

SARDAR PATEL UNIVERSITY
Programme: MSC (Genetics)
Semester: III
Syllabus with effect from: June 2010

Paper Code: PS03CGEN01	Total Credits: 4
Title Of Paper: Immunogenetics	

Unit	Description in detail	Weightage (%)
1	Humoral and cell mediated immunity, organs of the immune system, characteristics of antigens, Blood groups and antigens, Rh incompatibilities, genetic basis of globin gene variation, Genetic disorders of haemoglobins (Sickle cell anaemia, Thalassemia and Haemophilia).	25 %
2	Structure, classes and function of immunoglobulins, Organization and expression of Immunoglobulin genes, Theories and genetic basis of antibody diversity, Hybridoma technology Molecular architecture of TCR, BCR and MHC, Genetics of Human leukocyte antigens.	25 %
3	Introduction to antigen-antibody reactions (Immunodiagnostics). Functions, activation and regulation of complement system, Vaccines (Attenuated, recombinant, synthetic, live and nucleic acid vaccines), Transplantation Immunology.	25 %
4	Virulence and host resistance, Autoimmunity and diseases (Systemic: Systemic Lupus Erythromatosus, Multiple Sclerosis & Rheumatoid Arthritis; Organ Specific: Hashimoto Thyroiditis, Autoimmune Anemia & Myasthenia Gravis), Brief introduction about primary and secondary immunodeficiencies.	25 %

Basic Text & Reference Books:

- Kuby-Immunology: T. J. Kindt, R. A. Goldsby and B. A. Osborne; W. H. Freeman
- Immunology: Ivan Roitt, J. Brostoff and D. Male; Mosby
- Essential immunology: Ivan Roitt; Oxford: Blackwell
- Topic related review articles.

