

7. What is Endosperm ? Describe different types of endosperm development in angiosperms. **16**

Unit IV

8. Explain the role of anatomical characters in plant taxonomy with suitable examples. **16**
9. Write notes on the following :
- (a) Secondary growth in monocots **8**
- (b) Anomalous secondary growth in *Boerhaavia*. **8**



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Roll No.

31722

M.Sc. EXAMINATION, 2025

(Fourth Semester)

(Regular & Re-appear)

BOTANY

Biology of Reproduction and Anatomy

Time : 3 Hours]

[Maximum Marks : 80

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Explain the following : 2×8=16

- (i) What is the function of the pollen tube during fertilization ?
- (ii) What is pollen allergy ? Name one plant commonly associated with it.
- (iii) Name any *two* animal pollinators and the type of pollination they are involved in.
- (iv) What is the function of synergids in the embryo sac ?
- (v) What is gametophytic self-incompatibility ?
- (vi) Differentiate between apomixis and parthenogenesis
- (vii) Define anomalous secondary growth.
- (viii) What is the significance of cortical bundles in dicot stems ?

Unit I

2. Write short notes on the following :

- (a) Structure, types and function of tapetum **8**
- (b) Pollen germination and pollen tube growth

8

3. What is male sterility ? Discuss its types and importance in hybrid seed production. 16

Unit II

4. Describe the structure types and development of the ovule. Illustrate with labelled diagrams.

16

5. Write an essay on pollination vectors. Explain the role of insects, wind and water in pollination. 16

Unit III

6. Explain the process of pollen-stigma interaction. How is compatibility determined in plants ? 16