

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2018

(CUCBCSS-UG)

Botany

BOT 4B 04—PHYCOLOGY, BRYOLOGY AND PTERIDOLOGY

Time : Three Hours

Maximum : 80 Marks

Part A*Answer all questions.*Fill in the blanks *or* Answer in one word :

1. False indusium formed by the in-folding of pinnae is seen in _____.
2. Which bryophyte produce protonema?
3. Formation of sporophytes directly from gametophyte with out sexual fusion is called as _____.
4. Ploidy of the spores produced by bryophytes.
5. The predominant phase in the life cycle of *Anthoceros* is the _____ phase.
6. Which alga produce cap cells?
7. Name an alga exhibiting scalariform conjugation.
8. Which pteridophyte is called 'whisk fern'?
9. _____ is a marine alga belonging to the class Phaeophyceae.
10. Name the female sex organ produced by *Chara*.

(10 × 1 = 10 marks)

Part B (Short Answer Type Questions)*Answer all questions.*

11. Explain the structure of the sporophyte of *Riccia*.
12. Write a note on the economic importance of algae.
13. Explain the structure and function of heterocyst.
14. With the help of a labeled diagram explain the structure of one cell of *Spirogyra*.
15. Distinguish between dictyostele and solenostele.
16. Explain the formation of elaters in *Equisetum* spore.
17. With the help of a diagram, explain the structure of archegonial cluster in *Funeria*.

Turn over

18. Explain the structure of *Selaginella strobilus*.
19. Explain the anatomy of *Anthoceros* thallus.
20. What are the uses of diatomaceous earth?

(10 × 2 = 20 marks)

Part C (Short Essays)

Answer any six questions.

21. Explain the structure of the male sex organ in *Chara*.
22. Write a note on economic importance of bryophytes.
23. Write an account on the sexual reproduction in *Volvox*.
24. Write a note on the salient features of bryophytes.
25. Using words and arrows illustrate the general life cycle pattern of heterosporous pteridophytes.
26. Explain the mechanism of dehiscence of *Marsilea* sporocarp.
27. With the help of a labeled diagram explain the thallus anatomy of *Riccia*.
28. Write brief notes on (a) frustule (b) coenobium (c) *Palmella* stage.

(6 × 5 = 30 marks)

Part D

Answer any two questions.

29. With the help of suitable diagrams, explain the life cycle of *Pteris*.
30. Explain the process of sexual reproduction in *Oedogonium*.
31. With the help of sketches, explain the structure and dehiscence of *Funeria* sporophyte.

(2 × 10 = 20 marks)