Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. Sem. - V - Examination – June- 2011

Subject code: 150402

Subject Name: Immunology

Date:22/06/2011 **Time: 10:30 am – 01:00 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Enlist and explain the secondary lymphoid organs and summarize their functions in the immune system.	**10**
	(b)	Explain different non specific defense mechanisms as a part of innate immunity.	**04**
Q.2	**(a)**	What is monoclonal antibody? Describe the technology for its production and enlist various applications of Mabs.	**07**
	(b)	Enlist different cells of immune system and narrate their functions.	**07**
		OR	
	(b)	Which are the factors that affect immunogenicity?	**07**
Q.3	**(a)**	Explain different classes of immunoglobulins with their biological activities.	**10**
	(b)	Differentiate active and passive immunization.	**04**
		OR	
Q.3	**(a)**	How can use of DNA vaccine raise both humoral and cellular immunity?	**10**
	(b)	Differentiate between immunogenicity and antigenicity.	**04**
Q.4	**(a)**	Explain classical pathway of complement activation with a neat diagram.	**07**
	(b)	Explain hypersensitivity mediated by IgE molecules.	**07**
		OR	
Q.4	**(a)**	Explain lectin pathway of complement activation with a neat diagram.	**07**
	(b)	Explain cell mediated hypersensitivity.	**07**
Q.5	**(a)**	What are immunologic basics of graft rejection?	**07**
	(b)	Explain western blotting technique with its applications in immunology.	**07**
		OR	
Q.5	**(a)**	Write a short note on animal transmitted disease.	**07**
	(b)	Explain the principle of immunoflorescence.	**07**

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