Govt. College, Ropar
Department of Botany
Class B.Sc. 1st Sem.
(Session 2021-2022)

Week	Lesson scheduled
1st	➢ Viruses: General structure, Classification, Replication , Importance of viruses, A brief account of *Mycoplasma* ➢ Class test
2nd	➢ Bacteria- general account, Its ultra-structure, Classification, Mode of reproduction, A brief account of Archaebacteria ➢ Class test
3rd	➢ Nutritional types in bacteria, Economic importance of Virus , General account of Cynobacteria, *Oscillatoria* ➢ Class test
4th	➢ General Characteristics of fungi, Classification, Economic importance *Phytophthora, Stemonitis* ➢ Class test
5th	➢ Important features and life history of *Physoderma, Mucor, Saccharomyces, Penicillium, Peziza* ➢ Class test
6th	➢ Important features and life history of *Ustilago, Agaricus, Cercospora, Colletotrichum* ➢ Class test
7th	➢ Lichens: Structure , Morphology, Reproduction, Economic importance ➢ Revision
8th	➢ **MST**
9th	➢ **MST**
10th	➢ Basic characteristics of algae, Classification, Economic importance ➢ Class test
11th	➢ Important features and life history of, *Volvox, Oedogonium, Vaucheria* ➢ Class test
12th	➢ Important features and life history of*Ectocarpus, Sargassum, Batrachospermum*

	➢ Class test
13th	➢ Cell structure and reproduction in diatoms, General characteristics of Bryophytes, Classification,Ecological and economic importance ➢ Class test
14th	➢ Structure, reproduction and affinities of*Anthoceros, Marchantia Funaria,* Evolution of sporophytes in bryophytes ➢ Class test
15th	➢ General characteristics of Pteridophytes, Classification and economic importance, Evolution of stellar system ➢ Class test
16th	➢ Important features and life history of *Rhynia, Selaginella, Equisetum Pteris, Marsilea* ➢ Revision and Class test

(SHIKHA CHAUDHARY)
Head of Department

Principal
Govt. College, Ropar

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Department of Botany

Class B.Sc. 2nd Sem.

(Session 2021-2022)

Week	Lesson scheduled
1st	➢ Structural organization of cell: Prokaryotic and eukaryotic cell: Plant and animal cell. ➢ Genetic inheritance; Mendelism; laws of segregation and independent assortment.
2nd	➢ The cell envelop; structure, composition and function of cell in bacteria, fungi and plants ➢ Linkage analysis; allelic and non-allelic interactions
3rd	➢ Plasma membrane; structure and function; various methods proposed, fluid mosaic model; transport across membrane. ➢ Mitosis and Meiosis
4th	➢ Genetic material; structure of DNA and RNA, elucidation of DNA and RNA as genetic material. ➢ Replication of DNA in prokaryotes and Eukaryotes
5th	➢ Organisation of DNA in to chromosomes, nucleosome structure. ➢ Transcription in prokaryotes and Eukaryotes
6th	➢ Organisation of genetic material in eukaryotes, prokaryotes and viruses ➢ Translation in prokaryotes and Eukaryotes
7th	➢ Structure and function of nucleus; organization of nuclear membrane ➢ Mutations and Transposable elements
8th	➢ **MST**
9th	➢ **MST**
10th	➢ Nucleolus and chromosome ➢ Chromosome alterations; deletions, duplications, translocations, inversions, variation in chromosome number-aneuploidy and polyploidy
11th	➢ Structure and function of cell organelles; ER, Ribosome, Golgi body ➢ A brief account of origin of earth, origin of life, History, Theories, Abiogenesis, Panspermia, chemical evolution
12th	➢ Lysosomes, Vacoules and Peroxisomes ➢ Oparin hypothesis, Miller's experiment, Evolution of progenote, protein evolution

13th	➢ Structure and function of Mitochondria ➢ ,Theories of organic evolution, Detailed account on Lamarkism, Darwinism
14th	➢ Plastids ➢ Modern synthetic theory Germplasm theory and mutation theory, Evidences of evolution, Direct and indirect evidences;
15th	➢ Semiautonomous nature ➢ Fossils, fossilization, types and significance, GTS. Determination of age of rocks and fossils.
16th	➢ Revision

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