

(i) Printed Pages: 4

Roll No.

(ii) Questions : 9

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B.A./B.Sc. (General) 4th Semester
1059

BOTANY

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

Time Allowed : Three Hours]

[Maximum Marks : 36

Note :— Attempt **FIVE** questions in all. Question No. **1** is compulsory. Attempt **FOUR** more questions selecting **ONE** from each unit. Draw well labelled diagrams wherever necessary.

1. (A) Multiple choice questions :—

(i) Sclerids are :

- (a) Xylem Elements
- (b) Phloem Elements
- (c) Fibres
- (d) Sclerenchymatous tissue

(ii) When scion is grafted over stock, the quality of fruit depends on :

- (a) Stock
- (b) Scion
- (c) Both of these
- (d) None of the above

(iii) Entomophily occurs in :

- | | |
|-------------------|---------------------|
| (a) Grasses | (b) Coconut |
| (c) <i>Salvia</i> | (d) <i>Hydrilla</i> |

(iv) In addition to normal vascular bundles, medullary bundles are also present in the stem of :

- | | |
|-----------------------|-----------------------|
| (a) <i>Boerhaavia</i> | (b) <i>Nyctanthes</i> |
| (c) <i>Dracaena</i> | (d) <i>Helianthus</i> |

(v) Embryo in a seed consists of :

- (a) Radicle and Plumule
- (b) Radicle, Plumule and Cotyledons
- (c) Radicle and Cotyledons
- (d) Plumule and Cotyledons

(vi) The angiospermous wood is known to be porous due to the presence of :

- | | |
|-----------------|---------------------|
| (a) Latex | (b) Companion cells |
| (c) Sieve tubes | (d) Vessels |

(B) Fill in the blanks :—

(vii) The pollination by bats is called _____.

(viii) When xylem is completely surrounded by phloem, such vascular bundles are called _____.

(ix) Clowes named the central inactive region of root apex as _____.

(x) The persistent form of nucellus in a seed is known as _____.

(xi) The bladder-like ingrowths of thin-walled parenchymatous cells into xylem vessels are known as _____.

(xii) Dispersal of fruits and seeds by explosive mechanism due to in-built devices is known as _____.

1×12=12

UNIT—I

2. (a) Discuss the structure, functions and types of Collenchymatous tissue.

(b) Differentiate between Dicot Stem and Monocot Stem.

3½+2½

3. (a) Draw a well labelled diagram of internal structure of Sunflower stem.

(b) Discuss the organisation of Root Apex according to Histogen Theory.

3+3

UNIT—II

4. With the help of suitable diagram, describe the anomalous structure of *Mirabilis* stem.

6

5. Write notes on :—

(a) Grafting

(b) Layering

3+3

UNIT—III

6. What is self-pollination ? Discuss its types as well as advantages and disadvantages.

6

7. (a) What is Hydrophily ? Discuss the characteristics of hydrophilous flowers.

(b) Discuss the mechanism of pollination in *Vallisneria*.

2½+3½

UNIT—IV

8. Discuss the development of Embryo in a typical dicot plant.

6

9. Write a detailed note on 'Fruit Development'.

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