

Objective - The objective is to learn basic Pathology, immunology, applied biotechnology and microbiology.

- UNIT - 1 MICROBIOLOGY-** Basic concepts Brief history of Microbiology with special reference to the contributions of Louis Pasteur, Robert Koch and others. Morphology and Physiology of Bacteria Classification and growth requirement of Bacteria Principles and uses of different kinds of Microscope, Sterilization and disinfection. **VIRUS** -General Properties of Virus, Herpes virus, Poliovirus, Hepatitis virus, Oncogenic virus.
- UNIT-2 Immunology** – Definition of Immunity, Types, development of B and T Lymphocytes, Hypersensitivity, Classification of Hypersensitivity, Immunological tests – Elisa, RIA, CRP, Western Blotting test, HBsAg.
- UNIT - 3 Applied Biotechnology – RDT (Recombinant DNA Technology)** Genetic engineering and gene Cloning In Microorganism, Strategies of genetic engineering, Genetic engineering for human welfare (production of pharmaceuticals, Insects pest control Etc.)
- UNIT - 4 PATHOLOGY** -Hyperplasia, Hypertrophy, Atrophy, Metaplasia, Cell Injury and Cell Death Necrosis, Apoptosis, Intracellular Accumulations, Lipids Proteins Glycogen Pigments Cellular Adaptations of Growth and Differentiation.

Recommended Books:

- Essential Microbiology by rajesh bhatiya
- Principles of Virology by S. Jane Flint & Lynn W. Enquist & Vincent R. Racaniello & Anna Marie Skalka