GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2016			
Subject Code:2160401 Date:06/0 Subject Name: Advanced Molecular Biology-II Time: 10:30 AM to 01:00 PM Total Ma Instructions:			6
			arks: 70
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Draw structure of Retrovirus and explain its life cycle. Explain Base Excision repair in detail with a neat diagram.	07 07
Q.2	(a) (b)	Explain the technique of DNA finger printing along with its applications. What are different ways of regulating metabolic pathways? Explain any one in detail.	07 07
		OR	
	(b)	Write a short note on Retrotransposons.	07
Q.3	(a) (b)	How can detection and selection of mutants be done? Give difference between genetic mapping and physical mapping. OR	07 07
Q.3	(a) (b)	What are different ways for suppression of mutation? Explain Maxam-Gilbert's Method of DNA sequencing.	07 07
Q.4	(a) (b)	Explain positive and negative regulation of transcription. Explain the mechanism of spliceosome mediated splicing. OR	07 07
Q.4	(a) (b)	Explain structure and genetic organization of any transposable element. How can gene regulation be carried out in prokaryotes during replication?	07 07
Q.5	(a) (b)	Write a brief note on splicing errors and its prevention. Explain genetics of M13 virus.	07 07
Q.5	(a) (b)	OR What is alternative splicing? Write down its applications. Write a short note on gene replacement and gene targeting.	07 07
