

- Unit:1 History and scope of Immunology. Types of Immunity - Innate, acquired, passive and active. Physiology of immune response - HI and CMI specificity and memory. Antigen - antibody reactions.
- Unit:2 Antigens - types - Hapten. Immunoglobulins - structures ^(class, Ab diversity) distribution and function. Molecular biology of Ig synthesis. ^{Primary & Secondary Lymphoid organs} Lymphoid tissues - Ontogeny and physiology of immune system -
 Origin and development, differentiation of lymphocytes. Lymphocyte sub-populations of mouse and man - structure and functions of class I and II molecules. Antigen distribution in population.
- Unit:3 HLA in human health and disease. Transplantation immunity - Organ transplantation and HLA tissue typing. Effector mechanisms in immunity - macrophage activation. Cell-mediated cytotoxicity. Hypersensitivity reactions. Cellular interactions in immune response. Development of vaccine and antibody in plants.
- Unit:4 Antigen recognition. T,B-cell receptors, MHC restriction, Role of APC's. Lymphocyte activation, clonal proliferation, differentiation. Interleukins and their role. The complement systems - mode of activation, classical and alternate pathway, biological function. Immunoregulation - helper and suppressor cells, specific factors. Idio type network, Immune erosion, Functions and applications of antibody, Magic bullet. ^{Immune therapy}
- Unit:5 Immune response genes. Immunological tolerance- Immunosuppression. Introduction to tumor immunology, autoimmune disorders, antigen drift and immunology of infectious diseases- AIDS- HIV pathogenesis - current understanding of possible vaccine development and therapeutic agents.

REFERENCE BOOKS:

1. Immunology by I.M.Roitt, J.Brostoff and D.K.Male (1993) Gower Medical Publishing, London
2. Immunology by J.Kuby (1991) Freeman and Company
3. Immunology A Short course by E.Benzimini, G.Sunshine and Leskowitz Willy-Lias 1996.
4. Introduction to Medical Immunology by Gabriel Virella, Marcel Dekker 1991
5. Essential Immunology, Ivan M.Roit (1994)- Blackwell Scientific publications, Oxford.
6. Immunology VII edition by Donald M.Weir, John Steward (1993) ELBS London.
7. Immunology III edition by Richard M Hyde (1995) National Medical series Williams & Wilkins, Harward Publishing Company

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