

Post Graduate Government College for Girls, Sector-42, Chandigarh
Teaching Plan for Bachelors (Third and Fifth Semester) and Post Graduate (Third Semester)
Session (2020-2021)

Class: M.Sc. MBT-3rd SEM

Name of the Teacher: Ms Sonia Chauhan

Subject: Bioinstruments and their Applications

Paper: MBT-303

S. No	Dates	Topics to be Covered
Week 1	03/08/2020 – 08/08/2020	Mass spectroscopy
Week 2	10/08/2020 – 14/08/2020	Mass spectroscopy
Week 3	17/08/2020 – 22/08/2020	Mass spectroscopy
Week 4	24/08/2020 – 29/08/2020	GCMS, LCMS
Week 5	31/08/2020- 05/09/2020	MALDI-ToF
Week 6	07/09/2020- 12/09/2020	Microscopy: Light microscope, Field Microscope, Fluorescent microscope, Phase contrast microscope
Week 7	14/09/2020- 19/09/2020	Microscopy: AFM, SCM, TEM, SEM, STM
Week 8	21/09/2020- 26/09/2020	Chromatography: PAPER, TLC
Week 9	28/09/2020- 03/10/2020	Chromatography: GC,HPLC
Week 10	05/10/2020- 10/10/2020	Chromatography: FPLC, Protein purification workstation
Week 11	12/10/2020- 16/10/2020	Electrophoresis: Theory, Electrophoresis: different methods of electrophoresis for proteins
Week 12	19/10/2020- 24/10/2020	Electrophoresis: different methods of electrophoresis for nucleic acids.
Week 13	27/10/2020- 30/10/2020	Centrifugation: Theory and its applications to biological systems, centrifuges,
Week 14	03/11/2020- 07/11/2020	rotors-fixed angle/swing out, concept of vertical, buoyant density centrifugation.
Week 15	09/11/2020- 12/11/2020	Crystallography and X-Ray diffraction, Electron diffraction, Neutron diffraction.
Week 16	16/11/2020- 21/11/2020	Radioisotope techniques: radiotracers GM Counter, Proportional and Scintillation counters, autoradiography
Week 17	23/11/2020- 28/11/2020	Spectrophotometer: UV and Visible; Infrared and Raman spectroscopy. CD spectroscopy, NMR, ESR.

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Class: M.Sc. MBT-3rd SEM

Name of the Teacher: Ms Sonia Chauhan

Subject: Tutorials

Paper: MBT-305

S. No	Dates	Topics to be Covered
Week 1	03/08/2020 – 08/08/2020	Unit – I: Quantitative PCR: Theory, Practice, Problems and Solutions.
Week 2	10/08/2020 – 14/08/2020	Unit – I: Quantitative PCR: Theory, Practice, Problems and Solutions.
Week 3	17/08/2020 – 22/08/2020	Unit – I Myths and misconception about diseases e.g., Tuberculosis, Leprosy, Rabies,
Week 4	24/08/2020 – 29/08/2020	Unit – I Myths and misconception about diseases e.g., Anthrax, Brucellosis
Week 5	31/08/2020- 05/09/2020	Unit – I Giant viruses and Virophages: Characteristics and evolutionary implications.
Week 6	07/09/2020- 12/09/2020	Unit - II Biomedical waste management
Week 7	14/09/2020- 19/09/2020	Unit - II Biomedical waste management
Week 8	21/09/2020- 26/09/2020	Unit - II Biosafety
Week 9	28/09/2020- 03/10/2020	Unit - II Biosafety
Week 10	05/10/2020- 10/10/2020	Unit - II biosecurity and dual use research of concern
Week 11	12/10/2020- 16/10/2020	Unit - II Exceptions to the classical bacterial definition
Week 12	19/10/2020- 24/10/2020	Unit - III Diversity of antimicrobial peptides
Week 13	27/10/2020- 30/10/2020	Unit - III Role of integrons in microbial drug resistance
Week 14	03/11/2020- 07/11/2020	Unit - III Non-Rhizobium PGPRs and their role in crop productivity
Week 15	09/11/2020- 12/11/2020	Unit - IV Radiations in diagnostics
Week 16	16/11/2020- 21/11/2020	Unit - IV Phosphorescence, Florescence and Luminescence
Week 17	23/11/2020- 28/11/2020	Unit - IV Applications of non-aqueous enzymology

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Class: B.Sc. Bioinfo (E) -5th SEM Name of the Teacher: Ms Sonia Chauhan

Subject: GENETIC ENGINEERING Paper- X: BNE-5002

S. No	Dates	Topics to be Covered
Week 1	03/08/2020 – 08/08/2020	UNIT-I: DNA Sequencing methods
Week 2	10/08/2020 – 14/08/2020	UNIT-I: DNA Sequencing methods
Week 3	17/08/2020 – 22/08/2020	UNIT-I: Genome sequencing methods
Week 4	24/08/2020 – 29/08/2020	UNIT-I: Genome sequencing methods
Week 5	31/08/2020- 05/09/2020	UNIT-I: Genome sequencing methods-NGS
Week 6	07/09/2020- 12/09/2020	UNIT-I: Genome sequencing methods-NGS
Week 7	14/09/2020- 19/09/2020	REVISION
Week 8	21/09/2020- 26/09/2020	REVISION
Week 9	28/09/2020- 03/10/2020	UNIT II: cloning vectors-INTRODUCTION
Week 10	05/10/2020- 10/10/2020	Characteristics of cloning vectors
Week 11	12/10/2020- 16/10/2020	plasmid, phages
Week 12	19/10/2020- 24/10/2020	cosmid vectors,
Week 13	27/10/2020- 30/10/2020	multipurpose cloning vectors, shuttle vectors,
Week 14	03/11/2020- 07/11/2020	Characteristics of EXPRESSION vectors :bacterial, yeast,
Week 15	09/11/2020- 12/11/2020	plant and mammalian expression vectors
Week 16	16/11/2020- 21/11/2020	BACs and YACs
Week 17	23/11/2020- 28/11/2020	Preparation of genomic and cDNA libraries

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Class: B.Sc. Microbio (E) -3rdSEM

Name of the Teacher: Ms Sonia Chauhan

Subject: Introduction to Medical Microbiology-I Paper: MIC 301

S. No	Dates	Topics to be Covered
Week 1	03/08/2020 – 08/08/2020	Section A: Brief Intro to terminology of infectious diseases
Week 2	10/08/2020 – 14/08/2020	Section-A:Frequency of disease, Recognition of infectious diseases, Infectious disease cycle
Week 3	17/08/2020 – 22/08/2020	Section-B: Nomenclature of microbes of medical importance
Week 4	24/08/2020 – 29/08/2020	Section-B:classification of microbes of medical importance; criteria of classification
Week 5	31/08/2020- 05/09/2020	Revision exercises
Week 6	07/09/2020- 12/09/2020	Revision exercises
Week 7	14/09/2020- 19/09/2020	Revision exercises
Week 8	21/09/2020- 26/09/2020	VIDEO presentation from public databases
Week 9	28/09/2020- 03/10/2020	VIDEO presentation from public databases
Week 10	05/10/2020- 10/10/2020	VIDEO presentation from public databases
Week 11	12/10/2020- 16/10/2020	Revision exercises
Week 12	19/10/2020- 24/10/2020	Revision exercises
Week 13	27/10/2020- 30/10/2020	Revision exercises
Week 14	03/11/2020- 07/11/2020	Revision exercises
Week 15	09/11/2020- 12/11/2020	Revision exercises
Week 16	16/11/2020- 21/11/2020	Revision exercises
Week 17	23/11/2020- 28/11/2020	Revision exercises

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Class: B.Sc. Microbio (E) -5th SEM

Name of the Teacher: Ms Sonia Chauhan

Subject: Food and Industrial Microbiology-I

Paper: MIC-502

S. No	Dates	Topics to be Covered
Week 1	03/08/2020 – 08/08/2020	Section C: Production strains, Isolation and screening techniques,
Week 2	10/08/2020 – 14/08/2020	Section C: preservation
Week 3	17/08/2020 – 22/08/2020	Section C: genetic modification of Industrial microorganisms
Week 4	24/08/2020 – 29/08/2020	Revision exercises
Week 5	31/08/2020- 05/09/2020	Revision exercises
Week 6	07/09/2020- 12/09/2020	Revision exercises
Week 7	14/09/2020- 19/09/2020	Food as substrate for microorganisms,
Week 8	21/09/2020- 26/09/2020	Nutritive value of food stuffs,
Week 9	28/09/2020- 03/10/2020	Effect of Hydrogen ion concentration (pH),
Week 10	05/10/2020- 10/10/2020	moisture requirement on food, Important food borne diseases viz. Staphylococcal intoxication,
Week 11	12/10/2020- 16/10/2020	Revision exercises
Week 12	19/10/2020- 24/10/2020	Revision exercises
Week 13	27/10/2020- 30/10/2020	Botulism,
Week 14	03/11/2020- 07/11/2020	Revision exercises
Week 15	09/11/2020- 12/11/2020	Salmonellosis
Week 16	16/11/2020- 21/11/2020	Shigellosis.
Week 17	23/11/2020- 28/11/2020	Revision exercises

Post Graduate Govt. College for Girls, Sector-42, Chandigarh

Teaching Plan for Bachelors (First Semester)

Session (2020-2021)

Class: B.Sc. (Hons.) 1st year (1st SEM) **Name of the Teacher:** Ms Sonia Chauhan

Subject: Life Sciences

Paper: BIOT-Sem-I-III-TB

S. No	Dates	Topics to be Covered
Week 1	01/09/2020-05/09/2020	ADMISSION
Week 2	07/09/2020-12/09/2020	ADMISSION
Week 3	14/09/2020-19/09/2020	ADMISSION
Week 4	21/09/2020-26/09/2020	ADMISSION
Week 5	28/09/2020-03/10/2020	An introduction to life on earth.
Week 6	05/10/2020-10/10/2020	Unit-III: Animal Anatomy and Physiology:- Homeostasis and organization of animal body.
Week 7	12/10/2020-16/10/2020	Circulation
Week 8	19/10/2020-24/10/2020	Respiration
Week 9	27/10/2020-30/10/2020	Nutrition and digestion
Week 10	03/11/2020 – 07/11/2020	Urinary system and homeostasis.
Week 11	09/11/2020 – 12/11/2020	The immune response
Week 12	16/11/2020 – 21/11/2020	REVISION
Week 13	23/11/2020 – 28/11/2020	Unit-IV: Animal Anatomy and Physiology:- The endocrine system,
Week 14	01/12/2020 – 05/12/2020	Reproduction
Week 15	07/12/2020 – 12/12/2020	Nervous system
Week 16	14/12/2020 – 18/12/2020	The senses,
Week 17	21/12/2020 – 26/12/2020	Action and support by the muscles and skeleton system.