22BTP210N / 22BTP210

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024
(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)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following diseases is caused by a faulty immune system include? a) Deficiency diseases b) Autoimmune diseases c) Epidemic Diseases d) Non-communicable diseases	K1	CO1
	2	------ Immunity is obtained during lifetime. a) Acquired immunity b) Active immunity c) Passive immunity d) All the above	K2	CO1
2	3	---------- immune cells are most effective at destroying intra-cellular pathogens. a) T_H cells b)T_D cells c) T_C cells d) T_S cells	K1	CO2
	4	The specificity of an antibody is due to ---------. a) Its valence b) Heavy chains c) Fc portion of the molecule d) Variable portion of heavy and light chain	K2	CO2
3	5	CD4 T cells are generally restricted by a) MHC class -I b) MHC class-II c) β2 microglobulin d) CD-1	K1	CO3
	6	Which of the following polypeptide is important for the expression of MHC I on the cell membrane? a) Interferons b) Lymphokines c) Interleukins d) β_2-microglobin	K2	CO3
4	7	----------mediator can lead to systemic inflammation. a) Interferon alpha b) Interferon gamma c) Interleukin 2 d) Tumour Necrosis factor alpha	K1	CO4
	8	The classical pathway of complement is primarily activated by ----------. a) Antibody b) C3 c) Cytokines d) Microbial surfaces	K2	CO4
5	9	Successful immunization can be impaired by a) Cloning the vaccine b) Cytokines c) Maternal antibody d) Adjuvants	K1	CO5
	10	We use antisera to distinguish between various _____ within a species of bacteria. a) isotypes b) serovars c) lines d) isotypes	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

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

Module No.	Question No.	Question	K Level	CO
1	11.a.	Summarize cell-associated pattern recognition receptors.	K3	CO1
		(OR)		
	11.b.	Describe leucocyte–endothelial interaction.		
2	12.a.	Elucidate the separation of immune cells by flow cytometry.	K3	CO2
		(OR)		
	12.b.	List out the methods involved in the preparation of antigens from fungal pathogens.		
3	13.a.	Explain the structure and role of HLA in immune response.	K3	CO3
		(OR)		
	13.b.	Describe antibody-dependent cell-mediated cytotoxicity.		
4	14.a.	Summarize the biological significance of complement proteins.	K4	CO4
		(OR)		
	14.b.	Describe the host versus graft rejection mechanism.		
5	15.a.	Discuss the concept of vaccine development.	K3	CO5
		(OR)		
	15.b.	Elucidate how the ELISPOT assay works.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

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

Module No.	Question No.	Question	K Level	CO
1	16	Elaborate Primary and Secondary immune response.	K6	CO1
2	17	Discuss immunogenicity and antigen structure.	K6	CO2
3	18	Compare and contrast between B cell and T cell.	K5	CO3
4	19	Explain Type II hypersensitivity reaction.	K4	CO4
5	20	Elaborate on the technology used for the production of monoclonal antibodies.	K6	CO5

Z-Z-Z END