Semester: 2nd

Paper: Clinical Microbiology and Enzymology

Unit I

Microbiology: Classification of microorganisms, criteria for classification, Virulence and pathogenesis. Pure culture techniques and clutre techniques.

Unit II

Microbial fermentation, Microbes in decomposition and recycling. Microbes as pathogenic agents in man. Food poisoning (Staphyloccoccal, Salmonella and Shigella)

Unit III

Enzyme: Classification and Nomenclature, Coenzymes and cofactors, Enzyme kinetics Determination of Km and Vmax .specific activity, turnover number. Factors affecting rate of enzyme catalysed reactions: pH, temperature, etc. Enzyme inhibition: reversible and irreversible inhibition.

Unit IV

Diagnostic enzymology; Principles, definition of functional and non-functional plasma enzymes enzymes and enzyme pattern in health and diseases with special mention of plasma lipase, amylase, creatinine Kinase, SGOT & SGPT

Practicals:

1) Preparation of liquid and solid media for growth of Microorganisms.
2) Isolation and maintenance of organisms by plating, streaking, Slants and slab cultures.
4) Isolationof pure cultures
5) Blood Film preparation.
6) Gram staining and acid fast staining.

Books Recommended

1. **Microbiology by Davis**
2. **General Microbiology by Roger Stanier**