



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 1st Semester Examination, 2021

CC1-MICROBIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** of the following: 1×5 = 5
- (a) Name one bacterium without cell wall.
 - (b) What is tyndallization?
 - (c) What is axenic culture?
 - (d) Give one example of edible algae and fungi.
 - (e) In which class of protozoa contractile vacuole is generally absent?
 - (f) What are stromatolites?
 - (g) What is diatomaceous earth?
 - (h) State one difference between peptidoglycan and pseudopeptidoglycan.
2. Answer any **three** of the following: 5×3 = 15
- (a) Describe with proper diagram the haplontic life cycle of algae. 5
 - (b) Write a note on the various types of pigments found in algae. What is an eye-spot and state its function. 3+2
 - (c) Describe the structure of fungal cell wall with diagram. 5
 - (d) Write about the experiments which were conducted to support spontaneous generation. 5
 - (e) Write the general characteristics of viroids and prions. $2\frac{1}{2} + 2\frac{1}{2}$
3. Answer any **two** of the following: 10×2 = 20
- (a) What is heterokaryosis? Describe the mechanism for parasexual reproduction in fungi. What is fungi imperfecti? 2+6+2
 - (b) What is the system for classification and utility for Carl Woese's three Kingdom classifications? What is binomial nomenclature? 6+4
 - (c) With suitable diagram, explain Koch's postulates. Write the contribution of Paul Ehrlich and Selman A. Waksman in the field of microbiology. 6+4
 - (d) Write down the economic importance of algae and fungi. 5+5

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