

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

B.Tech-I Semester (CSE/IT/ECE/CE/BT/BI)

COURSE CODE (CREDITS): 18B11BI312 (3.1.0)

MAX. MARKS: 25

COURSE NAME: Microbiology and Immune System

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	CO	Marks
Q1	Explain the key characteristics that differentiate Group I viruses from Group IV viruses in the Baltimore classification.	1	3
Q2	Describe the role of complement proteins in the immune response. How do they interact with other components of the immune system to enhance the defense against pathogens?	4	4
Q3	Compare and contrast the methods of sterilization with examples using dry heat and moist heat, focusing on the different factors that lead to microbial death in both techniques.	3	4
Q4	What are the primary mechanisms through which bacteria develop resistance to antibiotics? Discuss the advantages and limitations of the broth micro dilution method compared to the disk diffusion method for determining bacterial antibiotic susceptibility.	3	4
Q5	Draw a diagram of lymphoid organs and distinguish between primary and secondary lymphoid organs. How do they influence their respective roles in lymphocyte development and activation of the immune response?	2	5
Q6	Differentiate between humoral immunity and cell-mediated immunity. How does each type contribute to the defense against infections? Provide examples to illustrate the roles of antibodies and T-cells in these immune responses.	2	5