

U.G. 3rd Semester Examination - 2025

BOTANY

[MAJOR]

Course Code : BOT-MJ-CC-T-03

(Phycology and Lichens)

[NEP-2020]

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

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

1. Answer any five questions : 2×5=10
- i) What is heterocyst? Mention its function.
 - ii) Mention physiological anisogamy in brown algae with example.
 - iii) What is coenobium? Give an example.
 - iv) What do you mean by dwarf male filament? Where it is noted?
 - v) What is Gaidukov phenomenon?
 - vi) Mention two economic importance of *Xanthophyceae*.
 - vii) Name two Indian species of *chara*.

[Turn over]

viii) Write down the pigment composition of red algae.

2. Answer any two questions: $5 \times 2 = 10$

i) Why Lichens are called Ecological Indicator?
Mention its role in environment. $2+3$

ii) Briefly describe the asexual reproduction in Lichen. 5

iii) Write the unique features of Dinoflagellates.
Why Diatoms are so important? $3+2$

iv) Mention different algal products and their uses with special reference of agriculture. 5

3. Answer any two questions: $10 \times 2 = 20$

i) Describe reproduction and life cycle of *Gracilaria*. Give economic importance of Rhodophyceae. $3+4+3$

ii) Describe different growth forms, range of thallus organization and nature of symbiosis of Lichens with sketches and examples. 10

iii) Write in details the structure and evolutionary significance of *Prochloron*. $4+6$

iv) What is aplanospore? Describe life cycle of *Chlamydomonas* with suitable diagram. $2+8$