

Roll No: _____

B.Sc. (Hons) Biochemistry, Semester-II
Semester Examination, October 2023
Paper Title: BASIC MICROBIOLOGY
Paper Code: BBC-MIC 201

Time: 2.5 hours**Max Marks: 60**

Note: This paper has 3 Sections, A, B, and C. Attempt all three sections. Section A: Answer all the questions; Section B: Answer any two; Section C: Answer all the questions, each question in this section has an internal choice.

Abbreviations Used: CLO- Course Learning Outcome, PLO- Program Learning Outcome, BTL- Bloom Taxonomy Level: BT level 1- Remember; BT level 2-Understand; BT level 3-Apply; BT level 4-Analyse; BT level 5-Evaluate, BT level 6-Create.

Section A (Attempt all questions)**[1x10=10 Marks]**

Q. No	Questions	BTL	CLO	PLO
i.	IMViC tests stands for	1	5	2
ii.	 theory hypothesizes that life originates from other living matter only.	2	1	3
iii.	 culture is made on the slanting surface of a solidified medium in a test tube that has been tilted to provide a greater area for growth.	3	5	2
iv.	<i>Bacillus Anthraxis</i> is an example of <i>cocci</i> bacteria. (True/False)	1	4	3
v.	The SARS-CoV-2 genome consists of..... as a genetic material. (DNA/RNA)	2	3	
vi.	In Archaeobacteria, NAM and NAT are attached by.....linkage.	2	4	
vii.	With his single lensed microscope, was the first to examine bacteria and protozoa	1	1	3
viii.	Poliovirus has as its genome.	4	3	2
ix.	Parafagellar body present in Euglenophyta assists in detection of	4	2	4
x.	Animal associated Fungi exists in 2 forms, Y (yeast) form exists inwhile, M (mold) form in.....	3	1	3

SECTION B: Long type Questions (Attempt any 2 out of 4)**[12.5X2 = 30 Marks]**

Q. No	Questions	BTL	CLO	PLO
1	Explain in detail the contributions made by scientists, Paul Ehrlich, Elie Metchnikoff and Edward Jenner.	2	1	3
2	Draw a Venn diagram to classify the major molecules that make up typical Gram-positive and Gram-negative cell walls and those common to both types of cell wall and outline the difference between Archaeal and Bacterial Cell Wall.	2	5	1
3	Explain the structure and replication cycle of T4 and λ phage.	4	3	2

4	Give a detail account of General Characteristics of Algae including economic importance and Characteristics of major algal divisions.	3	4	4
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SECTION C: Short-type Questions. (Attempt all questions, each question has an internal choice) [5x4=20 Marks]

Q. No	Questions	BTL	CLO	PLO
1	Highlight the process of development of 5 different fermentation products, and the associated pathways and organisms. OR Classify and explain the different types of microbiological media.	3	4	3
2	Explain the notable Classification Systems used to classify living organism. OR Outline the important differences between Bacteria, Archae and Eukarya.	4	2	1
3	Highlight the similarities and differences between Chlamydia and Rickettsia. OR Describe the following terms and their applications: Biopolymers, Biosurfactants, Biocatalysts and Vaccines and Bioremediation.	5	4	3
4	Give a detail account of General Characteristics of Fungi and mention major fungal divisions. OR Describe the steps involved in multiplication of Bacteriophages within host.	2	3	1
