

- (b) Give differences between Periderm and Bark. 4
- (c) Write a short note on Annual Rings. 4

#### Unit IV

8. What are Hydrophytes ? Explain using examples from among plants growing in India, the anatomical aspects of adaptations in Hydrophytes. 16
9. (a) Give an account of anatomical adaptations in Xerophytes. 8
- (b) Define Halophytes. Explain their anatomical aspects of adaptations. 4

Roll No. ....

Exam Code : J-21

Subject Code—52566

#### B.Sc. EXAMINATION

(Main/Reappear) (Batch 2018 Onwards)

(Third Semester)

BOTANY

BOT-301-L, Paper VII

Plant Anatomy

*Time : 3 Hours*

*Maximum Marks : 80*

**Note :** Attempt any *Five* questions. Q. No. **1** is compulsory. All questions carry equal marks.

**1.** Define the following :

- (a) Syndetocheilic stomata
- (b) Amphicribal
- (c) Periclinal division
- (d) Companion cell

- (e) Dendrochronology
- (f) Tissue system
- (g) Cork
- (h) Conjoint, Collateral and Open vascular bundles. **2×8=16**

### Unit I

2. (a) Describe any *two* theories regarding organisation of shoot apical meristem. **8**
- (b) What are Simple Permanent Tissues ? Describe the various kinds of Parenchyma. **8**
3. (a) What are Complex Tissues ? Explain in detail various components of Phloem. **8**
- (b) What is Meristematic Tissue ? Explain 'Histogen Theory' for Shoot Apex. **8**

### Unit II

4. (a) Describe the primary structure of Dicot Root with well labelled diagram. **8**

- (b) Point out the basis differences in the anatomy of Root and Stem. **4**
- (c) Write a short note on Epidermal Hairs. **4**
- 5. (a) What are Stomata ? Explain its various types with suitable examples. **8**
- (b) Draw only Transverse Section of Monocot Leaf. **4**
- (c) Write a short note on Trichomes. **4**

### Unit III

6. (a) With suitable diagrams, explain anomalous secondary growth in DRACAENA. **8**
- (b) Differences between Heart wood and Sap wood. **4**
- (c) Write a short note on Lenticels. **4**
7. (a) Define Cambium. Describe the origin, structure and activity of Vascular Cambium. **8**