

Lesson Plan

2nd Year (Hons.)

Students are Requested to Carry a Copy of the syllabus during the class .

Sl. No.	Topic	Lecture Period
1	Definitions: taxonomy, classification, identification, nomenclature, aims and scope of taxonomy, history and phases of taxonomy. 3LP	Taxonomy of Angiosperm 06 LP
2	Tools of Taxonomy: Functions of field, herbarium- concepts and techniques, botanic gardens, floras / literature. 3LP	
3	Concepts of Taxonomical Hierarchy: Species/genus /family and other categories 2LP	
4	Biodiversity – definition, types (genetic, species and ecosystem), 1LP	Biodiversity and Conservation 05 LP
5	Importance and threats; Threatened plants (IUCN Categories); 1LP	
6	Knowledge on Red Data Book; Hotspots. 1LP	
7	In situ and ex situ conservation strategies for rare and endangered plants with emphasis on National parks, Sanctuaries and Biosphere reserves, seed banks, cryopreservation in India. 2LP	

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Sl. No.	Topic	Lecture Period
1	Plant water relationship: Diffusion, Osmosis, Concept of water potential and its components. 1LP	Plant Water Relationship 05 LP
2	Absorption of water – mechanism. Ascent of sap – path, cohesion-tension theory and its critical evaluation. 2LP	
3	Transpiration: Stomata – mechanism of opening and closing and Antitranspirant 2LP	
4	Pigments - Structure of chlorophyll a & b, importance of carotenoids; Absorption and Action spectra 2LP	Photosynthesis 12 LP
5	Red drop & Emerson effect, Hill reaction 2LP	
6	Photosystems & Photochemical reaction centres 2LP	
7	Cyclic and non-cyclic electron transport and photophosphorylation; Calvin cycle and Photorespiration (mechanism & significance); 4LP	
8	C4 cycle significance, CAM and its ecological significance 2LP	
9	Growth regulators: discovery, chemical nature (natural and synthetic); physiological roles; Auxin 1LP Gibberellins 1LP Cytokinins 1LP Absciscic acid 1LP Ethylene 1LP	Plant Growth regulators 05 LP
10	Physiology of flowering: Photoperiodism: Classification of plants based on photoperiod responses 1LP	Photoperiodism 02 LP
11	Phytochrome – chemical nature, role in flowering in SDP and LDP. Vernalization 1LP	
12	Seed Dormancy: Types, causes and methods of breaking seed dormancy 1LP	Seed Dormancy 1LP