

2021
M.Sc.
Third Semester
DSE-01
BOTANY
Course Code: MBOD 3.11 (A)
(Plant Systematics)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. Discuss the various categories used in the study of biosystematics. 14
2. Write a note on isolating mechanisms. 14

UNIT-II

3. (a) Write a comparative account between phenetic and cladistic approaches of plant classification. 10
- (b) Write a note on the steps of phylogenetic data analysis. 4
4. (a) Differentiate between 5×2=10
- (i) Plesiomorphic and apomorphic characters
- (ii) Parallelism and convergence
- (b) What interpretations are projected in a phylogenetic tree? 4

UNIT-III

5. Define outbreeding. Explain the different mechanisms that promotes outbreeding. 2+12=14
6. What is mutation? Explain the role of mutation in evolution. 2+12=14

UNIT-IV

7. (a) Write a critical explanation on the monophyletic and polyphyletic origin of angiosperms. 8
- (b) Discuss how evolution in animals have influenced the evolution in plants. 6
8. (a) Explain why Winteraceae, Chloranthaceae and Amborellaceae are

- considered as basal groups of angiosperms. 12
- (b) What are paleoherbs? 2

UNIT-V

9. Discuss the roles of the following in relation to taxonomy: $7 \times 2 = 14$
- (i) Embryology
 - (ii) Palynology
10. (a) Write a note on the use of chemical evidences in the field of taxonomy. 7
- (b) What is molecular systematics? Describe the characteristic of molecular systematics. $2 + 5 = 7$
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