

SARDAR PATEL UNIVERSITY
Programme: BSC (BIOTECHNOLOGY)
Semester: IV
Syllabus with effect from: November 2012

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| Paper Code: US04CBIT01 | Total Credit: 3 |
| Title Of Paper: Fundamentals of Biotechnology - II | |

| Unit | Description in detail | Weighting (%) |
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| 1 | Prokaryotic Transcription - Definition, concept of gene, promoter. Initiation, elongation, termination and anti termination of transcription. Operon concept - lac and trp operon. | |
| 2 | Prokaryotic translation - An overview of translation in prokaryotes. Initiation, elongation and termination of translation. Significance of translation. | |
| 3 | Restriction - modification system, restriction enzymes, types, nomenclature, properties and examples (EcoRI, BamHI, SmaI) | |
| 4 | Introduction to antigen-antibody interaction. Cells and organs of immune system (T cell, B cell, NK cells, APC). | |

Basic Text & Reference Books:

- Biotechnology - Expanding Horizon - B D Singh (1st Edition)
- Molecular Biology of gene - Watson, Hopkins & Roberts (4th Edition)
- Genomics - T A Brown (3rd Edition)
- Immunology - Janis Kuby
- Principles of Biochemistry - Lehninger and Cocks (4th Edition)
- Elements of biotechnology - P.K. Gupta

