ST. DAVID'S COLLEGE LTD. THIVANDRUM

(Pages : 3)

H-2079

Reg. No. : .....

Name : .....

First Semester B.Sc. Degree Examination, November 2019

First Degree Programme under CBCSS

Complementary Course

BO 1131 : MICROTECHNIQUE, ANGIOSPERM ANATOMY AND REPRODUCTIVE BOTANY

(2014 - 2018 Admission)

Time : 3 Hours

Max. Marks : 80

I. Very short answer, answer **all** questions, one word to maximum of two sentences.

1. Name a synthetic stain.
2. What are mordants?
3. Tunica-Corpus theory was proposed by _____.
4. Give an example of secondary meristem.
5. What is dermatogen?
6. Mention the four types of cells in the xylem.
7. What are aerenchyma? What is its function?
8. Parenchymatous cells with plenty of chloroplasts are called _____.
9. Differentiate open and closed vascular bundles.
10. What is meant by double fertilization?

(10 × 1 = 10 Marks)

P.T.O.

II. Short answers, not to exceed one paragraph, answer any **eight** questions.

11. What is a fixative? Give one example.

12. What are the uses of acetocarmine?

13. Explain the preparation of Carnoy's fluid.

14. List any four objectives of plant anatomy.

15. Differentiate protoxylem and metaxylem.

16. What is dendrochronology?

17. What are the functions of sclerenchyma?

18. Differentiate exarch and endarch xylem.

19. Explain the structure of mesophyll in a dorsiventral leaf.

20. Differentiate fascicular and inter-fascicular cambium.

21. Describe the components of egg-apparatus in Angiosperms.

22. What is coleoptiles?

(8 × 2 = 16 Marks)

III. Short essay, not to exceed 120 words, answer any **six** of the following.

23. Explain the procedure for the preparation of acetocarmine stain.

24. What is meant by counter staining? Give one example.

25. What are the characteristics of meristematic cells?

26. Write a brief note on secretory tissues.

27. Differentiate phellum, phellogen and phelloderm.

28. How meristematic tissue is classified based on its origin? Give example for each group

29. Draw a labeled diagram of the T.S. of monocot leaf.

30. Explain the structure of bicollageral vascular bundle with a labeled diagram.

31. Describe the structure of male gametophyte in Angiosperms.

(6 × 4 = 24 Marks)

IV. Long essay, answer any **two** of the following.

32. With suitable diagrams, explain the theories of apical organization of root apex in plants.

33. With a labeled diagram, describe the anomalous secondary thickening in *Boerhavia*.

34. Explain the primary structure of monocot stem. Draw a labeled diagram of the CS of monocot stem.

35. With suitable diagram, explain the monosporic type of embryo sac development in plants.

(2 × 15 = 30 Marks)