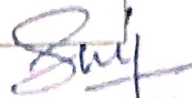


Teaching Plan
F.Y.B.Sc. Botany CBCS Pattern
(Semester II, Paper I) 2020-2021

BO-121: PLANT LIFE AND UTILIZATION II - 2 Credits (30 Lectures)

Sr. No.	Month	Topic
1	May 2 nd -3 rd week	<p>Credit-I</p> <p>1. INTRODUCTION: Introduction to plant diversity- Pteridophytes, Gymnosperms and Angiosperms with reference to vascular plants.</p> <p>2. PTERIDOPHYTES: General characters, Outline classification according to Sporne (1976) up to classes with reasons. Life cycle of Nephrolepis w.r.t. Habit, habitat, distribution, morphology, anatomy of stem and leaf, Reproduction – vegetative and sexual.</p>
2	May 4 th week	3. Utilization and economic importance of Pteridophytes.
3	June 1 st -2 nd week	<p>Credit-II</p> <p>1. GYMNOSPERMS: General characters, Outline classification according to Sporne (1977) up to classes with reasons. Life cycle of Cycas w.r.t. Habit, Habitat, Distribution, Morphology and Anatomy of Stem, leaf and reproductive organs- Male cone, Microsporophyll, microspores and megasporophyll, megaspore; structure of seed; Utilization and economic importance of gymnosperms.</p>
4	June 3 rd - 4 th week	<p>2. ANGIOSPERMS: General characters, Outline of classification of Bentham and Hooker's system up to series, comparative account of monocotyledons and dicotyledons.</p> <p>3. Utilization and economic importance of Angiosperms: In food, fodder, fibers, horticulture and medicines.</p> <p>Revision and MCQ discussion</p>

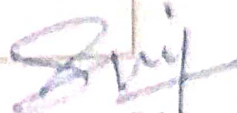

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Teaching Plan
 F.Y.B.Sc. Botany CBCS Pattern
 (Semester II, Paper II) 2020-2021

HO-122: PRINCIPLES OF PLANT SCIENCE - 1 Credits (30 Lectures)

Sr. No.	Month	Topic
1	May 2 nd - 3 rd week	CREDIT-I: PLANT PHYSIOLOGY AND CELL BIOLOGY 1. Introduction, definition and scope of plant physiology. 2. Diffusion - definition, importance of diffusion in plants, imbibition as a special type of diffusion. 3. Osmosis - definition, types of solutions (hypotonic, isotonic, hypertonic), endosmosis, exo-osmosis, osmotic pressure, turgor pressure, wall pressure, importance of osmosis in plants. 4. Plasmolysis - definition, mechanism and significance. 5. Plant growth - introduction, phases of growth, factors affecting growth
2	May 4 th week	6. Structure of plant cell, differences between prokaryotic and eukaryotic cell. 7. Plant cell wall - components of primary cell wall, structure and functions. 8. Ultrastructure and functions of chloroplast
3	June 1 st - 2 nd week	9. Cell cycle in plants- importance of cell cycle in plants, divisional stages of mitosis and meiosis CREDIT-II: MOLECULAR BIOLOGY 1. Introduction and scope of molecular biology, central dogma of molecular biology. 2. Structure of DNA, nucleoside and nucleotide 3. Watson Crick model of DNA and its characteristic features, types of DNA (A, B and Z DNA).
4	June 3 rd - 4 th week	4. Types of chromosomes. 5. Structure and types of RNA. 6. DNA replication- Types of replication (conservative, semi-conservative and dispersive), enzymes involved, leading and lagging strands, Okazaki fragments. Revision and MCQ discussion


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