QP Code: RM23MTECH081 | Reg. No | | | | | | | | | | | AY 23

GIET UNIVERSITY, GUNUPUR – 765022

M. Tech (Second Semester) Examinations, May – 2024

MPCBT2011 –Advanced Immunology and Genetic Engineering

(Biotechnology)

Time: 3Hrs | Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A **(2 x 10 = 20 Marks)**

Q.1. Answer all questions	CO#	Blooms Level
a. Explain the difference between innate and acquired immunity.	CO1	K2
b. Develop a hypothetical scenario where antibody-dependent cell-mediated cytotoxicity (ADCC) could be utilized.	CO1	K3
c. How would a deficiency in MHC molecules affect the body's ability to mount an immune response?	CO1	K4
d. State the immunological basis of graft rejection in transplantation.	CO2	K3
e. Differentiate between active and passive immunity.	CO2	K3
f. Mention the function of Alkaline phosphatise in r-DNA technology.	CO3	K3
g. Differentiate between linkers and adapters.	CO3	K4
h. Write the properties of YAC vector.	CO3	K3
i. Highlight the functions of yeast two hybrid system.	CO4	K1
j. Differentiate between mi-RNA and Si-RNA.	CO4	K3

PART – B **(10 x 5=50 Marks)**

Answer ***ANY FIVE*** questions	Marks	CO#	Blooms Level
2. a. State the importance of immunity. Explain the mechanism of acquired immune response.	2+8	CO1	K3
3.a. Describe the molecular structure of antibody. Add a note on its classification.	7+3	CO1	K3
4. a. Discuss on Gell and Coombs classification of hypersensitivity.	5	CO2	K4
b. Give a note on transplantation immunology.	5	CO2	K3
5.a. What is autoimmunity? Discuss on various autoimmune disorders.	5	CO2	K3
b. Discuss the properties of plasmid vectors with suitable diagram.	5	CO3	K2
6. a. Explain the process of nick translation with suitable diagram.	4	CO3	K2
b. Discuss the steps of Northern hybridization technique.	6	CO3	K2
7.a. How we can clone the DNA using COSMID as a vector? Discuss with diagram.	6	CO3	K3
b. Write notes on Phage display.	4	CO4	K3
8. a. Explain the techniques of Sanger's method of sequencing.	5	CO4	K2
b. Discuss the steps of PCR.	5	CO4	K2

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