

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BTECH
BRANCH: BIOTECH**

**SEMESTER: IV
SESSION: SP/2020**

SUBJECT: BE208 BIOLOGY OF IMMUNE SYSTEM

TIME: 2 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 25.
 2. Candidates may attempt for all 25 marks.
 3. Before attempting the question paper, be sure that you have got the correct question paper.
 4. The missing data, if any, may be assumed suitably.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q1 (a)	Intact skin contributes to nonspecific host resistance. Justify.	[2]	1 2
Q1 (b)	Identify the steps of Phagocytosis after ingestion of pathogen by phagocytic cell.	[3]	1 3
Q2 (a)	Distinguish between Monoclonal and Polyclonal antibodies.	[2]	1 4
Q2 (b)	What ideas justify that 'gene rearrangement' has a role in antibody diversity?	[3]	2 4
Q3 (a)	Define 'Haptens'. Identify features of antigens.	[2]	1 1,3
Q3 (b)	Categorize and explain the 'ELISA' methods.	[3]	2 4
Q4 (a)	Why do you think 'immunoprecipitation' reactions occur?	[2]	2 4
Q4 (b)	Can you make a distinction between the two types of immunodiffusion tests?	[3]	2 4
Q5 (a)	Classify the Cytokine families based on their functions.	[2]	1 4
Q5 (b)	What are the features of the 'classical' pathway of complement system?	[3]	2 4

::: 02/03/2020E ::::