

PCE5H001 BIOTECHNOLOGY

Module I:

Introduction and application of microbiology, Structure and functioning of bacterial cell, Classification and Identification criteria for bacteria. Nutritional requirements and nutritional types of bacteria.

Module II:

Isolation of micro-organisms, pure culture techniques and cultural characteristics. Bacterial growth, measurements and reproduction.

Module III:

Fundamentals of microbiology ecology and ecosystems, microbial associations and interactions. Applications of microbiology.

Module IV:

Types of bacteria in water, sanitary examination of water, water purification, average disposal and sewage purification.

Text and Reference Books:

1. *Microbiology, 4th ed. by MJPelczar, RDReid, and ECChan, McGraw-Hill.*
2. *Microbial Ecology: Fundamentals and Applications, 4th ed. by R M Atlas and R Bartha, Benjamin Cummings.*