

GOVERNMENT COLLEGE BAHADURGARH

LESSON PLAN FOR SESSION -2021-22

Subject Name with code and semester: - BOT. 2.1 & 2.2 (II Semester)

Teacher Name: Dr. Mukesh Kumar

Month	Topic
March	General Characters, Classification of Bryophytes, alternation of generation, evolution of sporophytes, economic importance, <i>Marchantia</i> (Structure and Reproduction)
April	<i>Anthoceros</i> (Structure and Reproduction), <i>Funaria</i> (Structure and Reproduction), General characters of Pteridophytes, Classification of Pteridophytes, alternation of generation, Heterospory, apospory, apogamy, and economic importance of pteridophytes, General account of stellar evolution, <i>Selaginella</i> (Structure and Reproduction)
May	<i>Equisetum</i> (Structure and Reproduction), <i>Pteris</i> (Structure and Reproduction), DNA-the Genetic Material, DNA structure and replication, DNA-Protein Interaction, The Nucleosome Model, Genetic Code, Satellite DNA and Repetitive DNA, Law of Segregation, Independent Assortment, Linkage
June	Allelic and non-allelic interaction, Presence and function of Mitochondrial and Plastid DNA, Plasmids, Mutations-spontaneous and induced, Transposable genetic element, DNA damage and repair, Modern concept of gene, RNA, Ribosome, Transfer of genetic information, Transcription and translation, Structure of protein, Regulation of gene expression in prokaryotes and eukaryotes

GOVERNMENT COLLEGE BAHADURGARH

LESSON PLAN FOR SESSION -2021-22

Subject Name with code and semester: - BOT. 6.1 (VI Semester)

Teacher Name: Dr. Mukesh Kumar

Month	Topic
March	Basic of Enzymology- Discovery and nomenclature, characteristics of enzymes, concept of holoenzymes, apoenzyme, coenzyme and co-factors, regulation of enzyme activity, mechanism of action
April	Respiration-ATP- the biological energy currency, aerobic and anaerobic respiration, Krebs cycle, electron transport mechanism, redox potential, oxidative phosphorylation, pentose phosphate pathway
May	Lipid Metabolism-Structure and function of lipids, fatty acid biosynthesis, beta oxidation, saturated and unsaturated fatty acids, storage and mobilization of fatty acids, Nitrogen metabolism-biology of nitrogen fixation, importance of nitrate reductase and its regulation, ammonium assimilation
June	Genetic engineering and biotechnology: Tools and techniques of recombinant DNA technology, cloning vectors, genomic and cDNA library, transposable elements, aspects of plant tissue culture, cellular totipotency, differentiation and morphogenesis, biology of <i>Agrobacterium</i> vectors for gene delivery and markers genes