7. What is self-incompatibility ? Differentiate between sporophytic and gametophytic incompatibility with examples. **16**

Unit IV

8. What is anomalous secondary growth ? Describe its various types with examples. **16**

9. Write notes on the following :

   (a) Contribution of leaf anatomy to taxonomic classification **8**

   (b) Extrastelar cambium and its activity **8**

❖❖❖❖❖❖❖

No. of Printed Pages : 04 **Roll No. .....**

51752

M.Sc. EXAMINATION, 2026

(Fourth Semester)

(Re-appear Only)

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 : **8×2=16**

(i) What is the function of the tapetum during pollen development ?

(ii) Define pollen grain.

(iii) What is Megasporogenesis ? Where does it take place ?

(iv) Name the different types of ovules found in angiosperms.

(v) What is triple fusion ?

(vi) What is anther culture ? Mention one application.

(vii) Differentiate between extrastelar and intrastelar cambium.

(viii) Define medullary bundles and give one example.

Unit I

2. Write short notes on the following :

(a) Role of male sterility in hybrid seed production **8**

(b) Pollen allergy-causes and significance **8**

3. Describe the development of male gametophyte in angiosperms. **16**

Unit II

4. Write notes on the following :

(a) Types of ovules **8**

(b) Development of female gametophyte **8**

5. Describe the different types of embryo sac development with suitable diagrams. **16**

Unit III

6. Define double fertilization. Explain the process of double fertilization in an angiospermic plant with suitable diagrams. **16**