

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – SUMMER 2013

Subject Code: 150402**Date: 16-05-2013****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) Briefly describe the three major events in the inflammatory response. **06**
- (b) Specific immunity exhibits four characteristic attributes, which are mediated by lymphocytes. List these four attributes and briefly explain them. **08**
- Q.2** (a) List the secondary lymphoid organs and summarize their functions in the immune response. **10**
- (b) All immunogens are antigens but not all antigens are immunogens. Explain. **04**
- OR**
- (b) A hapten can stimulate antibody formation but cannot combine with antibody molecules. Explain whether above statement is true or False. **04**
- Q.3** (a) Draw a schematic diagram of a typical IgG molecule and label each of the following parts: H chains, L chains, interchain disulfide bonds, intrachain disulfide bonds, hinge, Fab, Fc, and all the domains. Indicate which domains are involved in antigen binding. **07**
- (b) Explain radial immunodiffusion and double immunodiffusion with a neat diagram **05**
- (c) Differentiate between agglutination and precipitation for Ag-Ab reaction. **02**
- OR**
- Q.3** (a) Explain principle and variations of ELISA with a neat diagram. **07**
- (b) What are the basic functions of Complement components? **05**
- (c) Differentiate between antibody affinity and antibody avidity. **02**
- Q.4** (a) Explain Immune Complex mediated Hypersensitivity. **08**
- (b) Differentiate between active and passive immunization. **06**
- OR**
- Q.4** (a) Explain Antibody mediated Cytotoxic Hypersensitivity. **08**
- (b) Differentiate between idiotypic and isotypic. **06**
- Q.5** (a) Outline the classical pathway of complement activation with necessary figure **10**
- (b) What is immunologic basis of graft rejection? **04**
- OR**
- Q.5** (a) Write a short note on multivalent subunit vaccines with an example. **10**
- (b) Draw a neat chart of hematopoietic system. **04**
