

TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN – 2023-2024

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 24	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 2.2 Essential Mineral Elements Assignment-I Practicals : #1. Study of osmosis by potato osmoscope IPASE 12-06-2023 to 20-06-2023	01 01 02 02 02 01 01 01 01 01 02
JULY 23	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	01 02

EAMCET/NEET	01
CHAPTER – 3 ENZYMES	01
3.1 Chemical reaction	01
3.2 How do Enzymes bring about such High Rates of Chemical Conversion ?	01
3.3 Nature of Enzyme Action	01
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	
4.1 What do we know	}
4.2 Early experiments	
4.3 What is the site of Photosynthesis	01
4.4 How many pigments are involved in Photosynthesis	01
4.5 What is light reaction	02
4.6 The Electron Transport	03
Assignment-II	01
Unit Test - I	01
Practicals :	02
#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 CoCl_2 method)	

<p>AUG 25</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</p> <p>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 5.6 Amphibolic pathway 5.7 Respiratory Quotient EAMCET/NEET Assignment-III Unit Test - II Practicals: #4. Separation of plant pigments through paper chromatography</p>	<p>03 01 01 01 03 01 02 01 03 01 01 01 01 02 01 01 02</p>
<p>SEPT - 22</p>	<p>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</p>	<p>01 01 04 02 03 01 01</p>

	<p>7.3 Nutrition 7.4 Reproduction 7.5 The importance of Bacteria to Humans</p> <p>EAMCET/NEET CHAPTER 8: Viruses</p> <p>8.1 Discovery of viruses 8.2 Classification of Viruses</p> <p style="text-align: right;">}</p> <p style="text-align: center;">Assignment – IV UNIT – TEST -III</p> <p>Practicals: #5.Study of plant population density and frequency by Quadrant method.</p>	<p>01 01 01 01 01 01 01 02</p>
OCT 18	<p>8.3 Structure of Viruses 8.4 Multiplication of Bacteriophage 8.5 Viral diseases in plants 8.6 Viral diseases in Animals</p> <p style="text-align: right;">}</p> <p>EAMCET/NEET UNIT III : GENETICS CHAPTER 9 : Principles of Inheritance and variations</p> <p>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</p> <p style="text-align: center;">Assignment – V</p> <p>Practicals : #6.Preparation of temporary mount of monocot and dicot root and monocot and dicot stem.</p>	<p>02 02 01 01 01 03 02 02 01 01 02</p>
<p>FIRST TERM HOLIDAYS 19-10-2023 To 25-10-2023</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 10.6 Genetic code 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 02 01 02</p>
	<p>HALF YEARLY EXAMINATIONS FROM 20-11-2023 TO 25-11-2023</p>	
<p>DEC 23</p>	<p>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>01 02 03 01 03 04 01 02</p>

	12.2 Other Applications of Biotechnology 12.3 Transgenic plants Assignment – VI UNIT – TEST -IV Practicals: (To be Demonstrated by Teacher) #10.Observe and comment on the following #A. Anaerobic respiration #B. Phototropism #C. Apical bud removal #D. Suction due to transpiration pull. #11.Exercise on Controlled pollination - Emasculation, Bagging and Tagging (Activity)	01 01 01 01 02
JAN 2024 23	12.4 Bio-safety and Ethical issues EAMCET/NEET UNIT – VI PLANTS, MICROBES AND HUMAN WELFARE CHAPTER – 13 Strategies for Enhancement in Food Production 13.1 Plant Breeding 13.2 Single Cell Protein (SCP) 13.3 Tissue Culture EAMCET/NEET CHAPTER – 14 Microbes in Human Welfare 14.1 Microbes in Household Products } 14.2 Microbes in Industrial Products } 14.3 Microbes in Sewage Treatment 14.4 Microbes in Production of Biogas } 14.5 Microbes as Bio-control Agents } 14.6 Microbes as Bio-fertilizers } 14.7 Challenges posed by Microbes }	01 01 02 01 02 01 01 01 01 01 01 01

	EAMCET/NEET	01
	Practicals : #Record and Herbarium Certification #Practical Model Test	02
	SANKRANTI HOLIDAYS FROM 13-01-2024 To 16-01-2024	
	PRE-FINAL EXAMINATIONS 22-01-2024 TO 29-01-2024	
FEB 22	REVISION PRACTICAL EXAMINATIONS 2nd Week of February	22
MAR 23	INTERMEDIATE PUBLIC EXAMINATIONS (THEORY) 1ST WEEK OF MARCH LAST WORKING DAY 31-03-2024	23

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