

Botany (P.G.)

[CBCS]

M.Sc. First Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER- 102

[Phycology & Bryology]

Full Marks: 40

Time: 02 Hrs

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Unit-1

Full Marks 20

[Phycology]

Group A

- 1. Answer any four questions of the following: 1x4= 4**
 - a. What is paralytic shellfish poisoning (PSP)?
 - b. Mention two features of polyphasic approach of classification.
 - c. What is frustule? What is its main structural component?
 - d. What is red tide?
 - e. Which algae causes the red rust of tea?
 - f. What is fucoidin?

- 2. Answer any two questions of the following: 2x4= 8**
 - a. Write a short note on Eutrophication caused by algae.
 - b. Enumerate the salient features of Rhodophyceae? Mention two similarities of Rhodophyceae with Cyanophyceae.

(2)

- c. Discuss the role of heterocyst in Nitrogen fixation? Draw its structure.
- d. Write own the characteristics features of Xanthophyceae. Give an example.

3. Answer any one question of the following: 1x8=8

- a. Discuss on the different types of chloroplast found in eukaryotic algae. 8
- b. Discuss the classification of algae as per Robert Edward Lee. 8

Unit - 2
Full Marks 20
[Bryology]

Group A

1. Answer any four questions of the following: 1x4= 4

- a. Mention one fossil Marchantiophyta with its age of occurrence. 1
- b. What is IAP and what is its function? $\frac{1}{2} + \frac{1}{2}$
- c. Mention the two categories of bryophytes in response to pollution. 1
- d. Write two features of Haplomitrium. 1
- e. Define Nematodontous and Arthrodentous peristome teeth. $\frac{1}{2} + \frac{1}{2}$
- f. What are the principal chemical components of oil bodies found in Marchantiales. 1

(3)

2. Answer any two questions of the following: 2x4= 8

- a. Characteristic the division Anthocrophita. Mention the evolutionary importance of the sporophyts of Anthoceros. Sp. 2+2
- b. Why bryophytes are ideal for surveying heavy metal depositions in terrestrial ecosystem? Explain. 4
- c. Write the uses of Mosses as Biomonitor in Indian Scenario. Name an ectokydric and a myxohydric moss with their role in pollution monitoring. 2+2
- d. Why Frullania and Plagiochila are considered as promising to study sex chromosomes? Explain briefly.

3. Answer any one question of the following: 1x8=8

- a. Give a brief account on thallus organization in bryophytes. 8
- b. Give an account of 8 stages of increasing sterilization of sporogenous tissue in bryophytes. 8

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