S.V.R.K. GOVT. DEGRE E COLLEGE (M), NIDADAVOLE (Table A)

ANNUAL CURRICULAR PLAN – LECTURER-WISE 2022-23

Department: BOTANY Class: II B.Sc. (CBZ) Year: II Paper: 1V Semester: 1V

Name of the Lecturer: Dr. P.S.S.SRAVANTHI.

S. No.	Month & Week	Hours available	Syllabus topic	Additional input / value addition	Curricular Activity			Co-curricular Activity				Re ma rks	
					Activity	Hours allotted	Whether conducte d	If nor, alternate date	Activity	Hours	Whether conducte d	If not, alternate date	
1	2	3	4	5	6	7	8	9	10	11	13	13	13
1	March 4 th Week	4 2	Plant-Water relations: . Importance of water to plant life, physical properties of water, diffusion, imbibition, osmosis. water potential, osmotic potential, pressure potential.	Chemical structure of water	Teaching Practical	4 2			-				
2	April 1 st week	4 2	Absorption and lateral transport of water; Ascent of sap Transpiration: stomata structure and mechanism of stomatal movements (K+ ion flux). Mechanism of phloem transport; source-sink relationships		Teaching Practical	4 2							
3	April 2 nd week	4 2	Mineral nutrition, Enzymes and Respiration Essential macro and micro mineral nutrients and their role in plants; symptoms of mineral deficiency. Absorption of mineral ions; passive and active processes.	Diagrammatic representation of mineral deficiency symptoms	Teaching Practical	3 2			Assign ment	1			
4	April 3 rd week	4 2	Characteristics, nomenclature and classification of Enzymes. Mechanism of enzyme action, enzyme kinetics. Respiration: Aerobic and Anaerobic; Glycolysis, Krebs cycle;		Teaching Practical	3 2			Assign ment	1			
5	April 4 th week	4 2	electron transport system, mechanism of oxidative phosphorylation, Pentose Phosphate Pathway (HMP shunt). I MID EXAMINATIONS		Teaching Practical	3 2			Quiz	1			

6	May 1 st week	4 2	Photosynthesis and Photorespiration 1 Photosynthesis: Photosynthetic pigments, absorption and action spectra; Red drop and Emerson enhancement effect.		Teaching Practical	3 2	Assign ment	1		
7	June 1 st week	4 2	Concept of two photosystems; mechanism of photosynthetic electron transport and evolution of oxygen; Photophosphorylation		Teaching Practical	3 2	Assign ment	1		
8	June 2 nd week	4 2	Carbon assimilation pathways (C3,C4 and CAM); Photorespiration - C2 pathway . II MID EXAMINATIONS		Teaching Practical	3 2	Group discussi on	1		
9	June 3 rd week	4 2	Nitrogen metabolism: Biological nitrogen fixation — asymbiotic and symbiotic nitrogen fixing organisms. Nitrogenase enzyme system. Lipid metabolism: Classification of Plant lipids, saturated and unsaturated fatty acids.	Structure of Nitrogenase enzyme	Teaching Practical	3 2	Assign ment	1		
10	June 4 th week	4 2	Anabolism of triglycerides, β-oxidation of fatty acids, Glyoxylate cycle. Growth and Development: Definition, phases and kinetics of growth		Teaching Practical	3 2	Student seminar	1		
11	July 1 st week	4 2	. Physiological effects of Plant Growth Regulators (PGRs) – auxins, Gibberellins, cytokinins, ABA, ethylene and brassinosteroids		Teaching Practical	3 2	Assign ment	1		
12	July 2 nd week	4 2	Physiology of flowering: Photoperiodism, role of phytochrome in flowering. Seed germination and senescence. Physiological changes during water stress.	Biological clock	Teaching Practical	3 2	Assign ment	1		
13	July 3 rd week	4 2	. Revision		Teaching Practical	3 2	Student seminar	1		
14	July 4 th week	4 2	Revision		Teaching Practical	3 2	Assign ment	1		