Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2150402 **Date:05/12/2015**

Subject Name: Immunology

Time:10:30am to 1:00pm **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 different molecules playing role in immunologic response.	**07**
	(b)	How does inflammation occur? Explain with a neat diagram.	**07**
Q.2	**(a)**	Enlist different cells of immune system. Explain monocytes and macrophage in detail.	**07**
	(b)	Explain the process of B cell maturation with a neat diagram.	**07**
		OR	
	(b)	What is function of primary and secondary lymphoid organ in human body? Explain role of thymus in immune system.	**07**
Q.3	**(a)**	Differentiate between Class I and Class II MHC molecules	**07**
	(b)	Explain cytosolic pathway of antigen processing and presentation.	**07**
		OR	
Q.3	**(a)**	Explain sandwich ELISA in detail with a neat diagram.	**07**
	(b)	Explain the process for production of monoclonal antibody.	**07**
Q.4	**(a)**	Explain type II hypersensitivity reactions and their remedies.	**07**
	(b)	Explain whole organism vaccine with their advantages and disadvantages.	**07**
		OR	
Q.4	**(a)**	Draw a neat diagram of antibody molecule showing all its domains.	**07**
	(b)	What are different antigenic determinants on immunoglobulin molecules?	**07**
Q.5	**(a)**	Explain alternative pathway of complement system.	**07**
	(b)	Write a short note on immunotolerance.	**07**
		OR	
Q.5	**(a)**	Define the term: active immunity, autoimmunity and adaptive immunity	**07**
	(b)	Write a short note on immunoflorescence.	**07**

****