

**BOTANY Paper-B**

**(Structure Development and Reproduction  
in Flowering Plants-I)**

**Time Allowed : 3 Hours**

**Maximum Marks : 36**

**Note :** Attempt five questions in all. Q. No. 1 is compulsory. Attempt four more questions selecting one from each unit. Draw diagrams where necessary.

1. (A) Fill in the blanks :

(i) The Plants which bear fruits once in a life time are called

- (ii) The flattened green, foliaceous petiole carrying out functions of lamina is known as \_\_\_\_\_.
- (iii) Turnip resembles sugarbeet in having \_\_\_\_\_ roots.
- (iv) Exine is made up of a highly resistant fatty substance called \_\_\_\_\_.
- (v) The point of attachment of body of ovule with the funiculus is called \_\_\_\_\_.
- (vi) The mode of arrangement of mature leaves on the stem and its branches is called \_\_\_\_\_.

6×1=6

(B) Multiple Choice Questions :

- (i) The unbranched trunk with crown of leaves at the apex is called :
- Caudex
  - Excurrent
  - Deliquiscent
  - None of these
- (ii) In *Nepenthes* (Pitcher Plant), the pitcher is modified :
- Leaf Stalk
  - Leaf Base
  - Leaf Lamina
  - Leaf Apex.
- (iii) Fasciculated roots are found in :
- Dalhia*
  - Raphanus Sativus*
  - Brassica rapa*
  - Ipomea batatas*
- (iv) The normal *Polygonum* type of embryo sac is :
- 8 nucleate, 8 celled
  - 8 nucleate, 7 celled
  - 7 nucleate, 7 celled
  - 7 nucleate, 8 celled
- (v) If the root cell of a rose plant contains 4x number of chromosomes, its endosperm will have :
- 4x
  - 6x
  - 8x
  - 12x

(vi) Opposite decussate leaves are found in :

(a) *Calotropis*

(b) *Nerium*

(c) *Alstonia*

(d) *Quisqualis*

6×1=6

#### UNIT-I

2. With the help of diagram, explain the anatomical modification in roots for respiration. 6

3. Explain the diversity in plants on the basis of their longevity. 6

#### UNIT-II

4. Give an account of internal structure of a dicot leaf with the help of a suitable diagram. 6

5. Write brief notes on any two of the following :

(a) Stem Tendril

(b) Phylloclade

(c) Stem thorn

3+3=6

#### UNIT-III

6. Discuss the statement-Flower is a modified shoot. 6

7. Discuss the development of male gametophyte in angiosperms. 6

#### UNIT-IV

8. Discuss the different types of ovules in angiosperms. 6

9. Describe double fertilization and its significance in an angiospermic plant. 6