Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 150402 **Date: 28-11-2014**

Subject Name: Immunology

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)**	How do physiologic and inflammatory barriers perform their function in non specific host defenses?	**07**
	(b)	Differentiate between primary and secondary response and explain it along with graph.	**07**
Q.2	**(a)**	Differentiate between apoptosis and necrosis.	**07**
	(b)	Enlist all the cells of immune system. Classify them into different groups, list out their features and their mode of action.	**07**
		OR	
	(b)	Which cells are included in mononuclear phagocytes? What are their salient features? Explain the mechanism of their action against pathogens.	**07**
Q.3	**(a)**	Draw a neat diagram of secondary lymphoid organ spleen. Explain its role in mounting immune response.	**07**
	(b)	Nature of Immunogen contributes to Immunogenicity. Justify this statement with explanantion.	**07**
		OR	
Q.3	**(a)**	Enlist and explain different classes of immunoglobulins with their biological functions.	**07**
	(b)	What are haptens? How are they different from adjutants? How do they respond to our body?	**07**
Q.4	**(a)**	What are the possible outcomes on interaction of antigen with antibody?	**07**
	(b)	What is ELISA? Explain the technique with its variants.	**07**
		OR	
Q.4	**(a)**	Explain the technique of western blotting with a neat diagram.	**07**
	(b)	Write a detailed account on immunofluorescence.	**07**
Q.5	**(a)**	Explain classical pathway of complement system.	**07**
	(b)	Explain any two air borne transmitted diseases.	**07**
		OR	
Q.5	**(a)**	Explain hybridoma technology for production of monoclonal antibody.	**07**
	(b)	Write a short note on multivalent subunit vaccine.	**07**

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