

2022
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. What is plant speciation? Discuss the different types of mechanism of plant speciation. 2+12=14
2. What is the study of biosystematics? Enumerate the scope and significance of biosystematics. 2+12=14

UNIT-II

3. Write an account on the phenetic method of plant classification. Explain the principles of taxometrics? 4+10=14
4. (a) During phylogenetic data analysis complex characters are given more weightage than simple ones. Why? 7
(b) Mention a few important factors one should take into consideration while assigning polarity in phylogenetic data analysis. 7

UNIT-III

5. (a) What are the different types of variation observed in plants. 4
(b) Discuss the different types of hybridization that cause variation in plants. 10
6. What is molecular evolution? Elaborate the Kimura's neutral theory of evolution and its principles. 4+10=14

UNIT-IV

7. (a) Write an account on the origin of angiosperms. 10
(b) Give an overview on the origin of angiosperms based on the molecular data. 4
8. Describe the possible ancestors of angiosperms according to euanthial and pseudanthial theories. 14

UNIT-V

9. Discuss the important characteristics of pollen grains and chromosomes that are useful in solving the taxonomic problem with examples. $7+7=14$
10. What is molecular systematics? Explain the molecular techniques used in handling the molecular data in taxonomic studies. $2+12=14$
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