TELANGANA BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN - 2025-2026

BOTANY	SECOND YEAR	
Month/ No. of working days & Periods	Topics to be covered Unit – Test / Exams / EAPCET/NEET classes to be conducted	Periods allotted for each topic
JUNE 23	Syllabus dictation and discussion of IPE Question paper along with scheme of valuation- weightage of marks to each chapter.	01
	UNIT- 1 PLANT PHYSIOLOGY CHAPTER1:Transport in plants	
	1.1 Means of Transport1.2 Plant water relations1.3 Long distance transport of water	01 02 02
	1.4 Transpiration 1.5 Uptake and transport of Mineral nutrients	02 01
	1.6 Phloem Transport :Flow from source to sink CHAPTER-2 Mineral Nutrition	01
	2.1 Methods to study the Mineral requirement of plant	01
	2.2 Essential Mineral Elements2.3 Mechanism of Absorption of Elements	01
	2.4 Translocation of Solutes 2.5 Soil as Reservoir of Essential Elements	02
	2.6 Metabolism of Nitrogen Practicals:	02
	#1. Study of osmosis by potato osmoscope Unit Test – I EAPCET/NEET	02 01 04
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JULY	CHAPTER - 3 ENZYMES	
23	3.1 Chemical reaction	01
	3.2 How do Enzymes bring about such	01
	High Rates of Chemical Conversion ?	
	3.3 Nature of Enzyme Action	
	3.4 Factors Affecting Enzyme Activity	01
	3.5 Classification and Nomenclature of	01
	Enzymes	01
	3.6 Co-factors	01
	CHAPTER – 4 Photosynthesis in	01
	Higher Plants	
	4.1 What do we know	
	4.2 Early experiments	01
	4.3 What is the site of Photosynthesis	01
	4.4 How many pigments are involved in	01
	Photosynthesis	O1
	4.5 What is light reaction	03
	4.6 The Electron Transport	02
	4.7 Where are ATP and NADPH used	02
	Practicals:	
	#2. Study of plasmolysis in epidermal	
	peels (Eg.	
	Rheo leaves)	02
	#3. Comparative study fo the rates of	
	transpiration in	
	the upper and lower surfaces of leaves	
	(by Cocl2 method)	
	Unit Test - II	01
	EAPCET/NEET	04

AUG	4.8 The C4 pathway	01
22	4.9 Photorespiration	01
	4.10 Factors affecting photosynthesis	01
	CHAPTER – 5: Respiration in plants	
	5.1 Do plants breathe	
	•	01
	5.2 Glycolysis	02
	5.3 Fermentation	01
	5.4 Aerobic Respiration	03
	5.5 The Respiratory balance sheet	01
	5.6 Amphibolic pathway	01
	5.7 Respiratory Quotient	01
	CHAPTER 6: Plant Growth and	
	Development	0.4
	6.1 Growth	01
	6.2 Differentiation and dedifferentiation	0.1
	and Redifferentiation	01
	6.3 Development	
	Practicals:	
	#4. Separation of plant pigments through	02
	paper	
	chromatography	
	em em acograpmy	
	Unit Test – III	01
	EAPCET/NEET	04
	_	0.
SEPT	6.4 Plant Growth Regulators	04
22	6.5 Seed dormancy	01
	6.6 Photoperiodism	
	6.7 Vernalisation	01
	UNIT II : MICROBIOLOGY	
	CHAPTER 7 : Bacteria	
	7.1 Morphology of Bacteria	01
	7.1 Morphology of Bacteria 7.2 Bacteria cell structure	01
	7.2 Bacteria ceii structure 7.3 Nutrition	01
		O1
	7.4 Reproduction	01
	7.5 The importance of Bacteria to Humans	
	J	

	CHAPTER 8: Viruses 8.1 Discovery of viruses 8.2 Classification of Viruses 8.3 Structure of Viruses 8.4 Multiplication of Bacteriophase 8.5 Viral diseases in plants 8.6 Viral diseases in Animals Practicals:	01 02 01 01
	#5.Study of plant population density and frequency by Quadrant method.	02
	Unit Test - IV EAPCET/NEET	01 04
	FIRST TERM HOLIDAYS 28-09-2025 To 05-10-2025	
OCT 21	UNIT III: GENETICS CHAPTER 9: Principles of Inheritance and variations	
	9.1 Mendel's Experiments	01
	9.2 Inheritance of one gene(Monohybrid cross)	02
	9.3 Deviations from Mendelian concept of dominance	02
	9.4 Inheritance of Two Genes (Dihybrid cross)	01
	9.5 Chromosomal theory of Inheritance	01
	9.6 Linkage and recombination	01
	9.7 Mutations	01
	UNIT IV: Molecular Biology CHAPTER 10: Molecular Basis of	
	Inheritance .	
	10.1 The DNA	
	10.2 The Search for Genetic Material	02 01
	40 0 504 14	UI
	10.3 RNA World	01

	Practicals: #6.Preparation of temporary mount of monocot and dicot root and monocot and dicot stem.	02
	Unit Test - V EAPCET/NEET	01 03
NOV 23	10.5 Transcription 10.6 Genetic code 10.7 Translation 10.8 Regulation of Gene Expression UNIT – V BIOTECHNOLOGY CHAPTER 11: Biotechnology principles and Processes 11.1 Principles of Biotechnology	02 01 02 02
	11.2 Tools of Recombinant DNA Technology Practicals:(To be Demonstrated by Teacher) #7. Study of distribution of Stomata in the upper	03
	surfaces of leaf #8.Study of Aerobic respiration #9.Study of Imbibition in Seeds EAPCET/NEET	02 04
	HALF YEARLY EXAMINATIONS FROM 10-11-2025 TO 15-11-2025	
DEC 24	11.3 Process of Recombinant DNA Technology CHAPTER 12: Biotechnology and its Applications	04
	12.1 Biotechnological Applications in Agriculture 12.2 Other Applications of Biotechnology 12.3 Transgenic plants 12.4 Bio-safety and Ethical issues	02 01 01 01

	UNIT – VI: PLANTS, MICROBES AND HUMAN WELFARE	
	CHAPTER - 13 Strategies for Enhancement in Food Production	
	13.1 Plant Breeding	01
	13.2 Single Cell Protein (SCP)	01
	13.3 Tissue Culture	02
	CHAPTER – 14 Microbes in Human	
	Welfare	
	14.1 Microbes in Household Products	0.1
	14.2 Microbes in Industrial Products	01
	14.3 Microbes in Sewage Treatment (01
	14.4 Microbes in Production of Biogas	0.1
	14.5 Microbes as Bio-control Agents	01
	14.6 Microbes as Bio-fertilizers	01
	14.7 Challenges posed by Microbes	O1
	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)	02
	Unit Test - VI EAPCET/NEET	01
JAN	#Record Verification and Certification	<u> </u>
2026	#Herbarium Verification and Certification	
19	REVISION IPE Theory	
	SANKRANTI HOLIDAYS FROM 11-01-2026 To 18-01-2026	
	PRE-FINAL EXAMINATIONS 19-01-2026 To 24-01-2026	

	PRACTICAL SYLLABUS REVISION (1 ST YEAR)	
	PRACTICAL SYLLABUS REVISION (2 ND YEAR)	
	PRACTICAL MODEL TEST	
	REVISION IPE/ EAPCET/NEET	
FEB 24	PRATICAL EXAMINATIONS - 1 ST WEEK REVISION	24
MAR 23	INTERMEDIATE PUBLIC EXAMINATIONS (THEORY) 1 ST WEEK OF MARCH LAST WORKING DAY 31-03-2026	23

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