



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 1st Semester Examination, 2021

CC1-BOTANY

PHYCOLOGY AND MICROBIOLOGY

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) What is virion?
 - (b) Name one unicellular motile alga.
 - (c) What is mucopeptide?
 - (d) Name one alga that produces commercial iodine.
 - (e) Name one DNA and one RNA virus.
 - (f) Name one endospore forming bacteria.
 - (g) What is nannandrium?
 - (h) Name a parasitic alga.

GROUP-B

2. Answer any **three** questions from the following: 5×3 = 15
- (a) What are the different types of chloroplast found in chlorophyceae? Describe with labelled sketches. 5
 - (b) Distinguish between Lytic and Lysogenic cycle. 5
 - (c) Give an account of the sexual reproduction of *Ectocarpus*. 5
 - (d) Illustrate the process of Hfr type of conjugation in bacteria with labelled sketches. 5
 - (e) What is a Nucule? Describe its structure with well labelled diagram. 5

GROUP-C

3. Answer any *two* questions from the following: 10×2 = 20
- (a) Describe the structure and chemical constituents of cell wall of a gram positive bacteria. 10
 - (b) Classify virus according to Baltimore classification. Draw and describe the structure of bacteriophage (T₄). 5+5
 - (c) Give an account of the importance of algae with respect to agriculture and industry. 10
 - (d) What is triphasic life cycle? Describe the post fertilization changes in an alga that has triphasic life cycle, with well labelled diagrams. 10

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