22MBP315N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch – **APPLIED MICROBIOLOGY**

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 cells is involved in cell-mediated immunity? a. T-cells b. B-cells c. Mast cells d. Both T and B cells	K1	CO1
	2	Which of the following immunity is obtained during a lifetime? a. Acquired immunity b. Active immunity c. Passive immunity d. None of the above.	K2	CO1
2	3	What are the types of light chains a plasma cell can produce in an antibody? a. Kappa and Lambda b. Kappa and Gamma c. Gamma and Lambda d. Gamma and Delta	K1	CO2
	4	Antigen binding sites are present in a. Fab regions of an antibody b. F_c region of an antibody c. only in the light chain d. only in the heavy chain	K2	CO2
3	5	C4b2a BAR is called as _____ a. C3 convertase b. C4 convertase c. C2 convertase d. C5 convertase	K1	CO3
	6	Allergens are presented to T cells by which type of cell/receptor during sensitization phase of type 1 hypersensitivity? a. TCR (T cell receptor) b. BCR (B cell receptor) c. APC (antigen presenting cells) d. B cells	K2	CO3
4	7	Name the class of MHC which is recognized by CD4 TH cell. a. MHC cannot recognize T cells b. MHC III c. MHC I d. MHC II	K1	CO4
	8	Which of the following is NOT a type of method of Transplantation? a. Autografting b. Allografting c. Xenografting d. Phenografting	K2	CO4
5	9	Which of the following statement is true regarding vaccination? a. Vaccination is a method of active immunization b. Vaccination is a method of passive immunization c. Vaccination is a method of artificial passive immunization d. Vaccination is a method of natural passive immunization	K1	CO5
	10	What is the basic principle of immunisation and vaccination? a. It is based on the number of B and T lymphocytes b. It is based on the property of memory of the immune system c. It is based on antigen-antibody interactions d. It is based upon the number of white blood cells	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.	Give a brief note on primary lymphoid organ with neat sketch.	K4	CO1
		(OR)		
	11.b.	Distinguish humoral and cell mediated immunity in detail.		
2	12.a.	Encounter the characteristic features of an Antigen.	K4	CO2
		(OR)		
	12.b.	Comment on TCR and its types and function in detail.		
3	13.a.	Give an Account on cell mediated hypersensitivity.	K2	CO3
		(OR)		
	13.b.	What is immune complex deposition? Explain its mechanism with in detail.		
4	14.a.	What is transplantation immunology? How the human immune system respond to the transplanted organ and tissue?	K3	CO4
		(OR)		
	14.b.	State any two secondary immunodeficiency disorder and relate with its immune therapy.		
5	15.a.	Illustrate the significant role of cytokines and chemokines in immunoblotting.	K3	CO5
		(OR)		
	15.b.	Comment on immunodiagnosis by agglutination and precipitation.		

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	Explain in detail about innate and acquired immunity.	K4	CO1
2	17	Elaborate B cell maturation and activation. Explain how it build as a memory cell?	K4	CO2
3	18	Classify the classical and alternate pathway systems with neat sketch.	K5	CO3
4	19	Extend the role of tumor antigen and explain how the host immune response to human tumor.	K5	CO4
5	20	Encounter diagnosis of Ag-Ab reaction by immunoelectrophoresis.	K6	CO5

Z-Z-Z END