



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 1st Semester Examination, 2022

CC2-MICROBIOLOGY
BACTERIOLOGY

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) What is generation time?
 - (b) How does bacterial virulence depend on the presence of capsule?
 - (c) State the role of cell wall in bacteria.
 - (d) What is nucleoid?
 - (e) Name one chemical agent used to isolate anaerobic bacteria.
 - (f) What is fluorescence?
 - (g) Define antibiotic.
 - (h) Give an example of selective media.

2. Answer any **three** of the following: 5×3 = 15
 - (a) Write a short account on archaebacterial cell wall. 5
 - (b) What is numerical taxonomy? Differentiate between conventional taxonomy and molecular taxonomy. 2+3
 - (c) What is SASP? How does endospore germinate during favourable condition? 2+3
 - (d) Discuss with suitable figure the working principle and application of bright field microscope. 5
 - (e) State the molecular and physiological adaptations of Halophiles. 5

3. Answer any **two** of the following: 10×2 = 20
 - (a) What are the methods of preservation of microbial culture? Give the general pattern of asexual reproduction in bacteria. 5+5
 - (b) Write short notes on: 5+5
 - (i) Inclusion bodies
 - (ii) Ribosome (70S).
 - (c) With the help of suitable figure describe the structural chemistry of *E. coli* cell wall. Write down the difference between gram-positive and gram-negative bacterial cell wall. 5+5
 - (d) Write a short note on the effect of penicillin on the cell wall of bacteria. Differentiate between spheroplast and protoplast. 6+4

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