



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

2018-2019

2018-2019

ALLIED & OPTIONAL ALLIED BOTANY - I

PAPER - I - UABTAT / UB BTAT

S.No	WEEK	PORTIONS TO BE COVERED
1	1 st Week	General characters of Cryptogams with basic classification. General characters of Algae.
2	2 nd week	Structure & Reproductive life cycle of Oscillatoria and Chlorella. Reproductive life cycle and alternating generations in Gracilaria. General characters of Fungi.
3	3 rd week	Structure and life cycle of Albugo and Yeast. Structure & life cycle of Agaricus
4	4 th week	General characters of Bacteria, Structure of Bacterial cell and Reproduction Economic importance of Bacteria
5	5 th week	General characters of Bryophytes - Structure Reproduction and life cycle of Funaria
6	6 th week	General characters of Pteridophytes Structure, reproduction and life cycle in Lycopodium.
7	7 th week	General characters of Gymnosperms. Structure & life cycle of Cycas
8	8 th week	Plant Physiology - Osmosis, Diffusion and DPD. Absorption of water - Active & Passive mechanism Transpiration - Types and Guttation
9	9 th week	Photosynthesis - Light reaction and Calvin cycle. Respiration - Glycolysis, Fermentation and Krebs's cycle
10	10 th week	Plant Growth regulators - Auxins, Gibberellins - Seed germination & Dormancy. Parthenocarpy - Types - Stress Physiology.
11	11 th Week	Ecology - Ecosystem - Structure, Functions Food chain, Food web and Ecological Pyramids - Plant adaptations in Hydrophytes and Xerophytes - Pollution - causes and control measures of Air, Water & Land.
	12 th week	Plant Pathology - Symptoms and control measures

II/IV ALLIED & OPTIONAL ALLIED BOTANY
PAPER - II UABTBT/UBBTBT

WEEK

PORTIONS TO BE COVERED

1st

Taxonomy

General outline of Bentham & Hooker's System of classification.

2nd week

General characters & Economic importance of Caesalpiniaceae, Rubiaceae & Asclepiadaceae

3rd week

Structure, Technical description and Economic importance of Euphorbiaceae & Liliaceae

4th - 5th week

Plant Anatomy - Meristematic and Permanent tissues - Primary structure of Dicot stem and Dicot root.

6th - 7th week

Primary structure of Monocot stem and Monocot root, Dicot leaf (Dorsiventral leaf) Secondary thickening of Dicot stem.

8th week

Annual rings. Cytology - Prokaryotic cell and Plant Eukaryotic cell - organelles. Ultrastructure of Chloroplast & Mitochondria and Nucleus. Cell division types - Stages of Mitosis and Meiosis.

9th week

Microscope Types & Principles - Simple & compound Microscope. functioning

10th week

Embryology - structure of Mature Anther Male gametophyte development - Process - Microsporogenesis - Male gamete - Female gametophyte - Structure & development of Embryo Sac - Polygonum type

11th week

Dicot embryo - Structure & development. Fertilization - types - Triple fusion - double Fertilization - types - Process - future application.

12th week

Genetics - laws of Mendel - Monohybrid & Dihybrid experiments

13th week

Plant Biotechnology - Plant Tissue culture M.S. Medium - Composition, Preparation & Composition - Differentiation & Dedifferentiation & Redifferentiation - Significance of Tissue culture

14 - 18th week

Recombinant DNA Technology - Gene cloning, restriction enzymes, Plasmids - Applications of Genetic engineering

A. Dejmalla