

GOVERNMENT DEGREE COLLEGE KHAIRATABAD ,HYDERABAD
DEPARTMENT OF BOTANY
ANNUAL CURRICULAR PLAN- 2020-2021

	We ek	Class	No of hours	Topic	Completed or not	Additional inputs	Activity	status	Remarks		
September	I	BZC III	4	Plant anatomy- introduction, Meristems, Types of meristems	yes						
			3	Demonstration of double staining technique							
		BZC V	3+3	Plant cell envelops- cell wall, plasmamembrane Concept and components of Ecosystem	yes					Other cell organelles	Cell model preparation
			2+2	Cytochemical method demonstration Estimation of carobonates in water sample							
	II	BZC III	4	Shoot apex theories	yes						
			3	Section cutting of dicot stem							
		BZC V	3+3	Nucleus, Nucleic acids-structure of DNA Food chains, food web, ecological pyramids	yes					Other DNA model	DNA model preparation
			2+2	Study of Mitotic stages – Onion root tips Estimation of bicarbonates in water sample							
	III	BZC III	4	Root apex theories	yes			Slip test			
			3	Section cutting of dicot root							
		BZC V	3+3	RNA types and functions, Biogeochemical cycles, Energy flow	yes					Other RNA types-hr RNA,mi-RNA	
			2+2	Cell organelles structure study Study of plant community by quadrat method							
IV	BZC	4	Simple tissues	yes							

		III	3	Study of stomatal types using epidermal peels					
		BZC V	3+3	Chromosome – morphology, organization of DNA in chromosome Environment- atmosphere, hydrosphere, lithosphere	Yes		Slip test		
			2+2	Cell organelles structure study Study of plant community by quadrat method					
October	I	BZC I	4	Bacteria: Structure, nutrition, reproduction	Yes				
			3	Gram staining technique					
			BZC	4	Complex tissues	Yes			
			III	3	Achyranthes stem – section cutting				
			BZC V	3+3	Euchromatin and heterochromatin . Karyotype, lampbrush and polytene chromosomes Light and temperature factor, biotic factor	Yes		Assignment	
				2+2	Special type of chromosomes study Study morphological characters of hydrophytes				
			II	BZC I	4	Economic importance. Brief account of Archaeobacteria, Actinomycetes and Mycoplasma with reference to little leaf of Brinjal and Papaya leaf curl	Yes		
					3	Specimens of plant diseases			
				BZC	4	Special tissues	Yes		
		III	3	Boerhaavia stem – section cutting					
		BZC	3+3	Extra nuclear genome – mt-DNA, CT-DNA, plasmids	Yes				

				Ecological adaptations of plants					
		V	2+2	Study morphological and anatomical characters of hydrophytes					
	III	BZC I	4	Viruses: Structure, replication and transmission	yes				
			3	Specimens of plant diseases					
		BZC III	4	Epidermal tissue system, ground tissue system	yes				
			3	Bignonia stem – section cutting					
		BZC V	3+3	Cell division – mitosis and meiosis and their significance	yes				
			2+2	Soil formation weathering, types of soil					
				Special type of chromosomes study					
				Study morphological and anatomical characters of hydrophytes					
	IV	BZC I	4	Plant diseases caused by viruses and their control with reference to Tobacco Mosaic and Rice Tungro.	yes				
			3	Study of Virus and bacteria photograohs					
		BZC III	4	Vascular tissue system, Diversity of internal structure of leaf	yes				
			3	Beet root– section cutting					
		BZC V	3+3	Mendelism- laws of inheritance	yes				
			2+2	Soil erosion and conservation					
				Genetic problems – monohybrid ratio					
				Study morphological and anatomical characters of Xerophytes					
November	I	BZC I	4	plant diseases of important crop plants caused by bacteria and their control with reference to Angular leaf spot of cotton and Bacterial blight of	yes		Plant diseases		

			Rice.			observation		
		3	specimens					
	BZC III	4	Types of stomata and epidermal outgrowths	yes		Types of stomata under microscope		
		3	Embryology slides					
	BZC V	3+3	Genetic interactions- Epistatis, complementary, Population ecology	yes				
		2+2	Genetic problems – dihybrid ratio Study morphological and anatomical characters of Xerophytes					
II	BZC I	4	General characters of Algae					
		3	Identification and study of algae from algal mixture					
	BZC III	4	Ecological adaptations of hydrophytes and xerophytes	yes				
		3	Embryology slides					
	BZC V	3+3	supplementary and inhibitory genes ecotypes , ecads	yes				
		2+2	Incomplete dominance genetic problems Study morphological and anatomical characters of Xerophytes					
III	BZC I	4	General characters, structure, reproduction and classification of algae (Fritsch)	yes				
		3	Identification and study of algae from algal mixture					
	BZC	4	Vascular cambium structure and function- normal secondary growth in stem and root	yes				

			3	Slides of algae					
		BZC III	4 3	Anomalous secondary growth in Beet root Isolation of embryo from given material		yes			
		BZC V	3+3 2+2	Three point test cross Three point test cross problems Timber value – Acacia, Tectona, Azadirachta		yes			
	III	BZC I	4 3	Phaeophyceae- Ectocarpus Rhodophyceae- Polysiphonia. Slides of algae		yes			
		BZC III	4 3	Timber structure- Teak, Rose wood, Red sanders, Nallamaddi, Neem Revision		yes			
		BZC V	3+3 2+2	Mutations- chromosomal structural changes, numerical changes Biodiversity concept, Earth summit Aesthetic value- Mangifera, Ficus, Ocimum		yes			
	IV	BZC I	4 3	General characters and classification of fungi (Ainsworth). Fungal plant diseases specimens		yes			
		BZC III	4 3	Embryology- introduction, Anther structure, microsporogenesis, development of male gametophyte Revision		yes			
		BZC V	3+3 2+2	Gene mutations Threats and value of biodiversity Revision		yes			
January	I	BZC I	4	Mastigimycotina- Albugo , Zygomycotina- Mucor		yes			

		3		Fungal plant diseases specimens					
	BZC	4		Ovule structure, types of ovules, megasporogenesis, monosporic embryosac development	yes				
	III								
		3		Revision					
	BZC	3+3		Structure of gene, genetic code	yes				
	V			Hot spots of India					
		2+2		Revision					
	II	BZC I	4	Ascomycotina- Saccharomyces and Penicillium.	yes				
			3	Fungal plant diseases specimens					
	BZC	4		Bi and tetrasporicembryosac development	yes				
	III		3	Revision					
	BZC	3+3		DNA replication	yes				
	V		2+2	Endemism, IUCN categories, Red data book					
				Revision					
	III	BZC I	4	Basidiomycotina- Puccinia, Deuteromycotina- Cercospora.	yes				
			3	Section cutting rust of diseased leaf					
	BZC	4		Pollen morphology, pollination, fertilisation	yes				
	III		3	Revision					
	BZC	3+3		Transcription in Prokaryotes, Eukaryotes	yes				
	V		2+2	Principles of conservation- Insitu and Exsitu					
				Revision					
February	I	BZC I	4	Economic importance of lichens	yes				

			3	Section cutting					
	BZC	4	4	Seed structure, appendages, dispersal mechanism, Endosperm types and development					
	III	3	3	Revision					
	BZC	3+3	3+3	Lac- operon and Try-operon	yes				
	V	2+2	2+2	WWF and NIMPGR Revision					
II	BZC I	4	4	Bryophytes: Structure, reproduction	yes				
		3	3	Section cutting					
	BZC	4	4	Embryo development, polyembryony and apomixis, Revision	yes				
	III	3	3	revision					
	BZC	3+3	3+3	revision	yes				
	V	2+2	2+2	Revision					
III	BZC I	4	4	Marchantia, Anthoceros	yes				
		3	3	Slides of Bryophytes					
	BZC	4	4	Introduction of syllabus , plant cell wall	yes				
	IV	3	3	Practical syllabus dictation, discussion					
	BZC	3+3	3+3	Introduction of syllabus	yes				
	VI	2+2	2+2	Practical syllabus dictation, discussion					
IV	BZC I	4	4	Polytrichum, Evolution of Sporophyte in Bryophytes.	yes				
		3	3	Specimens, Slides					
	BZC	4	4	Cell membrane ultrastructure models and functions, mitochondria , chloroplast	yes				