

**2023**  
**M.Sc.**  
**Third Semester**  
DISCIPLINE SPECIFIC ELECTIVE – 01  
**BOTANY**  
*Course Code: MBOD 3.11(A)*  
(Plant Systematics)

*Total Mark: 70*  
*Time: 3 hours*

*Pass Mark: 28*

*Answer five questions, taking one from each unit.*

**UNIT-I**

1. Discuss the various experimental categories in the study of biosystematics. 14
2. Describe the different mode of additive speciation. 14

**UNIT-II**

3. Differentiate between the terms with appropriate examples: 7×2=14
  - (a) Homology and analogy
  - (b) Parallelism and convergence
4. Describe a phylogenetic diagram. Explain the types of phylogenetic diagram. 8+6=14

**UNIT-III**

5. (a) Discuss in what way an outbreeding and an inbreeding species are considered in a phylogenetic classification. 8  
(b) Write a note on how hybrids established themselves in nature. 6
6. (a) Explain how mutation and natural selection contribute to evolution of genetic characteristic. 8  
(b) What do you mean by Darwin fitness? Elaborate. 6

## UNIT-IV

7. Discuss the three aspects that are considered to understand the origin and evolution of angiosperm. 14
8. Write a summary on the following: 7×2=14
- (a) Origin of monocot
  - (b) Basal living angiosperms

## UNIT-V

9. Enumerate on the following: 7×2=14
- (a) The role of embryology in solving taxonomic problem
  - (b) The role of anatomy in solving taxonomic problem
10. Write an account on the following: 7×2=14
- (a) The systematic value of chemotaxonomy
  - (b) The systematic value of molecular data
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