

19. (a) Analyse on Internal structure of lichens.

Or

- (b) Evaluate the economic importance of lichens.

20. (a) Discuss the salient features of *Anthoceros*.

Or

- (b) Describe the general characters of *Polytrichum*.

PART C — ( $3 \times 10 = 30$ )

Answer any THREE questions.

21. Write an essay on economic importance of Algae.
22. Distinguish the characters of Prochlorophyceae from Phaeophyceae.
23. Describe different types of reproduction in fungi.
24. Explain the thallus organization and reproduction in Lichens.
25. Discuss on the reproduction mechanism in Bryophytes.
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S.No. 6183

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(For candidates admitted from 2022-2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Botany

PLANT DIVERSITY – I

(ALGAE, FUNGI, LICHENS AND BRYOPHYTES)

Time : Three hours

Maximum : 75 marks

PART A — (20 marks)

Answer ALL questions.

- I. (A) Choose the correct answer : ( $5 \times 1 = 5$ )
1. Chlorella, which method is used for DNA uptake?
- (a) Electroporation
- (b) Direct uptake of naked DNA
- (c) Conjugation
- (d) Chemically induced uptake by protoplast
2. A chemical used to inhibit the growth of algae is
- (a) Chlorine (b) Iodine
- (c) Lead (d) Algicides

3. The parasitic fungus which destroys wheat plant is  
 (a) lice (b) leech  
 (c) Cuscuta (d) Puccinia
4. Lichens reproduce vegetatively by the formation of special propagules known as  
 (a) Ascospores (b) Basiospores  
 (c) Zoospores (d) Diaspores
5. \_\_\_\_\_ is used for surgical dressing.  
 (a) Sphagnum (b) Riccia  
 (c) Marchantia (d) Polytrichum
- (B) Fill in the blanks : (5 × 1 = 5)
6. \_\_\_\_\_ are stony ancient structures built by colonies of microscopic photosynthesizing organisms.
7. \_\_\_\_\_ are otherwise called stoneworts.
8. \_\_\_\_\_ the fruiting body is cup-shaped and asci are present in hymenium.
9. \_\_\_\_\_ lichens are branching shrub such as a miniature leafless tree.
10. In Porella the superficial cells of the stem give rise to \_\_\_\_\_

II. Answer ALL questions : (5 × 2 = 10)

11. Mention any two pigments in prokaryotic algal cell?
12. Enlist any two-diseases caused by Mastigomycotina fungal groups in crops.
13. Define parasexual cycle in fungi.
14. What are crustose lichens and their importance?
15. Explain protonema.

PART B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

16. (a) Demonstrate algal classification given by Smith.  
 Or  
 (b) Discuss on the thallus organization in algae.
17. (a) Explain the habit arid habitat of algae.  
 Or  
 (b) Organize the salient features of chlorophyceae.
18. (a) Write a general account on the characters of Rhodophyceae.  
 Or  
 (b) Differentiate Homokaryon from Heterokaryon.