

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, August 2022

First Degree Programme under CBCSS

**BOTANY**

**CORE COURSE**

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

**(2014–2018 Admission)**

Time : 3 Hours

Max. Marks : 80

**PART - A**

Answer All questions.  
Each question carries 1 mark.

1. What is Peristome?
2. Define Protostele.
3. Comment on rhizophore.
4. Define pycnoxylic wood.
5. Comment on accessory transfusion tissue.
6. What is tentpole?
7. Illustrate spur shoot.

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8. Explain diploxylic condition.
9. Write any two key features of *Lepidodendron*.
10. What is strobilus?

(10 × 1 = 10 Marks)

### PART – B

Answer any **Eight** questions.  
Each question carries **2** mark.

11. Comment on arm parenchyma.
12. Illustrate sori.
13. Comment on megasporophyll of *Cycas*.
14. Describe the male strobilus of *Gnetum*.
15. Illustrate the microsporophyll of *Pinus*.
16. Write the name of any two ornamental ferns.
17. Comment on ligule.
18. Describe sporocarp.
19. Contrast the mosses from liverworts.
20. Compare the indusium of *Marsilea* and *Pteris*.
21. Comment on the mode of vegetative propagation of *Pteris*.
22. Explain the features of sporophyll of *Pteris*.

(8 × 2 = 16 Marks)

### PART – C

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

23. Write an account on the formation of fossils.
24. Briefly describe the primary structural anatomy of *Gnetum* stem.
25. Illustrate the anatomy of the primary root of *Cycas*.
26. Briefly describe anatomical peculiarities of *Selaginella* stem with suitable diagram.
27. With suitable diagram identify the structural features of the stem of *Psilotum*.
28. Write an account on different types of protosteles with suitable diagrams.
29. Comment on different eras in geological time scale.
30. Briefly describe the structure of sporophyte of *Marchantia* with suitable diagram.
31. How does heterospory leads to seed habit?

(6 × 4 = 24 Marks)

### PART – D

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

32. Describe the structure of sporophyte of *Funaria* with the help of a diagram. Illustrate its spore dispersal mechanism.
33. Explain the life cycle of *Selaginella* with the help of a schematic diagram. Give special reference to heterospory.
34. Illustrate the life cycle of *Gnetum*. Mention the advanced features.
35. Describe the structure of sporocarp of *Marsilea* with the help of a diagram. Comment on its dehiscence mechanism.

(2 × 15 = 30 Marks)