

SARDAR PATEL UNIVERSITY
Programme: BSC (MICROBIOLOGY)
Semester: V
Syllabus with effect from: June 2013

Paper Code: US05CMIC04	Total Credit: 3
Title Of Paper: Immunology	

Unit	Description in detail	Weighting (%)
1	Non Specific Host Defense Mechanisms: Phagocytosis, Complement, Inflammation, Cytokines Acute Phase Proteins, Cells, Tissues & Organs of the Immune System.	
2	Specific Immune Responses: I Antigens, Haptens, Cluster of Differentiation Molecules, Humoral & Cell Mediated Immunity. Recognition of Foreignness. T Cell Biology - T Cell receptors, Types of T Cells, T Cell Activation. B Cell Biology- B Cell Receptors, B cell Activation.	
3	Specific Immune Responses: II Antibodies - (Immunoglobulins - Definition, Structure & Function, Classes of Immunoglobulins. Antigen-Antibody Reactions: General Features, Measurement of Antigen & Antibody. Serological Reactions: Precipitation Reactions, Definition, Mechanism - Zone Phenomenon & Lattice Hypothesis. Applications- Precipitation in Liquid Medium. Agglutination reactions- Definition, Applications-Slide agglutination test. Tube agglutination test, Passive agglutination test. Primary & Secondary Antibody response. Diversity of Antibodies, Clonal Selection Theory Monoclonal Antibody Technology	
4	Immune Disorders: Immuno Deficiency. Hypersensitivity Autoimmunity - Mechanism & Classification of Autoimmune diseases. Immunology of Transplantation: Classification of Transplants. Allograft reaction (mechanism) Factors favouring Allograft survival. Graft v/s Host reaction. Immunology of Malignancy.	

Basic Text & Reference Books:

- Text Book of Microbiology - Ananthnarayan & Paniker.
- Microbiology - Prescott, Harley & Klein.

