

2024
M.Sc.
Fourth Semester
CORE – 11
BOTANY
Course Code: MBOC 4.11
(Plant Development & Reproductive Biology)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. Define tropism. Explain the different types of tropisms with examples. 2+12=14
2. What are meristems? Write an account on organisation of shoot apical meristem with proper diagrams. 14

UNIT-II

3. With the help of appropriate diagrams explain the mechanisms of pollination in fig, *Salvia* and orchids. 14
4. Write notes on the following: 7×2=14
 - (a) Leaf determination
 - (b) Differentiation of epidermis with reference to stomata

UNIT-III

5. What is microsporogenesis? Illustrate on the different events that occurs during microsporogenesis with suitable diagrams. 2+12=14
6. Discuss on pollen germination and pollen tube growth till the embryo sac. Support your answer with labelled diagrams. 4+6+4=14

UNIT-IV

7. Define endosperm. Explain the different modes of endosperm development with neat labelled diagrams. Mention the role of endosperms. $2+10+2=14$
8. Write short notes on the following: $7 \times 2 = 14$
- (a) Storage protein of endosperm and embryo
 - (b) Seed dormancy

UNIT-V

9. Give an illustrative account on pollen morphology. 14
10. Define palynology. Illustrate on the applications of palynology. $2+12=14$
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