

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

MSc-I Semester (Microbiology)

COURSE CODE (CREDITS): 20B1WBI831 (2-0-0)

MAX. MARKS: 25

COURSE NAME: Virology

COURSE INSTRUCTORS: Dr. Tyson

MAX. TIME: 1 Hour 30

Minutes

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	Marks
Q1	Why is the Baltimore classification significant for virology research and clinical diagnostics? Justify your response by discussing its implications.	3
Q2	Write about the different phases of a one-step growth curve for bacteriophages. Examine the key events that occur during each phase and how they relate to the overall replication cycle of bacteriophages.	4
Q3	How are antiviral drugs classified based on their mechanisms of action? Provide specific examples of drugs for each category and analyze how these classifications impact treatment strategies.	4
Q4	Describe the principle behind the Complement Fixation Test. What are the main steps involved in performing this assay, and how can one apply the results to detect the presence of specific antibodies?	4
Q5	Explain the three main methods used for cultivating viruses in the laboratory. Evaluate how these methods differ and determine the advantages and disadvantages of each method.	5
Q6	Analyze how do different methods of ELISA assist in the quantitative measurement of antigens or antibodies in a sample? Assess the factors that can affect the accuracy and precision of ELISA results in quantification.	5