

B.Sc. Semester – 1 (NEP-2020) Examination

January-2024

Phycology (Major-2)

Time: 2:00 Hours

Marks: 50

Instructions:

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Que.1 Highlight the variations in occurrence, cell wall composition, pigment systems, and reserve food strategies within class Chlorophyta, Phaeophyta, and Rhodophyta. (10)

OR

Que.1 Answer accordingly.

- (A) Give name and two examples of each class of Algae describe by Fritsch.
- (B) Write notes on: Ecology of Algae.

Que.2 What are the types of thalli in *Oedogonium* based on the size of the male (antheridial) filament? (10)
Explain the process of sexual reproduction for each type.

OR

Que.2 Answer accordingly.

- (A) Explain any three types of Asexual reproduction in *Chlamydomonas*.
- (B) Describe the structures of the antheridium and oogonium in *Coleochaete*, including diagrams. Elaborate on the fertilization process in this organism.

Que.3 Give morphological description of the following parts of *Chara* with diagrams: (10)
1. Rhizoids 2. Branches 3. Amorphous Bulbils 4. Nucule & 5. Globule.

OR

Que.3 Answer accordingly.

- (A) Provide an illustration of the general characteristics of the class Xanthophyta.
- (B) Draw only: Well labelled schematic diagram of Life cycle of *Chara*.

Que.4 Describe the sexual reproduction process in *Ectocarpus*, emphasizing the structures and functions of its sex organs. (10)

OR

Que.4 Answer accordingly.

- (A) Explain prostrate and erect systems of habits in *Polysiphonia*.
- (B) In the life cycle of *Polysiphonia*, three distinct plant forms are identified. Explain these categories in detail.

Que.5 Answer accordingly. (10)

- (A) Elaborate on the structure, role & types of flagella in algal cells.
- (B) Write notes on: Structure of *Volvox*

OR

Que.5 Answer accordingly

- (A) Explain asexual reproduction of *Vaucheria*.
- (B) How algae are utilized in biotechnology & industry?
