Applied Microbiology (PGQP78 xvi)

Microbiology

- History and scope of microbiology
- Position of microorganisms in the living world
- Structure of a bacterial cell:
- Structure of bacteriophages
- Nitrogen Cycle
- General accounts of microbes in diverse environments
- Microbial growth curve
- Mechanisms of gene transfer
- Basic concepts of gene regulation
- Mutation in microbes
- Fermentative production
- N2 -fixation
- Bio fertilizers
- Microbial interactions

Cytology and Genetics

- Ultrastructure of plant an animal cell
- Cell cycle
- Mendel's laws and cytoplasmic inheritance
- Interaction of genes

- Linkage and crossing over
- Sex determination in plants and animals
- Modern concept of gene structure
- Mutations and mutagens

Biochemistry

- Proteins
- Enzymes
- Carbohydrates:
- Lipids
- Nucleic acids and Genetic code

Physiology

- Water relations
- Cell Membrane
- Photosynthesis
- Respiration
- Hormones

Biotechnology

- Genetic Engineering

Bio techniques

- Chromatography
- Electrophoresis

Ecology

- Abiotic environment
- Biotic environment
- Adaptations
- Population ecology
- Community Ecology
- Ecosystem function
- Ecological succession
- Environmental pollution