

## MSc Sem.-1 Examination

404

MLT

Time : 2-30 Hours]

February-2025

[Max. Marks : 70

Q1A	Write a detailed note on Growth curve of Bacteria.	7 Marks
Q1B	Draw the flow chart of Chemical Sterilization process.	7 Marks
OR		
Q1A	What is culture media? Give the differences between selective and differential media with examples.	7 Marks
Q1B	Draw the flow chart of Physical Sterilization process.	7 Marks
OR		
Q2A	Discuss about a typical bacterial cell and the different shapes of bacteria.	7 Marks
Q2B	Define MIC and explain how it is determined using broth dilution and E-test methods.	7 Marks
OR		
Q2A	Describe the biochemical diagnostic tests and explain their significance in bacterial identification.	7 Marks
Q2B	Write a note on identification of Viruses, Fungi, and Parasite.	7 Marks
OR		
Q3A	Write a brief note on Quantitative PCR.	7 Marks
Q3B	Explain the general mechanism of DNA Sequencing.	7 Marks
OR		
Q3A	Write a brief note on Evolutionary Relationships among microbes.	7 Marks
Q3B	Write a brief note on Polymerase Chain Reaction.	7 Marks
OR		
Q4A	Write a brief note on ELISA.	7 Marks
Q4B	Explain the general staining method for fungal identification.	7 Marks
OR		
Q4A	Explain the Cytopathic effects carried out by virus in host cell.	7 Marks
Q4B	Write a brief note on Microscopic examination of Stool and blood samples.	7 Marks
<b>Q5</b>	<b>Answer the following questions (Any Seven)</b>	<b>14 Marks</b>
I	What is Disinfection? Give any two examples of disinfectant.	2 Marks
II	Give the mode of action of heavy metals.	2 Marks
III	Classify the bacteria according to their shapes.	2 Marks
IV	What type of bacteria typically tests positive in the catalase test?	2 Marks
V	What is the primary purpose of Gram staining in bacterial identification?	2 Marks
VI	What is the significance of zones of inhibition in the Kirby-Bauer disk diffusion method?	2 Marks
VII	Provide the major difference between RT PCR and Q-PCR.	2 Marks
VII	What is phylogenetic analysis?	2 Marks
IX	How we can say that PCR is useful tool for the detection of pathogen?	2 Marks
X	Give the example of viruses belongs to the Herpesviridae family.	2 Marks
XI	Enlist the basic identification methods for viruses.	2 Marks
XII	What is parasite? Provide the Example of <i>Plasmodium</i> species.	2 Marks

BEST OF LUCK