

Elective paper BT104 Microbial diversity

Section I

Unit 1

- 1.1. Biodiversity: Types of biodiversity: alpha, beta, and gamma diversity.
- 1.2. Techniques for molecular identification: Morphological methods, Biochemical, serological,
- 1.3. Techniques for molecular identification: serological, Molecular methods, Fatty acid profiling, metabolic fingerprinting (Biolog
- 1.4. Techniques for molecular identification:

Unit 2

- 2.1. Taxonomy methods: Taxonomy and classification Taxonomic Hierarchies;
- 2.2. Classical approach to classification;
- 2.3. Molecular taxonomy;
- 2.4. Modern methods of taxonomy and systematic. Taxonomy methods:

Section II

Unit 3

- 3.1. Virology : Structure, classification, cultivation and economic importance of plant viruses
- 3.2. Virology : Structure, classification, cultivation and economic importance of animalviruses
- 3.3. Virology : Structure, classification, cultivation and economic importance of bacteriophage.
- 3.4. Importance of viroids and priones .

Unit 4

- 4.1. Phylogeny of microbial diversity, Evolution of Diverse microbial species; Microbial phylogeny : , Archaea and Eubacteria,.
- 4.2. Differential characteristics of Enterobacteriaceae, Bacillaceae, Pseudomonadaceae
- 4.3. Differential characteristics of Azotobacteriaceae, Staphylococcus, Streptococcus, Myxobacteria
- 4.4. Differential characteristics of Corynebacteria, Chlamydia, Rickettsias, Mycoplasma and Actinomycetes Archaeobacteria : Phenotypes of Archea