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Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET UNIVERSITY)

M.Sc. (Second Semester - Regular) Examinations, May - 2026

24MLSPC12002 – Immunology

(Life Science)

Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Differentiate the role of primary and secondary lymphoid organs.	CO1	K2
b. What are superantigens?	CO2	K2
c. Define agglutination reaction.	CO3	K1
d. What is graft-versus-host reaction?	CO4	K2
e. What are recombinant vector vaccines?	CO5	K2

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Critically discuss the cellular and molecular basis of adaptive immunity. (OR)	10	CO1	K4
b. Discuss the structure and functions of lymph node.	5	CO1	K3
c. Explain the role of macrophages in immune responses.	5	CO1	K2
3.a. Explain the structure, classes and functions of immunoglobulins. (OR)	10	CO2	K4
b. Explain antigen processing and presentation.	5	CO2	K4
c. Elaborate cytokines: properties, production and therapeutic applications.	5	CO2	K3
4.a. Discuss the complement system, classical pathway and its biological significance. (OR)	10	CO3	K4
b. Explain antigen-antibody interactions with suitable examples.	5	CO3	K3
c. Elaborate the principles, methodology and applications of ELISA	5	CO3	K4
5.a. Discuss hypersensitivity reactions and their immunological mechanisms. (OR)	10	CO4	K4
b. Explain transplantation immunity.	5	CO4	K3
c. Differentiate primary and acquired immunodeficiency diseases.	5	CO4	K2
6.a. Discuss various types of vaccines and their immunological importance. (OR)	10	CO5	K3
b. Describe hybridoma technology for monoclonal antibody production.	5	CO5	K4
c. Explain active and passive immunization.	5	CO5	K2

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