

Reg. No. :

Name :

Fourth Semester B.Sc. Degree Examination, August 2022

Career Related First Degree Programme under CBCSS

Group 2(a) Botany and Biotechnology

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

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. What is transfusion tissue?
2. Define protonema.
3. Name the Pteridophyte known as water fern'.
4. What is the function of peristome teeth?
5. Give an example for a manoxylic wood.
6. What is vallecular canal?
7. Define apospory.
8. What is pollination drop?
9. Name a fossil Pteridophyte.
10. What is heterospory?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Answer any **eight** questions **Each** question carries **2** marks. (Answer not to exceed **one** paragraph)

11. Mention the xerophytic adaptations of *Equisetum* stem.
12. What are coralloid roots? Mention its significance.
13. Name two types of rhizoids in Bryophytes.
14. Differentiate between eusporangiate and leptosporangiate development.
15. Explain the morphology of *Marchantia* thallus.
16. What is polyembryony?
17. Describe the sporangium in *Rhynia*.
18. What is a synangium?
19. Explain the microsporophyll of *Cycas*.
20. List the medicinal importance of Pteridophytes.
21. Describe the stele in *Selaginella*.
22. What is siphonogamy?
23. What are the applications of Paleobotany?
24. Illustrate the structure of sporophyte in *Marchantia*.
25. Explain dwarf shoots in *Pinus*.
26. What are gemmae cups?

(8 × 2 = 16 Marks)

SECTION – C

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

27. Discuss the ecological importance of Bryophytes.
28. Illustrate the internal structure of *Pinus* needle.
29. Describe the strobilus in *Equisetum*.
30. Explain the structure of sporophyte in *Funaria*.
31. List the economic importance of Gymnosperms.
32. Describe the structure of *Marsilea* sporocarp.
33. Explain the thallus anatomy of *Riccia*.
34. Rhizophore is an 'organ sui-generis'. Substantiate the statement.
35. Discuss various types of fossils.
36. Brief a note on male strobilus in *Gnetum*.
37. Explain the prothallus in *Pteris*.
38. Discuss the angiospermic features of *Gnetum*.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. Each question carries **15** marks. (Answer not to exceed **3** pages)

39. Describe the life cycle of *Selaginella* with suitable diagrams.
40. Give an account on Geological Time Scale.
41. With suitable sketches, explain the life cycle of *Cycas*.

42. Explain stelar evolution in Pteridophytes with suitable sketches.
43. What are the general characters of Gymnosperms? Describe the affinities of Gymnosperm with Angiosperms.
44. Explain alternation of generations in *Riccia* with illustrations. (2 × 15 = 30 Marks)
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