ST. SAINTS COLLEGE TRIVANDRUM

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R – 2356

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2023

First Degree Programme under CBCSS

Botany

Core Course III

BO 1441 : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

(2019 Admission onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

I. Answer **all** questions in a word, one or two sentences. Each question carries 1 mark.

Write short notes on

1. Elaters
2. Annulus
3. Protstele
4. Heterospory
5. Sori
6. Eusporangiate
7. Ovuliferous scale

P.T.O.

8. Endosporic

9. Bars of Sanio

10. Lagenostoma

(10 × 1 = 10 Marks)

SECTION B

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

11. Define Heterophyllum.

12. What is Synagium?

13. Briefly explain Indusium.

14. Give an account of winged pollen of *Pinus*.

15. What is Pycnoxylic wood?

16. Define meroblastic development of embryo.

17. Explain microsporophyll of *Cycas*.

18. Draw the structure of *Gnetum* ovule.

19. Write an account of Lepidostrobus.

20. What is geological time scale?

21. Comment on *Rhynia*.

22. Explain Gemmae with a neat diagram.

(8 × 2 = 16 Marks)

SECTION C

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

23. Briefly describe Rhizopore.

24. Comment on *Funaria* capsule.

25. Briefly write notes on *Pteris* sporangium.

26. Explain *Marselia* sporocarp.

27. What is the morphology of Gnetum male cone?

28. Give an account of the coralloid root of *Cycas*.

29. Describe the anatomy of *Pinus* needle.

30. Give an account of economic importance of Bryophytes.

31. Comment on Lygenopteris.

(6 × 4 = 24 Marks)

SECTION D

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

32. Give an account of Sexual reproduction in Marchantia.

33. Briefly describe the different steles of pteridophytes you have studied.

34. Describe in brief development of gametophytes in Pinus.

35. Give an account of Lepidodendron and Lepidocarpon.

(2 × 15 = 30 Marks)