ALLIED BOTANY- I

Semester	Subject code	Category	Lecture		Theory		Practical	Credit
			Hrs/ Week	Total Hours/ Semester	Hrs/ Week	Total Hours/ Semester		
III	21CABO 3A	Allied	4	60	4	60	-	3

COURSE OBJECTIVES

The student will be able to understand the systematic position, functional morphology, anatomy, Life history, economic importance of plants and microbes.

COURSE OUTCOMES (CO)

On the successful completion of the course, the student will be able to

CO NUMBER	CO Statement	Knowledge level (K1-K4)
CO 1	Recognize the general characters, classification, reproduction and economic importance of Microbes.	K3
CO2	Understand the structure and life history and economic importance of Thallophytes	K2
CO 3	Gain knowledge about the Morphology, Anatomy and reproduction of certain Lower plants.	K2
CO 4	Understand the relation between prokaryotic and eukaryotic cell and understand the basic phases involved in cell cycle.	K2
CO 5	Create the basic knowledge of plant tissues and the importance of secondary thickening in plants.	K2

Knowledge level: **K1- Remember; K2-Understand; K3-Apply; K4- Analyze**

MAPPING WITH PROGRAMME OUTCOMES

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	S	M	S	M	M	S
CO2	S	S	M	S	S	M
CO3	M	S	S	S	M	S
CO4	S	M	M	S	S	S
CO5	M	M	S	S	M	S

S-Strong; M-Medium; L-Low

Unit I Bacteria and Viruses **10Hrs**

Bacteria-General Characteristics-Shape. Flagellation-Grams Staining. Structure of E-Coli. Reproduction (Vegetative and Asexual) Economic Importance of Bacteria.

Viruses-General Characteristics and Structure. Tobacco Mosaic Virus and Corona Virus.

Unit II Thallophyta **10Hrs**

Structure and Life History of Algae-Nostoc, Chlorella, Sargassum,

Structure and Life History of Fungi - Albugo, Penicillium and Agaricus.

Economic importance of Algae and Fungi.

Unit III Bryophyta, Pteridophyta and Gymnosperms **14Hrs**

Structure and Life Hostory of Funaria, Lycopodium and Cycas.

Unit IV Cell Biology **12Hrs**

Prokaryotic and Eukaryotic cell (Plant cell) Cell Organelles-Chloroplast, Mitochondrion and Nucleus. Cell Division – Mitosis and Meiosis.

Unit V Anatomy **14Hrs**

Tissues-Meristematic and PermanentTissues. Primary Structure of Dicot Stem. Monocot stem. Dicot Root and Monocot root. Normal secondary thickening of Dicot stem. Anamolous Secondary Growth in Dracaena and Nyctanthes.

TEXT BOOKS

S. No	Authors	Title	Publishers	Year of publication
1	Rao.K.N.Krishnamoorthy, J.V and Rao G	Ancillary Botany	S.Viswanathan (p) Ltd., Chennai	1975
2	Sharma, O.P	Algae,	Tata McGraw Hill Education Private limited, New Delhi.	2011
3	Vashishta, Sinha AK	Bryophytes,	S.Chand &Company ltd., New Delhi	2011
4	Pandey B,P., Plant Anatomy S. Chand Publ. New delhi.	Plant Anatomy	S. Chand	2015
5	Sundararajan ,S	Cytology ,	Anmol publication (P) ltd, New Delhi	2000

REFERENCE BOOKS

S. No	Authors	Title	Publishers	Year of publication
1	Johri , RM, Lata S , Tyagi K	A text book of Gymnosperms	Dominate pub and Distributer, New Delhi	2005
2	Lee, RD	Phycology	Cambridge University Press, New York	2008
3	Nayudu MV	Plant viruses,	Tata McGraw-Bill Education, New Delhi	2008
4	Karp,G	Cell and Molecular Biology	John Wiley and Sons,New York	1995
5	Fahn, A.	Plant Anatomy	Macmillan Publication (P) Ltd, Singapore	1989

Web resources:

www.vedantu.com

www.toppr.com

www.mayoclinic.org

www.khanacademy.org

www.encyclopedia.com

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