



K20U 0295

Reg. No. :

Name :

**II Semester B.Sc. Degree (CBCSS – Supplementary/Improvement)
Examination, April 2020
CORE COURSE IN BOTANY/PLANT SCIENCE
2B02 BOT/PLS : Angiosperm Anatomy and Microtechnique
(2014-2018 Admissions)**

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** the questions.

1. Main component of primary cell wall is _____
(Cellulose, Hemicelluloses, Pectin, Suberin)
2. _____ is a vital stain.
(Safranin, Orcein, Hematoxylin, Trypan blue)
3. Perforation plate is seen in _____
(Trachea, Tracheids, Sieve tubes, Fibers)
4. _____ is an example of secondary meristem.
(Vascular cambium, Fascicular cambium, Apical meristem, Cork cambium)

(4×1=4)

PART – B

Answer **any eight**.

5. What is a meristem ? What are the characteristics of meristematic cells ?
6. Brief note on different types of xylem vessels based on thickening.
7. What are the different types of cell wall growth ?
8. Briefly describe about different types of pits.

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9. Distinguish between sieve tubes and sieve elements with suitable diagram.
10. Give the formula of two fixatives.
11. Brief about maceration.
12. What is tylosis ? What is its significance in wood ?
13. Differentiate between leaf trace and leaf gap.
14. What is the significance of double staining ?
15. What are bulliform cells ? What is its significance ?
16. Give an anatomical explanation of why dicot leaves are dorsiventral. **(8×2=16)**

PART – C

Answer **any four** of the following.

17. Briefly explain the structure and function primary cell wall with suitable diagrams.
18. Briefly explain about the secretory substances in plants with suitable diagram.
19. Give an illustrated note on phloem elements.
20. What is a meristem ? How meristems are classified ?
21. Briefly explain floral anatomy.
22. List out the anatomical adaptations of xerophytes. **(4×3=12)**

PART – D

Answer **any one** of the following.

23. What is a tissue ? How tissues are classified ? Write a brief note on simple tissues with suitable diagrams.
24. Explain the anomalous secondary thickening in Boerhaavia stem with suitable diagram.
25. What is microtomy ? Write an essay of different types of microtomes. **(1×8=8)**