

BOTANY

NIZAM COLLEGE: DEPARTMENT OF BOTANY

Lesson Plan for the academic year 2018-2019

Class: B.Sc-1st year (Semester I)

Section: Botany

Course/Paper: I – (Microbial diversity)

UNIT: I – Viruses

No. of Hours Allotted: 15 Hrs

Topics to be covered	No. of. Hours
Origin and evolution of life with reference to microbes-an outline.	2
Viruses – general structure of TMV and bacteriophages,	4
Replication and transmission of viruses	2
Purification of plant viral particles	3
An outline of important plant diseases caused by viruses and their control	3
Brief account of Archebacteria, Actinomycetes and Mycoplasma	1
Total	15 Hours

Name of the Teacher: Dr. A. Vijaya Bhasker Reddy, Assistant Professor

NIZAM COLLEGE: DEPARTMENT OF BOTANY
Lesson Plan for the academic year 2018-2019

Class: B.Sc-1st year (Semester II)
Course/Paper: II – (Plant diversity)

Section: Botany

UNIT: IV – Angiosperm taxonomy

No. of Hours Allotted: 15 Hrs

Topics to be covered	No. of. Hours
Introduction to Angiosperm Taxonomy	2
Taxonomy and its significance and Opportunities	1
Basic principles of Plant taxonomy	1
International Code of Nomenclature (ICN for plants)	2
Binominal system of nomenclature	1
Typification	1
History of classification	1
Types of classifications –Artificial classification (Linnaeus system)	1
Natural classification (Bentham & Hooker system)	1
Phylogenetic classification (Engler & Prantl system)	1
APG system of classification	1
Herbarium techniques	1
DNA barcoding. Web resources – BHL, IPNI, Species 2000, Tropicos and The Plant List.	1
Total	15 Hours

Name of the Teacher: Dr. A. Vijaya Bhasker Reddy

NIZAM COLLEGE: DEPARTMENT OF BOTANY
Lesson Plan for the academic year 2018-2019

Class: B.Sc-2nd year (Semester III)
Course/Paper: III – (Embryology, Anatomy, Biodiversity)

Section: Botany

UNIT: III –Biodiversity

No. of Hours Allotted: 15 Hrs

Topics to be covered	No. of. Hours
Concepts, Convention on Biodiversity-Earth Summit	
Types and Levels of Biodiversity	
Hotspots of Biodiversity in India	
Endemism	
Threats and Value of Biodiversity	
Conservation- Ex situ and In situ conservation	
Red data book, IUCN Red List Categories and Criteria, Threatened & Endangered Plants of India	
Role of organizations/programs in the conservation of Biodiversity: BSI, IUCN, UNEP, UNCED, LACONES, NBPGR, NBRI, WWF	
Protected Area network in state of Telangana-National Parks, Wildlife sanctuaries & Tiger reserves	
Total	15 Hours

Name of the Teacher: Dr. A. Vijaya Bhasker Reddy

NIZAM COLLEGE : DEPARTMENT OF BOTANY

LESSON PLAN FOR THE ACADEMIC YEAR 2018-2019 (Semester II)

Class : B.sc 1st year

Section:Botany

**Course/Paper:II - Plant Diversity (Bryophytes, pteridophytes,
Gymnosperms and Angiosperms Taxonomy)**

Unit:I - Bryophytes	No.of Hours
Topics to be covered	Allotted: 15
General characters of Bryophytes-structure, reproduction, life cycle, adaptations to land habit.	2
Classification of Bryophytes-Hepaticopsida, anthocerotopsida, bryopsida, range of thallus organization.	1
Marchantia-Classification of marchantia, Habit, distribution, gametophyte external characters, internal characters.	1
Reproduction of marchantia, vegetative reproduction- Fragmentation, formation of adventitious, branches, formation of gemmae.	1
Sexual reproduction - antheridiophore,antheridium, archegoniophore, archrgonium, fertilization, sporophyte, gametophyte, and life cycle	1
Anthoceros - Classification of anthoceros, Habit, distribution, gametophyte external characters, internal characters.	1
Reproduction of Anthoceros- vegetative reproduction, sexual reproduction- antharidium, archegonium, fertilization.	1
Anthoceros sporophyte, Sporophyte development, new gametophyte development, and life cycle.	1
Funaria- Classification of Funeria, Habit, distribution, gametophyte external characters, internal characters.	1
Reproduction of Funeria - vegetative reproduction- Bulbils, rhizome, primary protonema, secondary protonema.	1
Sexual reproduction of Funeria - male plant, antharidium, female plant, archegonium, fertilization.	1
sprophyte of funeria, development of sporophyte, foot, seta, capsule, dispersal of spores, and life cycle.	1
Evolution of sporophyte in Bryophyte - theory of sterilization and reduction theory.	1
Economic importance of Bryophtes - Direct uses of bryophytes, Indirect uses of bryophytes, Economic importance of Sphagnum.	1
	15 hrs

Name of the Teacher:CH.Nagesh

Head,Department of Botany

Signature:

Signature