



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours/Programme 1st Semester Examination, 2021-22

MCBHGEC01T/MCBGCOR01T-MICROBIOLOGY (GE1/DSC1)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.*

Answer Question No. 1 and any four questions from the rest

1. Answer any **four** questions from the following: 2×4 = 8
 - (a) What are inclusion bodies?
 - (b) How plasmids differ from episome?
 - (c) What is Prion?
 - (d) Name two endospore forming Pathogenic Bacteria.
 - (e) Define differential media.
 - (f) 70% alcohol has high bactericidal activity than absolute alcohol (100% alcohol).
— Explain.
 - (g) Write down the causative agent of COVID-19.

2.
 - (a) Define universal phylogenetic tree. 2
 - (b) What do you mean by classical taxonomy? Mention the several characteristics that are measure to group an organism into the classical taxonomy. 1+2
 - (c) Write down about the ecological significance and importance of Gram negative bacteria. 3

3.
 - (a) What is the generation time of 100 bacterial cells which are growing logarithmically for 5 hours and produce 1.7×10^6 cells? 3
 - (b) What is the Pour Plate technique? What is the advantages and disadvantages of this technique? 1+2
 - (c) How chemostat differ from turbidostat? 2

4.
 - (a) Write about the different phases of bacterial growth curve. 4
 - (b) What is glycocalyx? 2
 - (c) Name membrane strengthening compound found in bacterial cell membrane. 2

5. (a) What do you mean by Pleomorphic bacteria? Give example. 1+1
(b) What is LPS Layer? Write down the function of it. 1+2
(c) What is temperate virus? 1
(d) Write two differences between prokaryotic and eukaryotic ribosome. 2
6. (a) Indicate any one method of cultivation of animal virus. 3
(b) Define the following: 3
(i) Diauxic growth Curve
(ii) Synchronous growth.
(c) How radiation responsible for sterilization? 2
7. (a) What is the function of capsule and outer membrane of bacteria? 3
(b) What is Periplasmic space and what is its importance? 2
(c) Describe the structure of flagella of Gram (+ve) bacteria. 3
8. (a) What is Pure culture? Write down the importance of Pure culture. 1+2
(b) How Synthetic media differs from Complex media? 3
(c) What is microelement and macroelement? Cite with example. 2
9. (a) What is interferon? 2
(b) Mention two enveloped virus. 2
(c) What is Plaque assay? 2
(d) What is Cytopathic effect? 2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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