

Bachelor of Science (B.Sc.) Semester—IV (C.B.S.) Examination

BOTANY (Angiosperm, Anatomy and Embryology)

Paper—I

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable diagram and examples.

1. Write on :

- | | |
|---|---|
| (a) Classification of meristem based on position. | 5 |
| (b) Parenchyma and Collenchyma. | 5 |

OR

Write short notes on :

- | | |
|-----------------------|-----|
| (c) Sclerenchyma. | 2.5 |
| (d) Xylem vessel. | 2.5 |
| (e) Sieve element. | 2.5 |
| (f) Glandular tissue. | 2.5 |

2. Write on :

- | | |
|--|---|
| (a) Internal structure of Maize Root. | 5 |
| (b) Newman's theory of root apical meristem. | 5 |

OR

Write short notes on :

- | | |
|--|-----|
| (c) Tunica-Corpus theory. | 2.5 |
| (d) Primary structure of <i>Sunflower</i> stem (diagram only). | 2.5 |
| (e) Concentric Vascular bundles. | 2.5 |
| (f) Cambium. | 2.5 |

3. Write on :

- | | |
|---|---|
| (a) Anomalous secondary growth in <i>Bignonia</i> stem. | 5 |
| (b) T.S. of <i>Maize</i> leaf. | 5 |

OR

Write short notes on :

- (c) Periderm. 2.5
- (d) Heart Wood. 2.5
- (e) T.S. *Nerium* leaf (diagram only). 2.5
- (f) Senescence. 2.5

4. Write on :

- (a) Types of endosperm. 5
- (b) Polygonum type of embryo sac. 5

OR

Write short notes on :

- (c) Double fertilization. 2.5
- (d) Cross pollination. 2.5
- (e) T.S. Anther (diagram only). 2.5
- (f) Ultrastructure of Pollen Grain. 2.5

5. Write in two or three lines only (any **TEN**). Diagrams are not necessary :

- (a) Laticiferous tissue
- (b) Secondary meristem
- (c) Tracheids
- (d) Apical Cell Theory
- (e) Conjoint Vascular Bundle
- (f) Radial Vascular Bundle
- (g) Growth Ring
- (h) Sap wood
- (i) Abscission
- (j) Self pollination
- (k) Anatropous ovule
- (l) Triple fusion. 1×10=10