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Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2018
First Degree Programme under CBCSS
BOTANY
Core Course
BO 1441 – Bryology, Pteridology, Gymnosperms and Paleobotany
(2014 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **a word** or **one** or **two** sentences. **Each** question carries 1 mark. Draw diagrams only if specified in the question.

1. Which era is known as 'age of cycads' ?
2. What is ramenta ?
3. Explain circinate vernation with example.
4. What is a ligule ?
5. Define actinostele.
6. What is calyptra ?
7. What is transfusion tissue ?
8. Name a genus with winged pollen.
9. Name the types of rhizoids in *Riccia*.
10. Who is the father of Palaeobotany ?

(10×1=10 Marks)

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SECTION – B

Answer **any 8** questions. **Each** question carries **two** marks. Answer **not** to exceed **one** paragraph.

11. Write short note on fossil fuels.
12. Explain homospory and heterospory with suitable example.
13. What is alternation of generation ?
14. Enumerate the primitive features of *Riccia sporophyte*.
15. What are elaters ? Mention its structure and function.
16. Differentiate perigynium and perichaetium.
17. Explain the structure of a single gemma.
18. Enumerate the angiosperm characters of *Gnetum*.
19. Distinguish the microsporophyll and megasporophyll of *Cycas*.
20. Short note on ornamental pteridophytes.
21. Hydrophytic characters of *Marsilea*.
22. Enumerate the salient features of coralloid root. **(8x2=16 Marks)**

SECTION – C

Answer **any 6** of the following. **Each** question carries **4** marks.

23. Write short note on *Lepidocarpon*.
24. Describe the internal structure of *Marsilea* sporocarp.
25. Draw the L S of *Cycas* ovule and discuss.
26. Write short note on geological time scale.
27. Briefly describe the morphological features of *Rhynia*.

28. Explain the structure of *Psilotum* synangium with suitable diagrams.
29. Enumerate the dissimilarities of bryophytes with peridophytes.
30. Discuss the spore dispersal mechanism in *Pteris*.
31. Name and discuss the erect umbrellla shaped structure where female sex organs are located in *Marchantia*. **(6×4=24 Marks)**

SECTION – D

Answer **any 2** questions. **Each** question carries **15** marks.

32. Compare the sporophytes of bropytes that you have studied ?
33. With suitable diagrammatic representations, discuss the life cycle of *Pinus*.
34. Discuss various methods of fossilization.
35. Compare anatomically the aerial stem of *Psilotum* and *Selaginella* with that of *Marsilea* rhizome giving emphasis to the types of steles present in them. **(2×15=30 Marks)**