

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2023)

CLASS: BTECH
BRANCH: BIOTECHNOLOGY

SEMESTER : IV
SESSION : SP/2023

SUBJECT: BE208 BIOLOGY OF IMMUNE SYSTEM

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	Diagrammatically present the typical structure of antibody and give a tabular representation of different types of antibodies.	[2] 1	1
Q.1(b)	Illustrate the difference between innate and acquired immunity. Discuss the different components of immune system.	[3] 1	1
Q.2(a)	Give the properties of antigens.	[2] 2	1
Q.2(b)	Discuss the biological aspects of antigen- antibody reactions giving examples.	[3] 2	2
Q.3(a)	Write a short note on catalytic antibodies.	[2] 1	3
Q.3(b)	Discuss the technique of Hybridoma technology with special mention of HAT selection.	[3] 2	4
Q.4(a)	What do you mean by affinity and avidity?	[2] 2	1
Q.4(b)	Describe the genetic basis of antibody diversity in formation of light and heavy chain.	[3] 1	3
Q.5(a)	Write a short note on humoral and cell-mediated immune responses.	[2] 1	1
Q.5(b)	Describe the technique of Radial immunodiffusion and Radio Immuno Assay	[3] 2	5

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