

Roll No.

(07/22-II)

5225

B. Sc. EXAMINATION

(Fourth Semester)

BOTANY

Paper-II

Plant Embryology

Time : Three Hours

Maximum Marks : 40

Note : Attempt *Five* questions in all, selecting *two* questions from each Unit. Q. No. 1 is compulsory (short answer type questions).

1. Define the following : 1×8=8

(i) Essential and Non-essential whorls in flower

(ii) Compound of pollen which help in fossilization.

(iii) Porogamy

- (iv) Obturator
- (v) Who discovered double fertilization ?
- (vi) Caruncle
- (vii) Antipodals
- (viii) Ruminant endosperm.

Unit I

2. Describe the structure, function and types of tapetum in detail with well labelled diagrams. 8
3. Describe the following : 2×4=8
 - (i) Structure of a mature tetrasporangiate anther
 - (ii) Micro-gametogenesis.
4. Define Entomophily. Give the special characters of plants showing entomophily. Illustrate with examples. 8
5. Describe the various developmental stages of pollen tube till it reaches the embryo sac. 8

Unit II

6. Describe the following : $2 \times 4 = 8$
- (i) Structure of a typical angiosperm ovule
 - (ii) Structure of egg apparatus.
7. Define an Embryo. Describe the development of Monocot Embryo with labelled diagrams. 8
8. Describe the following :
- (i) Structure of a Dicot seed 4
 - (ii) Fleshy fruits 2
 - (iii) Winged seeds. 2
9. Write notes on the following : $2 \times 4 = 8$
- (i) Dispersal of fruits and why is it necessary
 - (ii) Hydrochory and Zoochory.