



K23U 3410

Reg. No. :

Name :

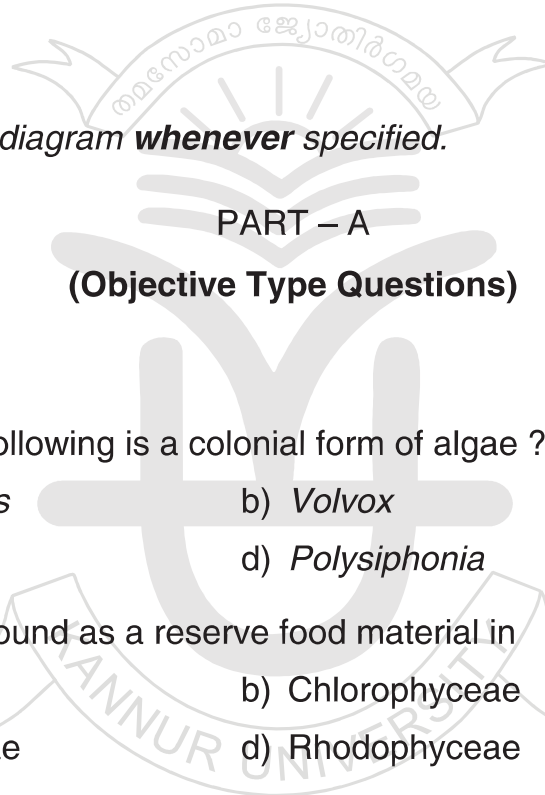
III Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2023
(2019 to 2022 Admissions)

CORE COURSE IN BOTANY/PLANT SCIENCE
3B03BOT/PLS : Plant Diversity I – Algae and Bryophytes

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagram whenever specified.



PART – A

(Objective Type Questions)

Answer all :

(4×1=4)

- Which among the following is a colonial form of algae ?
 - Chlamydomonas*
 - Volvox*
 - Cladophora*
 - Polysiphonia*
- Floridian starch is found as a reserve food material in
 - Phaeophyceae
 - Chlorophyceae
 - Bacillariophyceae
 - Rhodophyceae
- The presence of pyrenoids in algae is an adaptation to enhance
 - Reproduction
 - Photosynthetic efficiency
 - Mobility
 - Water storage
- What are rhizoids in *Riccia* ?
 - Reproductive organs
 - Spore-producing organs
 - Anchoring and absorbing organs
 - Photosynthetic organs

P.T.O.



PART – B
(Short essay questions)

Answer **any eight** :

(8×2=16)

5. Describe the special features of *Oedogonium* filament.
6. Describe the structure of female sex organ in *Chara*.
7. Explain the significance of Walne's medium in the cultivation of algae. List out its main components.
8. What are the distinctive features of *Pinnularia* diatoms that contribute to their ecological importance in aquatic ecosystems ?
9. Describe the thallus structure of *Ulothrix*.
10. Describe the relationship between algae and bryophytes.
11. What is algal bloom ? Discuss its causes.
12. Describe some common methods for preserving phytoplankton and macroalgae.
13. Describe the salient features of liverworts.
14. Describe the unique reproductive structures found in *Marchantia*.
15. Describe the ecological significance of Bryophytes.
16. Describe various techniques used for the collection and preservation of Bryophytes.

PART – C
(Essay questions)

Answer **any four** :

(4×3=12)

17. Explain the cell structure of *Chlamydomonas*. Describe a prominent structural feature that distinguishes them from other unicellular organisms.
18. Describe the process of conjugation in *Zygnema*.



19. Explain the various modes of reproduction in algae.
20. Describe the classification of algae by Fritsch and provide a brief overview of the characteristics that define each group.
21. Explain the economic importance of algae, highlighting their beneficial aspects.
22. Explain the structure of sporophyte in *Anthoceros*.

PART – D

(Long essay questions)

Answer **any one** :

(1×8=8)

23. Discuss the life cycle, ecological significance and adaptive features of *Sargassum*.
24. Explain the life cycle of *Polysiphonia* with suitable diagrams.
25. Describe the life cycle and ecological significance of *Funaria*.

