

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2017

(CUCBCSS-UG)

Botany

BOT 4B 04—PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

Fill in the blanks or Answer in one word :

1. Rhizophores are seen in _____.
2. Name a bryophyte exhibiting symbiotic association with Nostoc.
3. The cell wall of *Pinnularia* is impregnated with silica and is known as _____.
4. Name one homosporous pteridophyte.
5. The predominant phase in the life cycle of *Riccia* is the _____ phase.
6. Which alga produce nucule and globule as sex organs ?
7. Name a plant which produce peristome teeth.
8. Name the bean shaped structure enclosing the sporangia in *Marsilea*.
9. _____ is a unicellular alga belonging to the class Chlorophyceae.
10. Name the sterile cavities found on the surface of the 'leaves' and airbladders in *Sargassum*.

(10 × 1 = 10 marks)

Part B (Short Answer Type Questions)

*Answer all questions.
Each question carries 2 marks.*

11. What are heterocysts ?
12. Write a note on the photosynthetic pigments seen in algae.
13. Explain scalariform conjugation.
14. Citing an example define coenobium.
15. Differentiate between protostele and siphonostele.
16. Explain the aquatic adaptations of *Marsilea*.
17. What are dwarf males ?
18. Explain the economic importance of diatoms.

Turn over

19. Explain the habit of Chara.
20. Write a note on fossil bryophytes.

(10 × 2 = 20 marks)

Part C (Short Essays)

*Answer any six questions.
Each question carries 5 marks.*

21. Explain the sexual reproduction in Vaucheria.
22. List out the salient features of the sporophyte of Anthoceros.
23. What are 'cap cells'? Explain the formation of 'cap cells'.
24. Write a note on the economic importance of pteridophytes.
25. Enumerate the major differences between bryophytes and pteridophytes.
26. With the help of a simple sketch explain the structure of Equisetum strobilus.
27. With the help of a labeled diagram explain the thallus anatomy of Riccia.
28. Write brief notes on (a) aplanospores (b) akinetes (c) Palmella stage.

(6 × 5 = 30 marks)

Part D (Essay Questions)

*Answer any two questions.
Each question carries 10 marks.*

29. With the help of diagrams explain the life cycle of *Selaginella*.
30. Explain the process of sexual reproduction in *Sargassum*.
31. With the help of sketches explain the sexual reproduction in *Funeria*.

(2 × 10 = 20 marks)