ALL SAINTS COLLEGE

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R – 2355

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2023

First Degree Programme under CBCSS

Botany

Core Course

BO 1441 : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

(2014-2018 Admission)

Time : 3 Hours

Max. Marks : 80

PART – A

I. Answer all questions. Each question carries 1 mark.

1. Explain protonema.
2. Describe circinate vernation.
3. What is indusium?
4. Explain manoxylic wood.
5. Describe transfusion tissue.
6. Define spur shoot.
7. Identify pavement tissue.
8. Explain polyembryony.

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9. Write any two features of *Rhynia*.

10. Identify synangium.

(10 × 1 = 10 Marks)

PART – B

II. Answer **any eight** questions. Each question carries **2** marks.

11. Comment on girdle trace.

12. Write key features of *Lyginopteris*.

13. Describe the magasporophyll of *Pinus*.

14. Illustrate female strobilus of *Gnetum*.

15. Comment on microsporophyll of *Cycas*.

16. Explain the gemmae of *Marchantia*.

17. Comment on trabeculae of *Selaginella*.

18. Describe meristele.

19. Distinguish liverworts from mosses.

20. Compare the indusium of *Pteris* and *Marsilea*.

21. Comment on the vegetative propagation of *Cycas*.

22. Illustrate the aerial shoots of *Psilotum*.

(8 × 2 = 16 Marks)

PART – C

III. Answer **any six** questions. Each question carries **4** marks.

23. Write an account on different types of fossils.

24. Briefly describe the anatomy of the primary structure of *Pinus* stem.

25. Describe the anatomy of the coralloid root of *Cycas*.

26. Illustrate the anatomy of rhizome of *Marsilea*.

27. Contrast the structural peculiarities of the strobilus of *Selaginella*.

28. Comment on the different types of protostele.

29. Write an account on the sporophyte of *Riccia*.

30. Describe the anatomy of *Marchantia thallus* with the help of a diagram.

31. Illustrate the seed habit characters of *Selaginella*.

(6 × 4 = 24 Marks)

PART – D

IV. Answer **any two** questions. Each question carries **15** marks.

32. Illustrate the life cycle of *Funaria* with suitable diagrams.

33. Describe the sexual reproduction in *Selaginella* with special reference to megagametophyte.

34. Write an account on the reproduction of *Gnetum* with special reference to advanced features.

35. Compare and contrast the reproduction of *Pteris* and *Marsilea*.

(2 × 15 = 30 Marks)
