

B Sc DEGREE END SEMESTER EXAMINATION - JULY 2021**SEMESTER 4 : BOTANY (CORE)****COURSE : 19U4CRBOT4 : ANATOMY, MICROTECHNIQUE AND ANGIOSPERM MORPHOLOGY***(For Regular - 2019 Admission)*

Time : Three Hours

Max. Marks: 60

PART A**Answer All (1 mark each)**

1. What are simple laticifers?
2. What are ramiform pits?
3. What is late wood?
4. Give one example for a nuclear stain.
5. What is Dioxan?
6. Name the endodermal cell without casparian band.
7. What is fascicular cambium.
8. What is a carpel?

(1 x 8 = 8)**PART B****Answer any 6 (2 marks each)**

9. What is the general arrangement of secondary wall layers?
10. Lignified cells are usually dead. Why?
11. What is meant by reaction wood?
12. Heartwood is darker and harder. Justify.
13. What are whole mounts? Give one example.
14. The cambial ring in a typical dicot root is purely secondary in origin. Justify.
15. What is a schizocarpic fruit? Provide one example.
16. What is capitulum. Give example.

(2 x 6 = 12)**PART C****Answer any 4 (5 marks each)**

17. What are raphides? How do they differ from cystolith? Draw suitable diagrams and elaborate your answer.
18. What are tyloses? How do they develop in trees? What are their functions?
19. What are mounting media? Compare and contrast Canada balsam and DPX.
20. Compare the functions of pith to that of pericycle
21. Explain the types of stomata seen in angiosperms.
22. What is aestivation? With suitable examples explain different types of aestivation.

(5 x 4 = 20)**PART D****Answer any 2 (10 marks each)**

23. Write an essay on various secretory products in plant cell.
24. Discuss the components and functions of the vascular tissue system. Explain different types of vascular bundles.
25. With the help of suitable diagrams discuss the secondary thickening in *Dracaena* stem?
26. Write an essay on different types of Fleshy, Multiple and Aggregate fruits. Draw labelled diagrams with examples for each type.

(10 x 2 = 20)