

MAJOR BASED ELECTIVE – II IMMUNOLOGY

Unit 1:

Introduction: Terminologies – history of immunology – Immunohematology, Blood groups, Blood transfusion – Rh –incompatibilities – immunity-types of immunity-innate and acquired.

Unit 2:

Immune systems: Anatomy of lympho-reticular system-primary lymphoid organ. Secondary lymphoid tissue – Cells of the immune system-detailed aspects of T and B cells-receptors – activation and function.

Unit 3:

Antigens: Types, properties, haptens-adjuvants –vaccines –types-toxoids, antitoxins, Immunoglobulins – structure types and properties. Theories of antibody production.

Unit 4:

Antigen – antibody reactions – in vitro methods, agglutination –precipitation, methods, agglutination –precipitation, complement fixation, Immunofluorescence, ELISA, RIA, in vivo methods: skin tests – immune complex tissue demonstrations.

Unit:5

Hypersensitivity reactions-antibody mediated, type I anaphylaxis, Type II-Antibody dependent cell cytotoxicity. Type III immune complex reactions – respective disease and immunologic methods of diagnosis –cell mediated immune responses lymphokines, cytokines. Type IV-Hypersensitivity reactions. MHC and transplantation.

References:

1. Ivan M.Roit 1994. Essential Immunology-Blackwell scientific publications, oxford. Donal M.Weir, John, steward 1993. Immunology VII edition. ELBS, London.
2. Richard M.Hyde 1995. Immunology III edition. National Medical series, Williams & Wilkins. Harvard publishing company.
3. Janis kuby 1993.Immunology II edition. W.H.Frumen and company, New york.

Suggested book for reading.

1. William E.Paul 1993. Fundamental immunology. II edition Raven press, New york.
2. Topley & wilsons 1990. Principles of Bacteriology, virology and immunity VIII edition Vol.I General microbiology and immunity Edward Arnold, London.
3. Helen chapel, Mansel Haeney 1986. Essentials of clinical immunology. ELBS. Abul K.Abbas, Andrew H.Lichtman, Jordans. Pobar 1994. Cellular and molecular immunology. II edition W.B.Saunders, U.S.A.