

Name. _____		Printed Pages:01		
Student Admn. No.: _____				
School of Biological and Life Sciences Summer Term Examination – July - August 2024 Programme: B.Sc. Microbiology Semester: III				
Course Title: Concepts of Immunology Course Code: C2UC501B		Max Marks: 100 Time: 3 Hrs.		
Instructions:	1. All questions are compulsory. 2. Assume missing data suitably, if any.			
		K Level	COs	Marks
SECTION-A (15 Marks)		5 Marks each		
1.	Define innate immunity.	K1	1	5
2.	Explain the role of macrophages in the immune system.	K2	1	5
3.	Explain the concept of adjuvants in vaccines.	K2	2	5
SECTION-B (40 Marks)		10 Marks each		
4.	Discuss the role of the thymus gland in the immune system.	K2	2	10
5.	Explain the concept of a paratope. Discuss how paratopes contribute to the specificity and affinity of antibody binding to antigens	K3	2	10
6.	Explain the process of opsonization and its role in immune defense.	K3	3	10
7.	Differentiate between MHC class I and MHC class II molecules.	K4	3	10
SECTION-C (45 Marks)		15 Marks each		
8.	What are the distinguishing features of the innate immune response, and how does it provide immediate defense against pathogens?	K4	4	15
9.	How does the enzyme-linked immunosorbent assay (ELISA) technique work at a molecular level, including the steps involved in antigen detection and signal amplification, and what are the advantages and limitations of this methodology compared to other immunoassay techniques?	K4	4	15
10	What are some advantages and limitations of immunodiffusion techniques compared to other immunological assays, such as ELISA.	K5	5	15