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GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (NEW) EXAMINATION – WINTER 2017

Subject Code: 2170401   **Date: 02/11/2017**

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)	What are the six classes of enzymes? Give suitable example.	04
	(c)	Describe different types of enzyme specificities with examples.	07
Q.2	(a)	Explain "induced-fit" theory of enzyme action.	03
	(b)	Comment on the allosteric regulation of enzyme action.	04
	(c)	Give the derivation of Michelis-Menten Equation.	07
		OR	
	(c)	Comment on the formation and stabilization of secondary structure of proteins.	07
Q.3	(a)	Write a note on multi-subunit protein.	03
	(b)	Explain transition state theory of enzyme catalysis.	04
	(c)	Describe different physical methods of enzyme immobilization.	07
		OR	
Q.3	(a)	Explain the concept of active site and binding site in enzyme.	03
	(b)	Explain collision theory of enzyme catalysis.	04
	(c)	How will you obtained crude enzyme extracts from microbes?	07
Q.4	(a)	Write various limitations of enzyme immobilization.	03
	(b)	Comment on the analysis of film and pore diffusion.	04
	(c)	Comment on the use of enzymes in textile & leather industries.	07
		OR	
Q.4	(a)	Write the advantages of enzyme immobilization.	03
	(b)	How will you immobilize invertase enzyme?	04
	(c)	How will you isolate and purify enzymes from plant sources?	07
Q.5	(a)	How pH affects the activity of enzyme?	03
	(b)	Comment on the diagnostic use of enzymes.	04
	(c)	Comment on the survey of protein structures and functions.	07
		OR	
Q.5	(a)	How temperature affects the activity of enzyme?	03
	(b)	Comment on the analytical use of enzymes.	04
	(c)	Explain the concept of protein folding. Comment on the idea of protein design.	07

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