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Fourth Semester B.Sc. Degree Examination, May 2021

First Degree Programme under CBCSS

Botany

Core Course

BO 1441 : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

(2019 Admission Regular)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What is primary protonema?
2. What is glossopodium?
3. *Lepidocarpon.*
4. Bars of Sanio.
5. What is leptosporangiate?
6. What is a fossil?
7. Give example for an aquatic species of *Riccia.*
8. What is impression?

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9. Why pteridophytes are called vascular cryptogames?

10. What is shower of sulphur?

(10 × 1 = 10 Marks)

SECTION – B

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

11. Describe rhizoids in *Riccia.*

12. With the help of a diagram, explain the internal structure of *Selaginella* stem.

13. Male cone of *Pinus.*

14. Explain the structure of sporophyte in *Riccia.*

15. List any four uses of gymnosperms.

16. Draw a neatly labeled diagram *of Gnetum* ovule.

17. Explain classification of bryophytes proposed by Proskauer.

18. List the uses of pteridophytes.

19. 'Male flower' of *Gnetum.*

20. Leaf dimorphism in *Pinus.*

21. Explain the morphology of gametophyte in *Funaria.*

22. Species of *Rhynia.*

23. Describe synangium in *Psilotum.*

24. Explain the internal structure of *Funaria* stem.

25. Give an account on the vegetative morphology of *Pteris.*

26. Explain the anatomy of *Rhynia* stem.

(8 × 2 = 16 Marks)

SECTION – C

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

27. Describe the morphology of fossil *Lepidodendron.*

28. Comment on the vegetative reproduction in *Riccia.*

29. Coralloid root.

30. What is Geological Time Scale? Explain.

31. Explain the sporophyte morphology *of Psilotum.*

32. Draw and explain the internal structure of *Pinus* needle.

33. Describe the thallus anatomy of *Riccia* with the help of a diagram.

34. With the help of a diagram, explain the structure of *Funaria* capsule.

35. Explain the structure of the female cone *of Pinus* with a diagram.

36. Write a note on the economic importance of Bryophytes.

37. Outline the evolutionary trends in gymnosperms.

38. Write an account on the fossil gymnosperm *Lyginopteris.*

(6 × 4 = 24 Marks)

SECTION – D

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

39. Give an account on the morphology and life cycle *of Marsilea.*

40. Explain the structure and life cycle *of Anthoceros.*

41. With suitable diagrams, explain the sexual reproduction in *Cycas.*

42. Describe the Stelar Evolution in Pteridophytes with diagrams.

43. Explain the morphological and anatomical features of *Gnetum.* Add a note on its advanced characters.

44. Explain the morphology, thallus anatomy and reproduction in *Marchantia* with diagrams.

(2 × 15 = 30 Marks)
