

Reg. No. :

Name :

**III Semester B.Sc. Degree (C.B.C.S.S. – O.B.E.-Regular/Supplementary/
Improvement) Examination, November 2024
(2019 to 2023 Admissions)
CORE COURSE IN BOTANY/PLANT SCIENCE
3B03BOT/PLS : Plant Diversity I-Algae and Bryophytes**

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams wherever specified.

**PART – A
(Objective type questions)**

(4×1=4)

Answer all questions.

1. Gemmae cups are seen in

a) <i>Riccia</i>	b) <i>Anthoceros</i>
c) <i>Polysiphonia</i>	d) <i>Marchantia</i>
2. Auxospore formation is a feature in

a) Xanthophyceae	b) Bacillariophyceae
c) Phaeophyceae	d) Chlorophyceae
3. Stellate chloroplast is found in

a) <i>Chara</i>	b) <i>Oedogonium</i>
c) <i>Zygnema</i>	d) <i>Vaucheria</i>
4. An example of a parasitic alga

a) <i>Sargassum</i>	b) <i>Cephaleuros</i>
c) <i>Chara</i>	d) <i>Oscillatoria</i>

**PART – B
(Short Essay)**

(8×2=16)

Answer any 8 questions.

5. Summarise the commercial products derived from algae.
6. Describe protonema.

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7. Give the salient features of Xanthophyceae.
8. Briefly explain the cell structure of *Ulothrix*.
9. Describe the ecological significance of bryophytes.
10. Define coenobium.
11. List out the medicinal uses of bryophytes.
12. Explain the structure of *Pinnularia*.
13. Discuss the role of algae as bioremediation agents.
14. Explain the methods for vegetative reproduction in bryophytes.
15. Define Gongrosira stage.
16. Discuss the methods of counting and culture of algae.

**PART – C
(Essay)**

(4×3=12)

Answer any 4 questions.

17. Explain the methods for preserving macroalgae.
18. Analyze the evolutionary trends and affinities of algae with microbes.
19. Explain the structure of nucle and globule in *Chara*.
20. Enumerate the steps involved in collection and preservation of bryophytes.
21. Explain the type of life cycles seen in algae.
22. Describe the key morphological features of *Sargassum* and their adaptations for survival in marine environments.

**PART – D
(Long Essay)**

(1×8=8)

Answer any one question.

23. Explain the life cycle of *Polysiphonia* with the help of suitable diagrams.
24. Critically evaluate the evolutionary trends and affinities of bryophytes with algae and pteridophytes. Add a note on the evolution of its gametophyte.
25. Describe the life cycle of *Funaria*. Comment on its advanced features.