

M.Sc. 1st Semester Examination, 2023

BOTANY

PAPER – BOT-102

Full Marks : 50

Time : 2 hours

Answer all questions

The figures in the right hand margin indicate marks

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

PAPER – BOT-102.1

(Phycology)

[Marks : 25]

A . Answer any *two* from the following : 2 × 2

1. Name two algal orders under Streptophyta.

2. Which fraction of agar agar is responsible for gelling ? What does the other fraction contribute ?
3. Mention the name of the first identified algal pheromone and the algal group as source of that.
4. How are the thylakoids arranged in Cyanoprokaryotes ? Which structure carries phycobillins ?

B. Answer any *two* of the following : 4 × 2

5. What is the green water technique in pisciculture ? Illustrate how it helps the system.
6. How does algae contribute in reclaiming fertility of soil ?
7. Explain the role of endosymbiosis in the development of cell organelles mentioning the micromorphological features as evidence in support of that.

8. Elucidate the different types of chemotaxis of pheromone of algae.

C. Answer any *one* from the following : 8×1

9. Characterize Glaucophyta. Compare this group of algae with Cyanoprokaryotes and Rhodophyta. $6 + 2$

10. Mention the chemical nature and the source of occurrence of alginic acid. Write a comprehensive note on the various uses of it. $2 + 6$

[Internal Assessment – 5 Marks]

PAPER – BOT-102.2

(*Bryology*)

[Marks : 25]

A. Answer any *two* of the following : 2×2

1. What are leptoids and hydroids ?
2. What are the differences between Metzerales and Jungermanniales ?
3. Name a bryophyte which have lowest chromosome number.
4. What is the full form of IAP ?

B. Answer any *two* of the following : 4 × 2

5. Write down differences between sensitive and less sensitive bryophytes.
6. Write differences between bio- and bryo-monitoring.
7. State the effects of pollution in bryophytes.
8. Write a brief note on lignin in bryophytes.

C. Answer any *one* of the following : 8×1

9. What are the basic differences between traditional and current systems of classification in bryophytes and who proposed these ? Give a schematic representation on current system of classification with its merits and demerits. $2 + 4 + 2$
10. Write an essay on bio-technology of bryophytes. Which bryophytes are maximumly used in the biotechnological industry and why ? $6 + 2$

[Internal Assessment — 5 Marks]