

2071

B.A./B.Sc. (General) Fourth Semester  
Botany

Paper – B: Structure Development and Reproduction in Flowering Plants - II

Time allowed: 3 Hours

Max. Marks: 36

**NOTE:** Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit. Draw well labeled diagrams wherever necessary.

x-x-x

I. A) Multiple choice questions:-

- i) Which of the following is living component of phloem
  - (a) Tracheids
  - (b) Phloem fibres
  - (c) Vessels
  - (d) Companion cells
- ii) Geitonogamy is
  - (a) Self -pollination
  - (b) Present usually in monoecious plants
  - (c) Both a and b
  - (d) None of these
- iii) Viability of seeds can be assessed by
  - (a) Scarification
  - (b) Impaction
  - (c) Tetrazolium dye test
  - (d) Mechanical resistance
- iv) A fruit is formed as result of cell division and differentiation in
  - (a) Ovule
  - (b) Laticiferous tissue
  - (c) Secretory tissue
  - (d) Ovary
- v) Parachute- like pappus, light weight and minute seeds and censer mechanisms are characteristics of fruits and seeds dispersal in
  - (a) Zoochory
  - (b) Hydrochory
  - (c) Autochory
  - (d) Anemochory
- vi) The girdled portion at base of aerial branch covered with clay and wrapped with polythene in air layering is called
  - (a) Scion
  - (b) Stock
  - (c) Gootee
  - (d) Apomixis

P.T.O.

(2)

B) Fill in the blanks:-

- vii) The pneumatodes help in \_\_\_\_\_.
- viii) The failure of seeds to germinate due to unavailability of favourable environmental conditions is called \_\_\_\_\_.
- ix) The endosperm is of three types, nuclear, cellular and \_\_\_\_\_.
- x) The open vascular bundle comprises of \_\_\_\_\_ between xylem and phloem.
- xi) Rhizomes are a source of \_\_\_\_\_ which perennate in unfavourable conditions and produce aerial shoots in favourable conditions.
- xii) Pollenkitt is secreted in \_\_\_\_\_ flowers. (12x1)

UNIT - I

- II. Briefly discuss the secretory tissues in various plants giving examples. (6)
- III. Discuss the secondary growth in dicot root with diagrams. (6)

UNIT - II

- IV. Explain the anomalous secondary growth in *Dracaena*. (6)
- V. a) Briefly explain Plant Tissue Culture  
b) Discuss the importance of Vegetative propagation of plants. (3+3)

UNIT - III

- VI. a) Enlist the advantages and disadvantages of cross- pollination.  
b) Differentiate between self-pollination and cross-pollination. (3+3)
- VII. a) Briefly explain Autogamy with examples.  
b) What are the characteristics of Anemophilous plants. (3+3)

UNIT - IV

- VIII. Discuss the development of embryo in dicot plants. (6)
- IX. Write notes on:-  
a) Parthenocarpy  
b) Albuminous and Exalbuminous seeds. (3+3)

x-x-x