

(i). Printed Pages: 3 Roll No. ....

(ii) Questions : 9 Sub. Code : 

1	7	2	5	4
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Exam. Code : 

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B.A./B.Sc. (General) 3<sup>rd</sup> Semester

(2124)

BOTANY

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

Time Allowed : Three Hours] [Maximum Marks : 36

Note :—(1) Attempt FIVE questions in all.

(2) Q. No. 1 is compulsory. Attempt four more questions, selecting ONE from each unit.

(3) Draw diagrams wherever necessary.

1. (A) Fill in the blanks :

(i) Plants which bear fruits once in a lifetime and then die are called \_\_\_\_\_.

(ii) In pollen grain exine wall is made of \_\_\_\_\_ and intine wall is made of \_\_\_\_\_.

(iii) Phylloclades bears raised areas called \_\_\_\_\_ which represent nodes.

(iv) 3+2+3 condition is seen in \_\_\_\_\_ type of bisporic embryo sac. 4×1=4

(B) Multiple choice questions :

(i) Phyllodes are seen in :

- (a) *Casuarina*
- (b) *Acacia auriculiformis*
- (c) *Ruscus*
- (d) *Opuntia*

(ii) Which of the following lacks parallel Venation ?

- (a) Smilax
- (b) Banana
- (c) Bamboo
- (d) Fan Palm

(iii) Primary endosperm nucleus in angiosperms is formed due to fusion of male gamete with :

- (a) Antipodal cell
- (b) Egg cell
- (c) Syngerid cell
- (d) Secondary nucleus

(iv) Which of the following represents 4 nucleated tetrasporic type of embryo sac ?

- (a) *Plumbagella*
- (b) *Oenothera*
- (c) *Allium*
- (d) *Drusa*      4×1=4

UNIT—I

2. Explain the structural and anatomical modifications in roots for reproduction.

7

3. (a) Draw T.S. of Pneumatophore (Respiratory Root).
- (b) Explain the following types of structural tap-root modifications for storage :
  - (i) Tuberous
  - (ii) Fusiform
  - (iii) Napiform. 4,3

### UNIT—II

4. (a) Differentiate between simple and compound leaf.
- (b) Explain Phylloclade and Rhizome. 4,3
5. (a) Discuss various types of leaf venation with suitable examples.
- (b) Explain Cladode and Corm. 4,3

### UNIT—III

6. (a) Discuss the statement that “Flower is modified shoot”.
- (b) Draw T.S. of young anther. 4,3
7. Briefly discuss the structure and development of female gametophyte in angiosperms. 7

### UNIT—IV

8. Describe various types of ovules in angiosperms along with diagrams and examples. 7
9. Explain the following types of embryo-sacs along with diagrams :
  - (a) Penaea type
  - (b) Adoxa type
  - (c) Oenothera type. 3,2,2