

Paper – II: Immunology and Enzymology

Unit – I

Innate and acquired immunity, clonal nature of the immune response, nature of antigens antibody structure and function, abzymes, antigen–antibody reactions, major histocompatibility complex, complement system.

Unit – II

Cells of the immune systems: B–lymphocytes, T–lymphocytes, macrophages, natural killer and lymphokine activated killer cells. Regulation of the immune response, activation of B and T–lymphocytes, Lymphokines, T–cell regulation, MHC restriction, immunological tolerance.

Unit – III

Classification, nomenclature and general properties of enzyme. Their isolation, purification and large–scale production.

Unit – IV

Mechanism of enzyme action and regulation; active and regulatory sites; chemical modification, general mechanistic principles, feedback inhibition, Isozymes, Enzyme activation, zymogens, Multienzyme complexes.

Unit – V

Steady state kinetics: Methods for estimation of rate of enzyme catalyzed reaction with special reference to Michaelis–Menten equation. Effects of substrate, temperature, pH and inhibitors of enzyme activity.

