

November 2025
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. Enumerate the principles of plant systematic. What do you mean by plant speciation? 10+4=14
2. Write the principle of biosystematics studies. Describe the experimental categories of biosystematic studies proposed by Turesson. 5+9=14

UNIT-II

3. Enumerate the principles of taxometrics. Discuss the conceptual difference between phenetic and cladistic classification. 6+8=14
4. Explain the difference of parallelism character from a convergence character according to the phylogenetic concept. 14

UNIT-III

5. Write a note on variation in plants. Explain how outbreeding and inbreeding contribute to the variation in plants. 4+10=14
6. Discuss how mutation and random genetic drift bring about genetic changes in a population. 7+7=14

UNIT-IV

7. Write a critical account of the age of angiosperms. 14
8. Discuss why Winteraceae, Degeneriaceae and Magnoliaceae are considered as basal living angiosperms. 14

UNIT-V

9. Discuss the roles of the following in relation to taxonomy: $7 \times 2 = 14$
(a) Embryology
(b) Palynology
10. Write a note on each of the following: $7 \times 2 = 14$
(a) The use of chemical data in solving taxonomic problems
(b) The use of anatomical data in solving taxonomic problems