

DEPARTMENT OF BOTANY
Teaching Plan: 2016 - 2017

THEORY
1st Year
Pre-Midterm:

Subject	No of classes allotted	No of classes taken	Teacher	Topic
1. Microbiology	89	77	MD	1. Domain & archaea 2. General recombination of bacteria 3. Viruses-plantvirus characterization and transmission 4. Lysis and Lysogeny 5. bacterial cell
2. Palaeobotany & Palynology			MD	1. Types of fossils 2. Fossilization Process 3. Gondwana Flora 4. Branches and applications of palynology 5. pollen morphology and sporopollenin
3. Algae			DB	1. life cycle of Ectocarpus and Chara 2. Classification 3. characteristics of major classes 4. Economic importance of algae
4. Bryophyta			DB	1. classification, general characters and class characters 2. Marchantia life cycle 3. Moss
5. Pteridophyta			DB	1. Selaginella 2. Economic Importance 3. General characters 4. Fern characters 5. Dryopteris

Post-Midterm:

Subject	No of classes allotted	Teacher	topic
1. Fungi	89	MD	1. Class characters
			2. Classification
			3. Economic Importance
			4. Lichen
			5. Mycorrhiza
2. Gymnosperms		MD	1. Classification and class characters

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			2.Cycas 3.Pinus 4..Economic importance
3.Taxonomy and Morphology		MD DB	1.Nomenclature and classifications 2.floral morphological parts

2nd year:

Pre Mid-term

Subject	No of classes allotted	No of classes taken	Teacher
1.Plant Physiology and Biochemistry i.Photosynthesis ii.Transpiration iii. water potential and solute transport iv.Phytochrome and cryptochrome v.Structure of DNA	95	88	i.MD " " " v. DB
2.Ecology i. Hydrosere ii.Adaptations- xerophytes,hydrophytes,mesophytes and halophytes iii.Definitions of ecological terms			MD
3.Cell Biology and Genetics i.Properties of genetic Code ii.Mutation iii. Three Point test Cross iv.Ribosome,Mitochondria and Chloroplast			MD MD DB DB
4.Economic Botany			MD
5.Plant Anatomy i.Definition of anatomical terms ii.Structures and orientation			MD DB

Post Midterm

Subject	No of classes allotted	No of classes taken	Teacher
1. .Plant Physiology and Biochemistry i. Nitrogen fixation and Metabolism ii. Respiration iii. Enzymes iv. Plant growth regulators			MD MD DB MD
2.Cell Biology and Genetics i.Chromosome aberration ii.Polyploidy			DB DB

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3rd Year

Pre-Midterm:

Subject	No of classes allotted	Teacher	Topic
1.Plant Breeding	100	MD	1.Pure line and Mass selection 2.Heterosis and Hybrid Vigour 3.Allopolyploidy and application in plant breeding 4.Types and examples
2.Biostatistics		MD	1.Measures of central tendency 2.Chi-square evaluation and test
3.Biofertilizers		MD	1.Economic Importance 2.Cultivation,characters and importance of <i>Azolla</i> ,BGA,Mycorrhiza 3.Definition
4.Mushroom		MD	1.Types and variations 2.Nutritional value of mushrooms 3.Cultivation of <i>Pleurotus sajor-caju</i>
5.Plant Biotechnology		DB	

Post-Midterm

subject	No of classes allotted	Teacher	Topic
1.Plant Biotechnology	100	MD DB	1.Plasmid as Vector 2.DNA and gene library
2.Plant tissue Culture		DB	1.Somatic Hybridization 2.Protoplast Culture 3.Definitions 4.Organoleptic Culture

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Practical:

Pre-Midterm:

1. Culture Medium Preparation-PDA
2. Observation of bacteria in curd
3. Seed testing and counting by chi square method

Post-Midterm:

1. Instrumentation: Work Out and Identification
2. Medicinal Plants: Identification