

SARDAR PATEL UNIVERSITY
Programme: BSC (MICROBIOLOGY)
Semester: III
Syllabus with effect from: June 2012

Paper Code: US03CMIC02	Total Credit: 3
Title Of Paper: Fundamental Microbiology - II	

Unit	Description in detail	Weighting (%)
1	<p>Characterization, Classification and Identification of Microorganisms: Place of microorganisms in living world Haeckel's classification Whittaker's five kingdom concept Bergey's Manual of Systematic Bacteriology. Major characteristics of Microorganisms. Microbial Classification: Taxonomic groups, General Methods of Classifying Bacteria, Intuitive method, Numerical Taxonomy & Genetic Relatedness. Nomenclature and Identification</p>	
2	<p>Cultivation of Bacteria: Nutritional requirements. Nutritional types of bacteria Common ingredients of media, Types of media Physical condition required for growth : Temperature, Gaseous requirements (Aerobes and Anaerobes), PH & Miscellaneous, Physical requirements.</p>	
3	<p>Isolation and Growth of Bacteria: Isolation: Pure cultures, Methods of isolating pure cultures, Maintenance & Preservation of Pure cultures Growth of Bacteria: Mathematical expression of Growth, Growth curve of Bacteria, Synchronous Growth, Continuous culture, Measurement of Growth.</p>	
4	<p>Virology Bacteriophages: Discovery and significance , General characteristics Morphology and structure of Bacterial, Plant and Animal viruses Replication of Bacterial viruses (Lytic cycle and Lysogeny) Cultivation of animal, plant and bacteriophage</p>	

Basic Text & Reference Books:

- Microbiology- Pelczar, Chan and Krieg, 5th Ed.
- Elementary Microbiology- H. A. Modi

