

Roll No. ....

(01/22-II)

5205

**B. Sc. EXAMINATION**

(Third Semester)

**BOTANY**

Second Paper

Plant Anatomy

*Time : Three Hours*

*Maximum Marks : 40*

**Note :** Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (i) Prosenchyma
- (ii) Amphivasal Vascular Bundle
- (iii) Periderm
- (iv) Anisocytic Stomata
- (v) Trichomes
- (vi) Who proposed the Apical Cell Theory ?

(vii) Quiescent Centre

(viii) Blennials.

1×8=8

### Unit I

2. (a) With well labelled diagrams explain the structure of xylem.

(b) Describe the Histogen theory regarding shoot apex. 4×2=8

3. Write short notes on the following :

(a) Meristematic Tissues 3

(b) Annual Plants 2

(c) Cambium Structure. 3

4. Discuss in detail about the anomalous secondary growth in *Boerhaavia* sp. 8

5. Differentiate between :

(a) Sap wood and Heart wood 3

(b) Early wood and late wood 2

(c) Meristematic and permanent tissues. 3

## Unit II

6. (a) Draw a well labelled diagram of monocot leaf. 4
- (b) T.S. of dicot root. 4
7. Write short notes on the following :
- (a) Phyllotaxy 3
- (b) Leaf abscission. 3
- (c) Stomatal apparatus. 2
8. (a) Write an account of structural modifications in respiratory roots with a well labelled diagram. 6
- (b) Functions of epidermis. 2
9. Write short notes on the following :
- (a) Pinnately compound leaf
- (b) Structure of a typical dicot root with histological organization. 4×2