

**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
<b>Q.1</b>	(a) Explain “lock and key” hypothesis.	<b>03</b>
	(b) What are the six classes of enzymes? Give suitable example.	<b>04</b>
	(c) Describe different types of enzyme specificities with examples.	<b>07</b>
<b>Q.2</b>	(a) Explain “induced-fit” theory of enzyme action.	<b>03</b>
	(b) Comment on the allosteric regulation of enzyme action.	<b>04</b>
	(c) Give the derivation of Michelis-Menten Equation.	<b>07</b>
	<b>OR</b>	
	(c) Comment on the formation and stabilization of secondary structure of proteins.	<b>07</b>
<b>Q.3</b>	(a) Write a note on multi-subunit protein.	<b>03</b>
	(b) Explain transition state theory of enzyme catalysis.	<b>04</b>
	(c) Describe different physical methods of enzyme immobilization.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Explain the concept of active site and binding site in enzyme.	<b>03</b>
	(b) Explain collision theory of enzyme catalysis.	<b>04</b>
	(c) How will you obtained crude enzyme extracts from microbes?	<b>07</b>
<b>Q.4</b>	(a) Write various limitations of enzyme immobilization.	<b>03</b>
	(b) Comment on the analysis of film and pore diffusion.	<b>04</b>
	(c) Comment on the use of enzymes in textile & leather industries.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Write the advantages of enzyme immobilization.	<b>03</b>
	(b) How will you immobilize invertase enzyme?	<b>04</b>
	(c) How will you isolate and purify enzymes from plant sources?	<b>07</b>
<b>Q.5</b>	(a) How pH affects the activity of enzyme?	<b>03</b>
	(b) Comment on the diagnostic use of enzymes.	<b>04</b>
	(c) Comment on the survey of protein structures and functions.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) How temperature affects the activity of enzyme?	<b>03</b>
	(b) Comment on the analytical use of enzymes.	<b>04</b>
	(c) Explain the concept of protein folding. Comment on the idea of protein design.	<b>07</b>

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