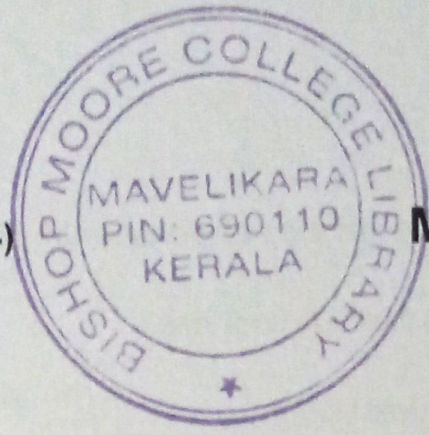


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M – 4502

Reg. No. : .....

Name : .....

**Fourth Semester B.Sc. Degree Examination, February 2022**

**Career Related First Degree Programme under CBCSS**

**Group 2(a) Botany and Biotechnology**

**Core Course:**

**BB 1441 – BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND  
PALEOBOTANY**

**(2019 Admission)**

**Special Examination**

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What is diploxylic condition?
2. Define heterospory.
3. What are tuberculated rhizoids?
4. What are elaters?
5. Define alternation of generations.
6. What is a fossil?

P.T.O.



7. Write the function of peristomial teeth in *Funaria*.
8. What is antheridiophore?
9. Define paleobotany.
10. What is a synangium?

(10 × 1 = 10 Marks)

### SECTION – B

Answer any **eight** questions, not exceeding a paragraph. **Each** question carries **2** marks.

11. What are coralloid roots? Give example.
12. Give the systematic position of *Marchantia*.
13. Comment on the microsporophylls in *Cycas*.
14. What are Sporocarps? Give example.
15. Write short note on transfusion tissue.
16. Mention the hydrophytic features of *Equisetum*.
17. Distinguish between Eusporangium and Leptosporangium.
18. Comment on Radiocarbon dating.
19. What is meant by prothallus?
20. Describe the structure of sporangium in *Rhynia*.
21. What is meant by Geological time scale?
22. Give the systematic position of *Lepidodendron*.

23. What are Gemmae? Mention its function.
24. Mention the role of bulbils in *Cycas*.
25. Describe the structure of sporophyte in *Riccia*.
26. 'Bryophytes are the amphibians of plant kingdom'. Justify the statement.

(8 × 2 = 16 Marks)

### SECTION – C

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

27. Describe the internal structure of *Riccia* thallus.
28. Mention any four similarities between Pteridophytes and Bryophytes.
29. Briefly describe the anatomy of *Lyginopteris* young stem.
30. Give an account of the types of fossils.
31. Mention the economic importance of *Cycas*.
32. Describe the external morphology of *Gnetum*.
33. Describe the methods of vegetative reproduction in *Riccia*.
34. Mention the xerophytic adaptations of *Cycas* leaflet.
35. Describe the structure of *Marchantia* sporophyte.
36. Give a brief account on the economic importance of Bryophytes.
37. Comment on the external morphology of *Psilotum*.
38. Describe the internal structure of *Pinus* needle.

(6 × 4 = 24 Marks)

## SECTION – D

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

39. Describe in detail the evolution of stelar types in Pteridophytes.
40. Give a detailed account on the structure and reproduction in *Lepidodendron*.
41. Write the classification of Gymnosperms and mention the diagnostic features of major classes.
42. Describe the external morphology of *Pinus*. Add a brief account on its reproduction.
43. Give an account on the structure and reproduction in *Funaria*.
44. Describe the external morphology of *Pteris*. Add a note on its reproduction.

**(2 × 15 = 30 Marks)**

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