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(Pages : 3)

G– 4078

Reg. No. : .....

Name : .....

Fourth Semester B.Sc. Degree Examination, July 2019

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 :

1. Scientific name of resurrection plant.
2. What is peristomial teeth?
3. Give examples for living fossils.
4. What do you mean by bars of Sanio?
5. Name of an aquatic species of Riccia?
6. Give example for symbiotic association in Gymnosperms.
7. What is polystele?

P.T.O.

8 What do you mean by alternation of generations?

9 What is sporogonium?

10 Who is the father of Indian Bryology?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions :

11. Explain the arrangement of sporophylls in Selaginella strobilus.

12. Describe the anatomy of Marsilea rhizome with a labelled diagram.

13. Justify the statement cycas seed represent three phases of life cycle.

14. Differentiate manoxylic and pycnoxylic woods.

15. Define siphonogamy.

16. Give a brief description on female reproductive structure in Gnetum.

17. What are the different vegetative reproduction methods shown by Riccia?

18. Write any four differences between liverworts and mosses?

19. Write notes on Ligule in Selaginella.

20. Write any four similarities between bryophytes and pteridophytes.

21. Explain the anatomical peculiarities of Cycas leaflet.

22. Explain the evolutionary significance of heterospory.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions.

23. Explain the morphology of Psilotum.

24. Describe the anatomy of Marchantia plant body.

25. Write the morphological characteristics of Gnetum.

26. Compare the steles of Selaginella stem and Pteris rhizome.

27. Draw a labelled diagram showing the anatomy of sporocarp in Marsilea.

28. Write any four distinguishing characters of Cycas.

29. Describe the sporophyte of Marchantia.

30. Explain the alternation of generations in Selaginella.

31. What is the structure of Pteris prothallus?

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions.

32. Explain why gymnosperms occupy a position in between pteridophytes and angiosperms.

33. Describe the life cycle of Funaria.

34. Explain the process of fossil formation. Comment on the objectives of Paleobotanical studies.

35. Explain the development of female gametophyte in Gnetum. Give a brief account on its post fertilization changes.

(2 × 15 = 30 Marks)
