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Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2024

Career Related First Degree Programme under CBCSS

Botany and Biotechnology

Core Course VI

BB 1441 : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY

(2019 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word or sentence.

1. Name an aquatic species of *Riccia*.
2. Explain the peculiarity of male gametes in *Marsilea*.
3. Define vallecular canal.
4. What is rosin?
5. Mention the function of ligule.
6. What is *Lepidocarpon*?

P.T.O.

7. What is impression?

8. What are leaf girdles in *Cycas*?

9. Define actinostele.

10. What are sulphur showers?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. Short answer (not to exceed **one** paragraph).

11. Describe the thallus organisation of *Marchantia*.

12. Explain alternation of generations in *Funaria*.

13. What is *Protonema*?

14. Explain heterospory in *Selaginella* and its significance.

15. Describe the anatomy of *Pinus* needle.

16. Explain the structure of male cone of *Pinus*.

17. Point out the peculiarities of Carboniferous period.

18. What is petrifaction?

19. Comment on *Lepidocarpon*.

20. Explain the structure of *Marsilea* sporocarp.

21. Explain seed habit in Pteridophytes.

22. Discuss economic importance of Pteridophytes.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. Each question carries **4** marks. (Answer not to exceed **120** words)

23. Outline the classification of Pteridophytes.

24. Enumerate the salient features of Bryophytes.

25. Discuss stelar evolution in Pteridophytes.

26. Briefly explain reproduction in *Equisetum*.

27. Describe the reproductive structures of *Pinus*.

28. Explain the geological time scale.

29. List the advanced features of *Gnetum*.

30. Describe the morphology of *Lyginopteris*.

31. Explain the sporophyte of *Riccia*.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks. (Answer not to exceed **three** pages)

32. Discuss major evolutionary transitions that led to the emergence of land plants. How do Bryophytes fit into this evolutionary history?

33. Compare and explain various types of Gymnosperm life cycle and their significance.

34. Discuss the significance of Paleobotany in reconstructing evolutionary history of plants.

35. Explain the life cycle of *Marsilea*.

(2 × 15 = 30 Marks)
