



AUXILIUM COLLEGE (Autonomous)

(Accredited by NAAC with A+ Grade with a CGPA of 3.55 out of 4 in the 3rd cycle)
Gandhi Nagar, Vellore – 6.

DEPARTMENT OF BOTANY

LESSON PLAN

2019-2020

2019-2020
ALLIED & OPTIONAL ALLIED BOTANY

PAPER - I - UABT/AIT /UBB/TAIT

SNO	WEEK	PORTIONS TO BE COVERED
1	1 st week.	General Characters of Cryptogams - Basic Classification of Plant Kingdom - General characters of Algae - types of Algae - Economic importance - Structure, reproduction of Algae Oscillatoria - life cycle.
	2 nd week	Structure, reproduction & life cycle of Chlorococci
	3 rd week	Structure, reproduction & life cycle of Gracilaria
	4 th week	General characters of Fungi - Classification. Structure, Reproduction & life cycle of Albugo & Yeast - Economic importance.
	5 th week	Structure, reproduction & life cycle of Gracilaria
	6 th week	Structure, reproduction & life cycle of Bacteria Economic importance of Bacteria.
	7 th week	General characters of Bryophyta - Structure, reproduction & life cycle of Funaria.
	8 th week	General characters of Pteridophyta Structure, reproduction and life cycle of Lycopodium
	9 th week	General characters of Gymnosperms. Structure, reproduction and life cycle in cycas.
	10 th week	Plant Physiology - Osmosis & Diffusion - Absorption of water - Mechanism - Transpiration - Types - Guttation - Photosynthesis - Mechanism Light Reaction & Calvin cycle.
	11 th week	Respiration - Glycolysis, Fermentation & Krebs cycle Plant Growth regulators - Auxins & Gibberellins Dormancy & Seed germination - Parthenocarpy - Types & Stress physiology.
	12 th week	Ecology - Ecosystem - Structure & functions.
	13 th week	Food chain, Food web & Ecological Pyramids.
	14 th week	Plants adaptations in Hydrophytes & Xerophytes Pollution - Air, water & land - Symptoms, Effects & Control measures of Tickler disease, Citrus canker & Tobacco Mosaic Virus.
	15 th week	Crop management - Biofertilizers - Azolla, Rhizobium & Mycorrhizae - Biopesticides.

WEEK

PORTIONS TO BE COVERED

1st week

General characters of Plants - Morphology
 General outline of Bentham & Hooker's system
 of classification - Description -
 How to describe a plant? - Technical
 descriptions.

2nd week

General morphological characters and
 Economic importance of - Caesalpiniaceae and
 Rubiaceae, Euphorbiaceae

3rd week

General morphological characters and
 Economic importance of - Asclepiada-
 ceae

4th week

Plant Anatomy - Tissues - Meristematic
 and Permanent - Simple & Complex

5th & 6th week

Primary structure of Dicot stem, T.S.
 Primary structure of Dicot root,
 Monocot stem and Monocot root.
 Dorsiventral leaf T.S. - Dicot leaf T.S.

7th week

Secondary thickening in Dicot stem -
 Annual rings.

8th & 9th week

Cell Biology: Cell types - Prokaryotic
 cell & Plant Eukaryotic cell -
 ultra structure of chloroplast, Mitochondria
 and Nucleus.

10th week

Mitosis stages - Genetics - Introduction
 Laws of Mendel - Monohybrid cross &
 Dihybrid cross experiments.

11th & 12th week

Plant tissue culture - Medium
 - M.S. Medium Composition & Preparation.
 Differentiation, Dedifferentiation & Redifferen-
 tiation - Cloning - Applications of tissue
 Culture.

13th - 15th week

R-DNA Technology, Vectors - Plasmids
 Definition & Applications - clones -
 Restriction Enzymes - Applications of
 R-DNA Technology & Genetic Engineering