

**PG.GOV'T COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Odd Semester**

**Session (2023-2024)**

**Class: BSC III (Medical)**

**Subject: Botany**

**Paper : A & B**

**Name of the Teacher: Dr HARSH MANCHANDA**

**Period : I**

**Room No : 221**

S. No	Dates	Topics to be covered
Week 1	21-07-2023 to 22-07-2023	a. Importance of water to plant life, physical properties of water, b Ecology: Definition, scope, relationship with other sciences.
Week 2	24-07-2023 to 28-07-2023	a Imbibition, diffusion, Osmosis, Plasmolysis, Deplasmolysis, concept of osmotic potential b. Ecology: Definition, scope, relationship with other sciences.,.
Week 3	31-07-2023 to 05-08-2023	aWater potential and pressure potential, absorption of water, active and passive mechanism of water absorption Plant Environment: Climatic factors affecting growth and distribution of plants.
Week 4	07-08-2023 to 12-08-2023	aTransport of water, mechanism and theories to explain ascent of sap, b Climatic & Topographic factors affecting growth and distribution of plants.
Week 5	14-08-2023 to 19-08-2023	a Transpiration types, mechanism of opening and closing of stomata, b. Topographic factors affecting growth and distribution of plants,
Week 6	21-08-2023 to 26-08-2023	a Mechanism of transpiration, factors affecting transpiration, antitranspirants. b. Edaphic factors affecting growth and distribution of plants
Week 7	28-08-2023 to 02-09-2023	a Mineral Nutrition, hydroponics and its importance; essential macro and micro elements; essentiality criteria b Edaphic and biotic factors affecting growth and distribution of plants
Week 8	04-09-2023 to 09-09-2023	a Deficiency symptoms and their roles b. Biotic factors affecting growth and distribution of plants
Week 9	11-09-2023 to 16-09-2023	a Mineral uptake and Mechanism of mineral uptake b Ecosystem : Concept, structure Abiotic and biotic components
Week 10	18-09-2023 to 23-09-2023	a Nitrogen metabolism, Physiology of biological nitrogen fixation, b Trophic levels, food chain, food web, ecological pyramids, energy flow
Week 11	25-09-2023 to 30-09-2023	a. Nitrogen metabolism, Biochemistry of biological nitrogen fixation, b.Biogeochemical cycles of carbon, nitrogen and water.
Week 12	03-10-2023 to 07-10-2023	a. Importance of nitrate reductase and its regulation, ammonia assimilation b.Community Ecology
Week 13	09-10-2023 to 14-10-2023	a. Lipid metabolism; structure and function of lipids b.Community characteristics, frequency, density cover, life forms
<b>Mid Semester Exam (16<sup>th</sup> October 2023 – 21<sup>st</sup> October, 2023)</b>		

Week 15	25-10-2023 to 27-10-2023	a $\beta$ oxidation, saturated and unsaturated fatty acids b Ecological succession
Week 16	31-10-2023 to 04-11-2023	a,. Proteins, Classification, role and structure of proteins b Air , water and soil pollution
Week 17	06-11-2023 to 11-11-2023	a. Basics of Enzymology, Discovery and nomenclature; classification, structure, properties Factors affecting its activity, mechanism of enzyme action. b Conservation and Management of natural Resources
Week 18	14-11-2023 to 18-11-2023	a Revision b Revision

**PG.GOV'T COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Odd Semester (For Undergraduate Classes - First Year)**

**Session (2023-2024)**

**Class:** B.Sc. 1<sup>st</sup> year (1<sup>st</sup> Sem.)

**Subject:** Botany

**Paper :** Paper A- <sup>a</sup>Plant Diversity

Paper B- <sup>b</sup>Cell biology

**Name of the Teacher:** Dr. Davinder Kaur

**Period :** 1<sup>st</sup> period

**Room No :** 126

S. No	Dates	Topics to be covered
Week 1	21-07-2023 to 22-07-2023	<sup>a</sup> Plant Diversity: Introduction, Bacteria: Salient Features. <sup>b</sup> Ultrastructure and function of typical plant cell, Endoplasmic reticulum and Golgi apparatus
Week 2	24-07-2023 to 28-07-2023	<sup>a</sup> Bacteria: Types, Cell structure and economic importance <sup>b</sup> Ultrastructure and function of Lysosome, Mitochondria, Plastids and nucleus
Week 3	31-07-2023 to 05-08-2023	<sup>a</sup> Algae: General characters, classification, Systematic position. <sup>b</sup> Ultrastructure and function of Ribosome, cell wall and plasma membrane
Week 4	07-08-2023 to 12-08-2023	<sup>a</sup> Cyanophyceae: structure & life history of Oscillatoria. <sup>b</sup> Physical structure of chromosome; Giant chromosome: polytene and lampbrush chromosome
Week 5	14-08-2023 to 19-08-2023	<sup>a</sup> Chlorophyceae: Structure and life history of Volvox and Cladophora. <sup>b</sup> Chromosome alterations and their importance
Week 6	21-08-2023 to 26-08-2023	<sup>a</sup> General characters of Xanthophyceae and life history of Vaucheria <sup>b</sup> Variation in chromosome number
Week 7	28-08-2023 to 02-09-2023	<sup>a</sup> Phaeophyceae: structure and life history of Dictyota. <sup>b</sup> Introduction and their importance - Cell division: mitosis
Week 8	04-09-2023 to 09-09-2023	<sup>a</sup> General characters of Rhodophyceae: Structure and life history of Batrachospermum. Economic importance of Algae. <sup>b</sup> Meiosis in plant and their significance
Week 9	11-09-2023 to 16-09-2023	<sup>a</sup> Fungi: General characters <sup>b</sup> Synaptonemal complex
Week 10	18-09-2023 to 23-09-2023	<sup>a</sup> Systematic position, structures, life history of Albugo. <sup>b</sup> DNA structure
Week 11	25-09-2023 to 30-09-2023	<sup>a</sup> Fungi: structure and life history of Rhizopus <sup>b</sup> Replication of DNA
Week 12	03-10-2023 to 07-10-2023	<sup>a</sup> Fungi: structure and life history of Saccharomyces. <sup>b</sup> Structure and function of gene
Week 13	09-10-2023 to 14-10-2023	<sup>a</sup> Fungi: structure and life history of Agaricus. <sup>b</sup> Structure and function of genetic code
<b>Mid Semester Exam (16<sup>th</sup> October 2023 – 21<sup>st</sup> October, 2023)</b>		
Week 15	25-10-2023 to 27-10-2023	<sup>a</sup> Fungi: structure and life history of Ustilago. <sup>b</sup> RNA structure and its types
Week 16	31-10-2023 to 04-11-2023	<sup>a</sup> Fungi: structure and life history of Puccinia <sup>b</sup> Transcription and translation
Week 17	06-11-2023 to 11-11-2023	<sup>a</sup> Fungi: structure and life history of Colletotrichum <sup>b</sup> Regulation of gene expression in prokaryotes
Week 18	14-11-2023 to 18-11-2023	<sup>a</sup> General account of Lichens and their economic importance. <sup>b</sup> Regulation of gene expression in eukaryotes.

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**Teaching Plan Odd Semester (For UG-PG - Ongoing Classes)**

**Session (2023-2024)**

**Class: B.Sc. 3<sup>rd</sup> year**  
**Subject: Microbiology**  
**Paper : MIC 501**

**Name of the Teacher: Dr. Davinder Kaur**  
**Period : II (4,5 Day)**  
**Room No : 224**

S. No	Dates	Topics to be covered
Week 1	21-07-2023 to 22-07-2023	Introduction to important diseases caused by <i>Streptococcus</i> Operative mechanisms, lab diagnosis, prevention and control.
Week 2	24-07-2023 to 28-07-2023	Introduction to important diseases caused by <i>Pneumococcus</i> . Operative mechanisms, lab diagnosis, prevention and control.
Week 3	31-07-2023 to 05-08-2023	Introduction to important diseases caused by <i>Neisseria</i> , Operative mechanisms, lab diagnosis, prevention and control.
Week 4	07-08-2023 to 12-08-2023	Introduction to important diseases caused by <i>Corynebacterium</i> . Operative mechanisms, lab diagnosis, prevention and control.
Week 5	14-08-2023 to 19-08-2023	Introduction to important diseases caused by <i>Bacillus</i> Operative mechanisms, lab diagnosis, prevention and control
Week 6	21-08-2023 to 26-08-2023	Introduction to important diseases caused by <i>Clostridium</i> Operative mechanisms, lab diagnosis, prevention and control
Week 7	28-08-2023 to 02-09-2023	Introduction to important diseases caused by <i>Proteus</i> Operative mechanisms, lab diagnosis, prevention and control
Week 8	04-09-2023 to 09-09-2023	Morphology, pathogenesis, life cycle, lab diagnosis, prevention and control of rabies.
Week 9	11-09-2023 to 16-09-2023	Morphology, pathogenesis, life cycle, lab diagnosis, prevention and control of polio.
Week 10	18-09-2023 to 23-09-2023	Morphology, pathogenesis, life cycle, lab diagnosis, prevention and control of Small Pox.
Week 11	25-09-2023 to 30-09-2023	Morphology, pathogenesis, life cycle, lab diagnosis, prevention and control of Measles.
Week 12	03-10-2023 to 07-10-2023	Human Mycotic infections. Superficial.
Week 13	09-10-2023 to 14-10-2023	Cryptococcosis,
<b>Mid Semester Exam (16<sup>th</sup> October 2023 – 21<sup>st</sup> October, 2023)</b>		
Week 15	25-10-2023 to 27-10-2023	Dermatophytosis.
Week 16	31-10-2023 to 04-11-2023	Life cycle, pathogenic mechanisms and control of parasitic infections: Amoebiasis.

Week 17	06-11-2023 to 11-11-2023	Life cycle, pathogenic mechanisms and control of parasitic infections: Kala azar.
Week 18	14-11-2023 to 18-11-2023	Life cycle, pathogenic mechanisms and control of parasitic infections: Toxoplasmosis

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**Teaching Plan Odd Semester (For Ongoing Classes UG-PG)**

**Session (2023-2024)**

**Class: B.Sc. 2<sup>nd</sup> year (3<sup>rd</sup> Sem.)**

**Subject: Botany**

**Papers: A & B**

**Name of the Teacher: Dr. Radha Chauhan**

**Period: 3<sup>rd</sup> (2,4,6), 5<sup>th</sup> (1,3,5)**

**Room No.: 126, 218**

S. No.	Dates	Topics to be covered
Week 1	21-07-2023 to 22-07-2023	General characters of gymnosperms, Differences between gymnosperms and angiosperms
Week 2	24-07-2023 to 28-07-2023	Basic body plan of angiosperms, <i>Cycas</i> detailed study
Week 3	31-07-2023 to 05-08-2023	<i>Cycas</i> detailed study, Diversity of Angiosperms
Week 4	07-08-2023 to 12-08-2023	Root system: Tap root and adventitious root system, their various types
Week 5	14-08-2023 to 19-08-2023	Root modifications for storage, respiration and reproduction
Week 6	21-08-2023 to 26-08-2023	<i>Pinus</i> detailed study
Week 7	28-08-2023 to 02-09-2023	<i>Pinus</i> detailed study, Stem: Modifications of underground stem
Week 8	04-09-2023 to 09-09-2023	Stem: Modifications of underground stem
Week 9	11-09-2023 to 16-09-2023	Internal structure (dicot and monocot leaves); Flower: As a modified shoot,
Week 10	18-09-2023 to 23-09-2023	Leaf: Venation, phyllotaxy, simple and compound leaves, functions and modifications
Week 11	25-09-2023 to 30-09-2023	Simple and compound leaves, functions, Leaf modifications
Week 12	03-10-2023 to 07-10-2023	Structure and development of male gametophytes
Week 13	09-10-2023 to 14-10-2023	<i>Williamsonia</i> , <i>Lyginopteris</i> fossils study, <i>Ephedra</i> detailed study
<b>Mid Semester Exam (16<sup>th</sup> October 2023 – 21<sup>st</sup> October, 2023)</b>		
Week 14	25-10-2023 to 27-10-2023	<i>Ephedra</i> detailed study, Structure of anther
Week 15	31-10-2023 to 04-11-2023	Structure of pistil; Structure and development of female gametophytes
Week 16	06-11-2023 to 11-11-2023	Different types of ovules and embryo-sacs
Week 17	14-11-2023 to 18-11-2023	Double fertilization and its significance; Fossil gymnosperms: Geological time Scale, Brief account of fossils, their formation and types (excluding details)

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**Teaching Plan Odd Semester (For Ongoing Classes UG-PG)**

**Session (2023-2024)**

**Class: B.Sc. Microbio. Elective (3<sup>rd</sup> Sem.) Name of the Teacher: Dr. Radha Chauhan**

**Subject: Immunology**

**Period: 6<sup>th</sup> (1,2)**

**Paper: MIC 302**

**Room No.: 216**

S. No.	Dates	Topics to be covered
Week 1	21-07-2023 to 22-07-2023	Introduction & history of Immunology, Non-specific defence,
Week 2	24-07-2023 to 28-07-2023	Physical barriers, Chemical barriers,
Week 3	31-07-2023 to 05-08-2023	Cellular, phagocytosis, inflammatory barriers, inflammation, fever
Week 4	07-08-2023 to 12-08-2023	Types of immunity, active and passive immunity
Week 5	14-08-2023 to 19-08-2023	Immunological memory, Humoral immune response,
Week 6	21-08-2023 to 26-08-2023	Antibodies structure, function , types of antibodies-1
Week 7	28-08-2023 to 02-09-2023	Antibodies structure, function , types of antibodies-2
Week 8	04-09-2023 to 09-09-2023	Cell mediated immune system, mechanism
Week 9	11-09-2023 to 16-09-2023	Types of effector T cells
Week 10	18-09-2023 to 23-09-2023	Helper T cell, suppressor T cells,
Week 11	25-09-2023 to 30-09-2023	Cytotoxic T cells, killer T cells
Week 12	03-10-2023 to 07-10-2023	Interaction between T & B lymphocytes
Week 13	09-10-2023 to 14-10-2023	Ag/Ab interactions: precipitation reaction, Immunodiffusion test,
<b>Mid Semester Exam (16<sup>th</sup> October 2023 – 21<sup>st</sup> October, 2023)</b>		
Week 14	25-10-2023 to 27-10-2023	Counter current immune electrophoresis
Week 15	31-10-2023 to 04-11-2023	Complement fixation tests
Week 16	06-11-2023 to 11-11-2023	Complement fixation tests
Week 17	14-11-2023 to 18-11-2023	Revision of syllabus