



'समानो मन्त्रः समितिः समानी'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 1st Semester Examination, 2023

**CC1-BOTANY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**GROUP-A**

1. Answer any **five** questions from the following: 1×5 = 5
- (a) Name one endospore producing bacteria.
  - (b) What is plasmid?
  - (c) Name one alga containing C-phycocyanin.
  - (d) Who is the “father of modern algology” in India?
  - (e) Name any two edible algae.
  - (f) What is prion?
  - (g) What is coenobium?
  - (h) Give an example of alga having triphasic life cycle.

**GROUP-B**

2. Answer any **three** questions from the following: 5×3 = 15
- (a) What is three-domain system, briefly describe it with examples. 1+4
  - (b) Classify virus according to Baltimore system of classification. 5
  - (c) Draw the sexual cycle of *Chara* sp. Name one Indian species of *Chara* sp. 4+1
  - (d) What is Chrysolaminarin? Describe the sexual cycle of *Vaucheria* sp. 1+4
  - (e) State the importance of bacteria in nitrogen cycle. 5

**GROUP-C**

3. Answer any **two** questions from the following: 10×2 = 20
- (a) Describe the chemical composition of cell wall of a typical Gram-negative bacterium. Briefly describe the economic importance of bacteria. 5+5
  - (b) Distinguish between: 2½ × 4 = 10
    - (i) Transformation and Transduction.
    - (ii) Lytic and Lysogenic cycle.
    - (iii) Carposporangium and Tetrasporangium.
    - (iv) Nannandrous and Macrandrous.
  - (c) Describe in detail the range of thallus structure in algae with suitable diagrams. 10
  - (d) What is triphasic life cycle? Describe the post-fertilization stages in *Polysiphonia* sp. 10

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