

DEPARTMENT OF BOTANY

BOTANY

ANNUAL CURRICULAR PLAN – 2020-2021

YEAR: 2020-2021

PAPER: I

SEM: I

NAME OF THE LECTURER: A. REKHA SRIVALLI

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
February	8	Unit I : Origin of life 1. Origin of life 2. Microbes 3. Viruses 4. Viral plant diseases 5. Vaccination	Pictures Diagrams Charts	Teaching	8	Conducted		Assignments		Conducted	
March	16	Unit II : Bacteria & Eubacteria 1. Special microbes 2. Cell structure 3. Reproduction 4. Economic imp. 5. Plant bacterial disease Unit III : Fungi & Lichens 1. General characters 2. Reproduction	Charts Diagrams Pictures	Teaching	14	Conducted		Seminars		Conducted	

April	16	3. Life history 4. Economic imp. 5. Diseases Unit IV : Algae 1. General characters 2. Thallus organization 3. Reproduction, life cycle	Diagrams Pictures Charts	Teaching	16	Conducted		Quiz		Conducted	
March	16	4. Economic imp. Unit V : Mineral nutrients of plants 1. General characters 2. Reproduction, Life cycle 3. Sporophytic evolution	Diagrams Charts Pictures	Teaching	15	Conducted		Seminars		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: III

SEM: III

NAME OF THE LECTURER: E. ASHA SUDHA

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
November	12	Unit I : Plant taxonomy - introduction 1. Taxonomy - classification 2. Taxonomic resources 3. Botanical nomenclature	Pictures Diagrams Charts	Teaching	12	Conducted		Assignment		Conducted	

		4. Types of classification 5. Bentham and hookers cls.									
December	12	Unit II : Systematic taxonomy - I 1. Engler and prantle cls. 2. Phylogeny 3. Study of families Unit III : Systematic taxonomy - II 1. Systematic study and economic imp. of families	Pictures Charts Diagrams	Teaching	12	Conducted		Seminars Assignments		Conducted	
January	12	Unit IV : Embryology – I 1. Anther structure, microsporogenesis, development of male gametophyte 2. Ovule – structure, types	Pictures Diagrams Charts	Teaching	12	Conducted		Quiz		Conducted	
February	12	Unit V : Embryology – II 1. Pollination and fertilization, endosperm – dev., types 2. Development of monocot & dicot embryos, polyembryony	Pictures Diagrams Charts	Teaching	12	Conducted		Quiz		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: V

SEM: V

NAME OF THE LECTURER: E. ASHA SUDHA

A.REKHA SRIVALLI

Month & Week	Hours available	Syllabus Topic	Additional Inputs /	Curricular Activity	Co-Curricular Activity
--------------	-----------------	----------------	---------------------	---------------------	------------------------

			Value Additions								
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
November	12	Unit I : Cell biology 1. Cell – the unit of life 2. Ultra structure and functions of cell wall & membrane 3. Chromosomes	Pictures Charts	Teaching	12	Conducted		Seminars		Conducted	
December	12	Unit II : Genetic material 1. DNA structure 2. Types of RNA Unit III : Mendelian inheritance 1. Mendel’s law of inheritance 2. Chromosomal mapping	Diagrams Pictures Charts	Teaching	10	Conducted		Assignments Seminars		Conducted	
January	12	3. Linkage 4. Crossing over Unit IV : Plant Breeding 1. Introduction & objectives 2. Methods of crop improvement	Diagrams Charts Pictures	Teaching	11	Conducted		Quiz		Conducted	
February	12	Unit V : Breeding, crop improvement & Biotechnology 1. Role of mutations 2. Role of somaclonal variations 3. Molecular breeding	Charts Diagrams Pictures	Teaching	12	Conducted		Slip tests		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: VI

SEM: V

NAME OF THE LECTURER: E. ASHA SUDHA

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
November	12	Unit I : Elements of Ecology 1. Ecology – def., branches, significance 2. Climate factors 3. Edaphic factors 4. Biotic factors	Pictures Charts	Teaching	11	Conducted		Seminars		Conducted	
December	12	Unit II : Ecosystem ecology 1. Ecosystem 2. Productivity of ecosystem 3. Biogeochemical cycles Unit III : Population & community ecology 1. Population	Diagrams Pictures Charts	Teaching	11	Conducted		Assignments Seminars		Conducted	
January	12	2. Plant communities 3. Interaction between plant growing in a community Unit IV : Phytogeography 1. Principles of phytogeography distribution	Diagrams Charts Pictures	Teaching	11	Conducted		Quiz		Conducted	

		2. Phytogeographic regions – India 3. Phytogeographic regions – world									
February	12	4. Endemism Unit V : Plant biodiversity & its importance 1. Biodiversity - Def., levels 2. Biodiversity hotspots 3. Loss of biodiversity 4. Seed banks	Charts Diagrams Pictures	Teaching	12	Conducted		Slip tests		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: **2020-2021**

PAPER: **II**

SEM: **II**

NAME OF THE LECTURER: **E. ASHA SUDHA**

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
September	15	Unit I : Pteridophytes 1. General characters, classification 2. Reproduction ,life history 3. Stellar evolution 4. Heterospory & seed habit	Pictures Charts	Teaching	15	Conducted		Seminars		Conducted	

September		Unit II : Gymnosperms <ul style="list-style-type: none"> ➤ General characters, classification ➤ Reproduction ,life history ➤ Outlines of geological time scale ➤ Cycadeoidea 	Diagrams Pictures	Teaching		Conducted		Assignments		Conducted	
October	12	Unit III : Basic concepts of Taxonomy <ol style="list-style-type: none"> 1. Aim & scope of Taxonomy 2. Plant nomenclature 3. Herbarium & its techniques 4. Bentham and hookers cls. 5. Systematic decription & economic imp. of families 	Diagrams Charts Pictures	Teaching	12	Conducted		Quiz		Conducted	
November	12	Unit IV : Systematic taxonomy <ol style="list-style-type: none"> 1. Systematic decription & economic imp. of families Unit V : Phytogeography <ol style="list-style-type: none"> 1. Principles & distribution 2. Endemism 3. Phytogeographic regions – world 4. Phytogeographic regions – India 5. Vegetation types in A.P 	Diagrams Pictures Charts	Teaching	12	Conducted		Slip tests		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2021-2022

PAPER: II (SDC-D.T)

NAME OF THE LECTURER: A REKHA SRIVALLI

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
September	5	Unit I : Introduction & establishment of Dairy farm 1. Dairy development 2. Constraints	Pictures Charts	Teaching	3	Conducted		Notes preparation		Conducted	
October	6	3. Site & records Unit II : Livestock identification & management 1. Cattle breeds 2. In & cross breeding	Diagrams Pictures	Teaching	6	Conducted		Assignments		Conducted	
November	8	3. Weaning, vaccination 4. Care & management of cattle Unit III : Feed & Dairy management 1. Feed for cattle 2. Operation flood, milk storage 3. Sanitation , safety precautions	Diagrams Pictures	Teaching	7	Conducted		Quiz		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: CERTIFICATE COURSE

SEM: II

NAME OF THE LECTURER: E. ASHA SUDHA

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
September	4	Unit I : Health promoters <ul style="list-style-type: none"> ➤ Brain tonics ➤ Obesity ➤ Anti – emetics ➤ Galactagogues ➤ Bites/ stings <ul style="list-style-type: none"> • Dog bites • Scorpion stings • Snake bites 	Pictures Charts	Teaching	4	Conducted		Seminars		Conducted	
October	4	Unit II : Skin problems <ul style="list-style-type: none"> ➤ Heal cracks ➤ Scabies ➤ Withlow ➤ Ringworm ➤ Swellings ➤ Pimples ➤ Filariasis ➤ Herpes 	Diagrams Pictures	Teaching	4	Conducted		Assignments		Conducted	
October		Digestive problems and fevers <ul style="list-style-type: none"> ➤ Indigestion ➤ Helminthiasis 	Diagrams Charts Pictures	Teaching		Conducted		Quiz		Conducted	

		<ul style="list-style-type: none"> ➤ Diarrhea ➤ Laxatives ➤ Fever ➤ Typhoid ➤ Malaria 									
November	4	Unit III : Specific ailments <ul style="list-style-type: none"> ➤ Burns ➤ Arthritis ➤ Cancer ➤ Mumps ➤ Goiter ➤ Heart ailment ➤ Chicken pox ➤ Dandruff/ lice 	Diagrams Pictures Charts	Teaching	4	Conducted		Slip tests		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: IV

SEM: IV

NAME OF THE LECTURER: E. ASHA SUDHA

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
November	12	Unit I : Plant – Water relations <ol style="list-style-type: none"> 1. Physical prop., importance 2. Diffusion, imbibitions & osmosis , water potential 	Pictures Charts	Teaching	12	Conducted		Seminars		Conducted	

		<ul style="list-style-type: none"> 3. Absorption & transport of water & ascent of sap 4. Transpiration 									
December	12	Unit II : Mineral nutrition & enzymes <ul style="list-style-type: none"> 1. Mineral Nutrition 2. Mineral ion uptake 3. Nitrogen metabolism 4. Enzymes 	Diagrams Pictures Charts	Teaching	10	Conducted		Assignments		Conducted	
January	12	Unit III : Photosynthesis <ul style="list-style-type: none"> 1. Photosynthesis 2. Photorespiration & its significance 3. Translocation of organic solutes Unit IV : Plant Metabolism <ul style="list-style-type: none"> 1. Respiration 	Diagrams Pictures Charts	Teaching	11	Conducted		Quiz		Conducted	
February	12	<ul style="list-style-type: none"> 2. Lipid metabolism Unit V : Growth & development <ul style="list-style-type: none"> 1. Growth & development 2. Physiological effects of phytohormones 3. Physiology of flowering 4. Physiology of senescence & aging 	Diagrams Pictures Charts	Teaching	12	Conducted		Slip tests		Conducted	

ANNUAL CURRICULAR PLAN

YEAR: 2020-2021

PAPER: VII

SEM: VI

NAME OF THE LECTURER: E. ASHA SUDHA

Month & Week	Hours available	Syllabus Topic	Additional Inputs / Value Additions	Curricular Activity				Co-Curricular Activity			
				Activity	Hours Allotted	Whether Conducted	If not Alternate Date	Activity	Hours Allotted	Whether Conducted	If not Alternate Date
September	12	Unit I : Plant tissue culture - I 1. History of plant tissue culture research 2. Methodology 3. Callus subculture, maintenance, growth measurements, morphogenesis in callus culture	Pictures Charts	Teaching	12	Conducted		Seminars		Conducted	
October	12	Unit II : Plant tissue culture - II 1. Endosperm culture 2. Production of secondary metabolites 3. Cryopreservation, germplasm conservation	Diagrams Pictures Charts	Teaching	12	Conducted		Assignments		Conducted	
November	12	Unit III : Recombinant DNA Technology 1. Restriction endonucleases 2. Cloning vectors 3. Gene cloning 4. Construction of genomic & cDNA libraries, colony hybridization	Diagrams Pictures Charts	Teaching	12	Conducted		Quiz		Conducted	

December	12	Unit IV : Methods of gene transfer 1. Methods of gene transfer 2. Selection of transgenics Unit V : Applications of Biotechnology 1. Applications of plant genetic engineering 2. Genetic modification	Diagrams Pictures Charts	Teaching	10	Conducted		Slip tests		Conducted	
----------	----	---	--------------------------------	----------	----	-----------	--	------------	--	-----------	--