

ANNUAL ACADEMIC PLAN – 2022-2023

BOTANY

SECOND YEAR

Month/ No. of working days & Periods	Topics to be covered Unit – Test / Exams / Assignment / EAMCET/NEET classes to be conducted	Periods allotted for each topic
JUNE 14	Syllabus dictation and discussion of IPE Question paper along with scheme of valuation- weightage of marks to each chapter. UNIT- 1 PLANT PHYSIOLOGY CHAPTER1:Transport in plants 1.1 Means of Transport 1.2 Plant water relations 1.3 Long distance transport of water 1.4 Transpiration 1.5 Uptake and transport of Mineral nutrients 1.6 Phloem Transport :Flow from source to sink EAMCET/NEET CHAPTER-2 Mineral Nutrition 2.1 Methods to study the Mineral requirement of plant Practicals : #1. Study of osmosis by potato osmoscope	01 01 02 02 02 01 01 01 01 01 02
JULY 24	2.2 Essential Mineral Elements 2.3 Mechanism of Absorption of Elements 2.4 Translocation of Solutes 2.5 Soil as Reservoir of Essential Elements 2.6 Metabolism of Nitrogen EAMCET/NEET CHAPTER – 3 ENZYMES 3.1 Chemical reaction 3.2 How do Enzymes bring about such	2 01 02 01 01 01

High Rates of Chemical Conversion ?	01
3.3 Nature of Enzyme Action	
3.4 Factors Affecting Enzyme Activity	01
3.5 Classification and Nomenclature of Enzymes	01
3.6 Co-factors	01
EAMCET/NEET	01
CHAPTER – 4 Photosynthesis in Higher Plants	01
4.1 What do we know	
4.2 Early experiments	01
4.3 What is the site of Photosynthesis	02
4.4 How many pigments are involved in Photosynthesis	04
4.5 What is light reaction	
4.6 The Electron Transport	
Practicals :	
#2. Study of plasmolysis in epidermal peels (Eg. Rheo leaves)	
#3. Comparative study fo the rates of transpiration in the upper and lower surfaces of leaves (by Cocl2 method)	02

<p>AUG 22</p>	<p>4.7 Where are ATP and NADPH used 4.8 The C4 pathway 4.9 Photorespiration 4.10 Factors affecting photosynthesis EAMCET/NEET Assignment – I UNIT – TEST -I CHAPTER – 5: Respiration in plants 5.1 Do plants breathe 5.2 Glycolysis 5.3 Fermentation 5.4 Aerobic Respiration 5.5 The Respiratory balance sheet Practicals: #4. Separation of plant pigments through paper chromatography</p>	<p>03 01 01 01 03 01 01 01 02 01 04 01 02</p>
<p>SEPT - 25</p>	<p>5.6 Amphibolic pathway 5.7 Respiratory Quotient EAMCET/NEET CHAPTER 6: Plant Growth and Development 6.1 Growth 6.2 Differentiation and dedifferentiation and Redifferentiation 6.3 Development 6.4 Plant Growth Regulators 6.5 Seed dormancy 6.6 Photoperiodism 6.7 Vernalisation EAMCET/NEET UNIT II : MICROBIOLOGY CHAPTER 7 : Bacteria 7.1 Morphology of Bacteria 7.2 Bacteria cell structure 7.3 Nutrition 7.4 Reproduction</p>	<p>01 01 02 01 01 04 02 02 01 01 01 01 01</p>

	<p>7.5 The importance of Bacteria to Humans EAMCET/NEET CHAPTER 8: Viruses 8.1 Discovery of viruses 8.2 Classification of Viruses Assignment – II UNIT – TEST -II Practicals: #5.Study of plant population density and frequency by Quadrant method.</p>	<p>01 01 01 02</p>
OCT 19	<p>8.3 Structure of Viruses 8.4 Multiplication of Bacteriophage 8.5 Viral diseases in plants 8.6 Viral diseases in Animals EAMCET/NEET UNIT III : GENETICS CHAPTER 9 : Principles of Inheritance and variations 9.1 Mendel’s Experiments 9.2 Inheritance of one gene(Monohybrid cross) 9.3 Deviations from Mendelian concept of dominance 9.4 Inheritance of Two Genes (Dihybrid cross) 9.5 Chromosomal theory of Inheritance Assignment – III UNIT – TEST -III Practicals : #6.Preparation of temporary mount of monocot and dicot root and monocot and dicot stem.</p>	<p>02 02 01 01 01 01 01 01 01 01 01 01 02</p>
<p>FIRST TERM HOLIDAYS 02-10-2022 To 09-10-2022</p>		

<p>NOV 24</p>	<p>9.6 Linkage and recombination 9.7 Mutations EAMCET/NEET UNIT III : IV Molecular Biology CHAPTER 10: Molecular Basis of Inheritance . 10.1 The DNA 10.2 The Search for Genetic Material 10.3 RNA World 10.4 Replication 10.5 Transcription Practicals:(To be Demonstrated by Teacher) #7. Study of distribution of Stomata in the upper surfaces of leaf #8.Study of Aerobic respiration #9.Study of Imbibition in Seeds</p>	<p>02 01 02 03 02 01 02 03 02</p>
<p>HALF YEARLY EXAMINATIONS FROM 21-11-2022 TO 26-11-2022</p>		
<p>DEC 25</p>	<p>10.6 Genetic code 10.7 Translation 10.8 Regulation of Gene Expression EAMCET/NEET UNIT – V BIOTECHNOLOGY CHAPTER 11: Biotechnology principles and Processes 11.1 Principles of Biotechnology 11.2 Tools of Recombinant DNA Technology 11.3 Process of Recombinant DNA Technology EAMCET/NEET CHAPTER 12: Biotechnology and its Applications 12.1 Biotechnological Applications in Agriculture</p>	<p>02 01 02 03 01 04 05 01 02</p>

	#Record and Herbarium Certification #Practical Model Test	
	SANKRANTI HOLIDAYS FROM 13-01-2023 T	
FEB 22	REVISION PRE-FINAL EXAMINATIONS 06-02-2023 To 13-02-2023	22
MAR 23	INTERMEDIATE PUBLIC EXAMINATIONS (THEORY) 15-03-2023 To 04-04-2023 LAST WORKING DAY 31-03-2023	23

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