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S – 2727

Reg. No. : .....

Name : .....

First Semester B.Sc. Degree Examination, January 2024

First Degree Programme under CBCSS

Botany

Complementary Course for Home Science, Zoology, Bio-Chemistry

BO 1131 : MICROTECHNIQUES, ANGIOSPERM ANATOMY AND REPRODUCTIVE BOTANY

(2022 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

(Draw diagrams wherever necessary)

SECTION – A

Answer **all** questions in **one** or **two** sentences. **Each** question carries **1** mark.

1. Name any two fixatives used in the laboratory.
2. What is double staining?
3. What is a conjoint vascular bundle?
4. What are transfer cells?
5. What are vascular rays?
6. What are passage cells?
7. What is an apical meristems? Give an example.
8. What is periderm?

P.T.O.

9. What is callose?

10. What are middle layers?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** of the following. **Each** question carries **2** marks.

11. Write down the composition of Carnoy's fluid.

12. Differentiate between killing and fixing.

13. What are primary meristems?

14. List any two differences between dicot stem and monocot stem.

15. What is a calyptra?

16. Differentiate between brachysclereids and macrosclereids.

17. What is a prosenchyma?

18. List the components of ground tissue system.

19. What is a diffuse porous wood?

20. What are libriform fibres?

21. What is Nemec phenomenon?

22. Differentiate between amoeboid and secretory tapetum.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** of the following. **Each** question carries **4** marks.

23. Explain composition and uses of haematoxylin and acetocarmine.

24. Explain the structure, types and functions of collenchyma.

25. Compare the organization of root apices in dicots and monocots, according to korper-kappe theory.

26. Compare apical theory and histogen theory.

27. Enumerate the identifying features of primary dicot root.

28. Compare the features of heartwood and sap wood.

29. Briefly explain the anomaly seen in *Boerhaavia* stem.

30. Explain the features of a *Capsella* embryo.

31. Explain the *Polygonum* type of embryo sac development.

(6 × 4 = 24 Marks)

SECTION – D

Write essay on any **two** of the following. **Each** question carries **15** marks.

32. Briefly explain structure and functions of various components of phloem.

33. Explain the various categories of epidermal tissue system in plants.

34. With a labelled diagram intrastelar secondary growth in dicot stem.

35. Briefly describe the process of fertilization in plants.

(2 × 15 = 30 Marks)
