

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2170401****Date: 15/11/2018****Subject Name: Enzymes and Proteins****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

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

		MARKS
Q.1	(a) Explain “Lock and Key” hypothesis.	03
	(b) Explain the role of entropy in enzyme catalysis.	04
	(c) What is enzyme specificity? Describe different types of enzyme specificities with suitable example.	07
Q.2	(a) Enlist six classes of enzymes.	03
	(b) Explain collision theory of enzyme action.	04
	(c) What is enzyme immobilization? Discuss various physical techniques of enzyme immobilization.	07
	OR	
	(c) Define enzyme immobilization. Discuss various chemical techniques of enzyme immobilization.	07
Q.3	(a) Explain the effect of temperature on enzyme action.	03
	(b) Write the advantages of enzyme immobilization.	04
	(c) Compare the kinetics of single substrate and multi-substrate reactions.	07
	OR	
Q.3	(a) Explain the competitive inhibition of enzyme.	03
	(b) Explain the concept of crude enzyme and pure enzyme.	04
	(c) Comment on the derivation of Michaelis-Menten Equation and its significance.	07
Q.4	(a) Give the significance of V_{max} .	03
	(b) How new functions evolved in proteins.	04
	(c) Comment on the use of enzymes in leather and textile industries.	07
	OR	
Q.4	(a) Diagnostic use of enzymes.	03
	(b) Allosteric regulation of enzymes.	04
	(c) Comment on the production and purification of crude enzyme extracts from plant sources.	07
Q.5	(a) Explain the modular structure of proteins.	03
	(b) Methods of characterization of enzymes.	04
	(c) Comment on the production and purification of crude enzyme extracts from animal sources.	07
	OR	
Q.5	(a) What is protein evolution?	03
	(b) Comment on the protein folding patterns.	04
	(c) Comment on the production and purification of crude enzyme extracts from microbial sources.	07
