

(i) Printed Pages : 2

Roll No.

(ii) Questions : 9

Sub. Code :

0	2	5	4
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Exam. Code :

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B.A./B.Sc. (General) 3rd Semester

(2123)

BOTANY

Paper— (B : Structure Development & Reproduction in Flowering Plants-I)

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Q. No. 1 is compulsory. Attempt only *one* question from each section. Attempt only *five* questions in total.

1. (A) Fill in the blanks :

- The monocarpic plants are _____.
- Cuscuta* shows _____ roots.
- The bundle sheath extension in leaf is _____ tissue.
- Mesogamy is _____ and found in _____.

(B) Mark the correct answer :

- The embryo sac of *Polygonum* contains :
 - 7 cells and 8 nuclei
 - 8 cells and 8 nuclei
 - Endosperm
 - Embryo
- 3 triploid antipodals are found in embryo sacs of :
 - Allium*
 - Oenothera*
 - Frittilaria*
 - Pepromia*

(g) Which is correct for a pollen tube ?

- (i) Exhibits chemotaxis (ii) Callose formation
(iii) Apical growth (iv) All of the above

(h) Phylloclades are found in :

- (i) *Ruscus* (ii) *Opuntia*
(iii) Australian *Acacia* (iv) None of the above

8×1=8

SECTION—I

2. Describe the various morphological and anatomical modifications of storage roots. 7
3. Discuss with the help of suitable diagrams the various types of roots which develop from radical of embryo. 7

SECTION—II

4. With the help of suitable diagrams, describe the various types of underground stems. 7
5. What is a compound leaf ? Describe its various types along with diagrams. 7

SECTION—III

6. Describe the structure of a male reproductive organ of an angiospermic plant with the help of diagrams. 7
7. Explain the development of male gametophyte in angiosperms upto entry in synergid. 7

SECTION—IV

8. Write a detailed account of various types of Embryo sacs. 7
9. Describe the following :
- (a) Structure of a typical ovule.
- (b) Double fertilisation and its significance. 7