22BTP210N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(Second Semester)

Branch – **BIOTECHNOLOGY**

IMMUNOTECHNOLOGY

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Question No.	Question	K Level	CO
1	_____ are the signalling molecules of the immune system. (a) Chemokines (b) Cytokines (c) Transmitters (d) Antigens	K1	CO1
2	Which of these cells give rise to antibodies? (a) T cells (b) Lymphocytes (c) Plasma cells (d) B cells	K2	CO1
3	Which immunoglobulin is the first to be produced during an Immune response? (a) IgE (b) IgM (c) IgG (d) IgA	K1	CO2
4	What are responsible for recruiting immune cells to a specific location within the body? (a) Chemokines (b) TNFs (c) Interferons (d) Interleukins	K2	CO2
5	Which receptors do alpha-beta T cells express? (a) CD8 (b) CD3 (c) CD25 (d) CD4	K1	CO3
6	Which of the following process gives rise to all the cells of immune system? (a) Hemopoiesis (b) Hemocytosis (c) Hematopoiesis (d) Hematocytosis	K2	CO3
7	What is the primary function of dendritic cells in the immune system? (a) Kill infected cells (b) Secrete histamine (c) Produce antibodies (d) Present antigens to T cells	K1	CO4
8	The pathway used for the ligand-receptor interaction is called as _____ (a) Apoptotic pathway (b) Signal transduction pathway (c) Neurotic pathway (d) Receptor pathway	K2	CO4
9	What are the two types of antigen receptors present on the surface of naïve B-cells? (a) Ig M and Ig D (b) Ig G and Ig E (c) Ig A and Ig D (d) Ig E and Ig M	K1	CO5
10	Which of the following is referred to as Type II Hypersensitivity reaction? (a) Immediate hypersensitivity (b) Cytotoxic reaction (c) Immune complex reaction (d) Cell mediated hypersensitivity	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Describe the organisation of immune system.	K3&K4	CO1
	(OR)		
11.b.	Differentiate primary and secondary immune response.		
12.a.	Describe about the types of Immunoglobulins.	K1&K4	CO2
	(OR)		
12.b.	Explain the preparation of antigen using viral and bacteria pathogens.		
13.a.	Describe about B cell effector mechanism.	K1&K3	CO3
	(OR)		
13.b.	Explain about T cell signalling and activation.		
14.a.	With labelled diagram explain about cytokine receptors.	K1&K4	CO4
	(OR)		
14.b.	Write short note on immunology of transplantation.		
15.a.	Explain immunodetection of antigen in cells and tissues.	K3&K4	CO5
	(OR)		
15.b.	Explain ELISPOT.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Question No.	Question	K Level	CO
16	Discriminate types of immunity.	K4	CO1
17	Explain in detail about immunoglobulin biosysthesis.	K1	CO2
18	Explain and Illustrate B cell signalling and activation.	K3	CO3
19	Explain in detail about complement pathways and its activation, compliment protein and its activation.	K4	CO4
20	Describe about hybridoma technology.	K4	CO5

Z-Z-Z END