



K19U 0250

Reg. No. : .....

Name : .....

**II Semester B.Sc. Degree (CBCSS – Reg./Supple./Improv.)  
Examination, April 2019  
(2014 Admission Onwards)  
CORE COURSE IN BOTANY/PLANT SCIENCE  
2B02BOT/PLS : Angiosperm Anatomy and Microtechnique**

Time : 3 Hours

Total Marks : 40

**SECTION – A**

Answer **all** :

1. Calcium carbonate crystals found in the epidermal cells of Ficus
  - a) Raphides
  - b) Cystolith
  - c) Druses
  - d) Aleuron
2. Specialised fan-shaped cells seen on the upper epidermis of grasses
  - a) Bulliform cells
  - b) Lenticels
  - c) Hydathode
  - d) Bundle sheath cells
3. Which among the following is a natural dye ?
  - a) Safranin
  - b) Hematoxylin
  - c) Methylene blue
  - d) Eosin
4. Inner most nonfunctional secondary xylem is
  - a) Heart wood
  - b) Hard wood
  - c) Sap wood
  - d) Soft wood

**(4×1=4)**

**P.T.O.**



## SECTION – B

Answer **any eight** :

5. Write note on Farmer's formula.
6. Differentiate eccentric and concentric starch grains with examples.
7. How protoxylem lacunae is formed ?
8. What is maceration ?
9. Enumerate any four dehydrating agents.
10. Write a note on sledge microtome.
11. Describe the nodal anatomy of plants.
12. Write a note on any two mounting agents.
13. Mention any four functions of parenchyma.
14. Write the structure of Hydathodes.
15. Which are the tissues derived from procambium and vascular cambium ?
16. Write the structure of vascular bundle in Dracaena. (8×2=16)

## SECTION – C

Answer **any four** :

17. Differentiate and explain the process of single staining and double staining.
18. Explain anatomical variation in the primary structure of dicot root and monocot root.



19. What are complex tissues ? Explain with neat and labelled diagrams.
20. Explain various non living inclusions in plants.
21. What is periderm ? How periderm formation does takes place in the dicot stems ?
22. Explain simple and bordered pits with suitable diagrams. (4×3=12)

## SECTION – D

Answer **any one** :

23. Explain the anomalous secondary growth in Boerhaavia with suitable labelled sketches.
24. With suitable diagrams and examples explain the anatomical adaptations of hydrophytes and xerophytes.
25. Explain the importance and compositions of various killing and fixing agents. (1×8=8)