Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– IV(NEW) EXAMINATION – SUMMER 2015

Subject Code: Molecular Biology and Genetics **Date: 05/05/2015**
Subject Name: 2140401
Time: 10:30am-1.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss various law of inheritance.	**07**
	(b)	Write about structure of bacterial chromosome.	**07**
Q.2	**(a)**	Explain the Griffith experiment with experimental diagram.	**07**
	(b)	Give a brief account on cistron, recon and muton.	**07**
		OR	
	(b)	Write a note on sex linked inheritance.	**07**
Q.3	**(a)**	Give detail account on one gene one protein hypothesis.	**07**
	(b)	Elaborate semi conservative mode of replication.	**07**
		OR	
Q.3	**(a)**	Enlist and explain the role of enzymes involved in prokaryotic replication.	**07**
	(b)	Explain in brief about primosome, replisome, replicon.	**07**
Q.4	**(a)**	What do you mean by post transcriptional modification? Write the modification takes place for mRNA.	**07**
	(b)	Explain in brief about promoter, silencer and enhancer.	**07**
		OR	
Q.4	**(a)**	Describe in detail about types and characteristics of genetic code.	**07**
	(b)	Elaborate on repetitive nucleotide sequences in Eukaryotic genome.	**07**
Q.5	**(a)**	Explain the process of protein synthesis in eukaryotes.	**10**
	(b)	Write a brief account on following : Monocistronic and polycistronic mRNA	**04**
		OR	
Q.5	**(a)**	Discuss transcription in prokaryotes.	**10**
	(b)	Write about concept of wobble hypothesis.	**04**

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