(Pages : 4)

ALL SAINTS COLLEGE LIBRARY
No.
TRIVANDRUM

N – 4027

Reg. No. : .....

Name : .....

First Semester B.Sc. Degree Examination, June 2022

First Degree Programme under CBCSS

Botany

Complementary Course

BO 1131 : MICROTECHNIQUES, ANGIOSPERM ANATOMY AND REPRODUCTIVE BOTANY

(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

(Draw Diagrams wherever necessary)

SECTION – A

Answer **all** questions, **each** question carries **1** mark.

1. What is the source of acetocarmine dye?
2. What is a sieve tube?
3. Define Apical cell theory.
4. What is the function of apical meristem?
5. What are tyloses?
6. Mention the role of periderm.
7. What is scutellum?

P.T.O.

8. What is an orthotropous ovule?

9. What is Plumule?

10. What is a radial vascular bundle?

(10 × 1 = 10 Marks)

SECTION – B

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

11. Differentiate killing and fixing.

12. Explain different components of xylem.

13. What is Histogen theory?

14. Explain bulliform cells.

15. Explain tunica-corpus theory.

16. What is monosporic embryosac?

17. What is triple fusion? Explain its significance.

18. Draw a neat labeled diagram of embryosac.

19. Differentiate ring porous wood and diffuse porous wood.

20. How periderm is formed?

21. What is fertilization?

22. What are annual rings?

23. Explain the structure of plant stomata.

24. Explain the role of tapetum.

25. What are the salient features of meristematic tissues?

26. Comment on mesophyll tissue.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** of the following questions in not more than **120** words. **Each** carries **4** marks.

27. With the help of diagrams, explain different types of vascular arrangements in plants.

28. Write a note on simple tissues.

29. Explain the structure and function of cambium.

30. Explain complex tissues.

31. Explain megasporogenesis.

32. Describe the structure of pollen wall.

33. With the help of a diagram, explain the internal structure of a dicot leaf.

34. Give an account on secretary tissues in plants.

35. Explain the primary structure of a typical dicot stem with a diagram.

36. Explain how secondary growth occurs in a dicot root.

37. What is extrastelar secondary growth?

38. Differentiate exarch and endarch conditions with the help of diagram.

(6 × 4 = 24 Marks)

SECTION – D

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

39. Explain the primary structure of dicot root. Describe the secondary growth in dicot root with diagrams.

40. What are meristems? Explain the classifications of meristems.

41. Explain microsporogenesis and development of male gametophyte in angiosperms. Draw suitable diagrams.

42. Describe anomalous secondary growth in *Boerhavia* with labeled sketches.

43. Write an essay on the diversity of permanent tissues in plants.

44. Explain different stages leading to the development of female gametophyte in flowering plants.

(2 × 15 = 30 Marks)