

2022
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. Write notes on the following: 7×2=14
 - (a) Phototropism and geotropism
 - (b) Photomorphogenesis
2. Discuss in detail the organization of shoot apical meristem with the help of a suitable diagram. 14

UNIT-II

3. Enumerate the process of differentiation of epidermis with reference to trichomes. 14
4. Write notes on the following: 7×2=14
 - (a) Florigen concept
 - (b) Pollination mechanisms in *Salvia* and *Ficus*

UNIT-III

5. Define self-incompatibility. Discuss the factors responsible for self-incompatibility. Mention three methods to overcome self-incompatibility. 1+7+6=14

6. Write notes on the following: 7×2=14
(a) Pollen germination
(b) Male sterility

UNIT-IV

7. Define endosperm. Discuss in detail the different types of endosperm development. 2+12=14
8. Write notes on the following: 7×2=14
(a) Seed storage proteins
(b) Dormancy

UNIT-V

9. Define palynology. Briefly discuss the different branches of palynology. 2+12=14
10. Write notes on the following: 7×2=14
(a) Pollen storage and its significance
(b) Allergic properties of pollen
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