

**2023**  
**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. Give an account on photomorphogenesis during seedling growth. 14
2. Give a general account on tropism. 14

**UNIT-II**

3. Give an account on physiology of flowering. 14
4. Write notes on the following: 7×2=14
  - (a) Root microbes interaction
  - (b) Development of lateral roots

**UNIT-III**

5. Describe in detail the development of pollen grain. 14
6. Write notes on the following: 7×2=14
  - (a) Types of ovules
  - (b) Bisporic embryo sac

**UNIT-IV**

7. Explain in detail the development of seed. 14
8. Write notes on the following: 7×2=14
  - (a) Polyembryony
  - (b) Apomixis

## UNIT-V

9. Write notes on the following: 7×2=14  
(a) Palynotaxonomy  
(b) Melittopalynology
10. Give an account on the following: 7×2=14  
(a) Pollen analysis  
(b) Pollen calendar and its importance
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