

SARDAR PATEL UNIVERSITY
Programme: BSC (BIOTECHNOLOGY)
Semester: V
Syllabus with effect from: June 2012

Paper Code: US05CBIT01	Total Credit: 3
Title Of Paper: Molecular Biology	

Unit	Description in detail	Weighting (%)
1	Replication in Eukaryotes - Problems associated with eukaryotic replication, Enzymes & proteins involved in replication with its function. DNA damage & repair, mismatch repair, direct repair, excision repair, SOS repair and post-replicative repair.	
2	Transcription in Eukaryotes: Initiation, elongation and termination. Types of RNA polymerases, types of promoter, enhancers & silencers, Post transcriptional modification - types of introns, splicing of RNA, t-RNA, r-RNA, modification of 5' and 3' ends.	
3	Translation in Eukaryote - Initiation, elongation and termination. Post-translational modification, protein targeting	
4	Transposons: Types, mechanism and recombination. Applications of transposons in r - DNA technology.	

Basic Text & Reference Books:

- Genes - Benjamin Lewin
- Molecular biology of the gene - Watson et al
- Molecular biology of the cell - Alberts et al

