

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V(New) • EXAMINATION – WINTER 2016****Subject Code:2150402****Date:17/11/2016****Subject Name:Immunology****Time:10:30 AM to 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.

		MARKS
Q.1	Short Questions	14
	1 Name the immunoglobulin molecule found in body secretions.	1
	2 Name the immune cells responsible for allergic reaction.	1
	3 Where does production and maturation of T cell take place?	1
	4 Name four barriers of innate immunity.	1
	5 What are adjuvants?	1
	6 Type II hypersensitivity is mediated by _____.	1
	7 Give fullform of ELISA.	1
	8 Which cells display Class II MHC molecules?	1
	9 What is function of C3 convertase in complement pathway?	1
	10 Define the term epitope.	1
	11 What is FACS?	1
	12 Give any two examples of autoimmune disease.	1
	13 Name different methods of transplantation.	1
	14 What is passive immunization?	1
Q.2	(a) Give difference between antigen and immunogen.	03
	(b) Explain attributes of adaptive immunity.	04
	(c) Write a brief note on mononuclear phagocytic cells.	07
	OR	
	(c) What is function of secondary lymphoid organ? Explain immune functioning of any one.	07
Q.3	(a) Draw a neat structure of Immunoglobulin molecule.	03
	(b) Give difference between Class I and Class II MHC molecules.	04
	(c) Explain Transplantation Technology.	07
	OR	
Q.3	(a) Give difference between precipitation and agglutination reactions.	03
	(b) Explain formation of Membrane attack complex at the end of complement pathway.	04
	(c) Explain type I hypersensitivity.	07
Q.4	(a) Give a brief note on immune tolerance.	03
	(b) Write a short note on recombinant vector vaccine.	04
	(c) Explain endogenous pathway of antigen processing and presentation.	07
	OR	
Q.4	(a) Explain phagocytic barrier in brief.	03
	(b) Explain the process of inflammation.	04

- (c) Explain exogenous pathway of antigen processing and presentation **07**
- Q.5** (a) Explain ABO blood grouping system. **03**
- (b) Explain Sandwich ELISA with neat diagram. **04**
- (c) Explain hybridoma technology for monoclonal antibody production. **07**

OR

- Q.5** (a) Enlist factors affecting immunogenicity and explain any one in detail. **03**
- (b) Explain Western Blot Technique with neat diagram. **04**
- (c) Explain the process of B cell maturation and development. **07**
