

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019****Subject Code: 2170401****Date: 23/11/2019****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) Name any three substrates for enzyme immobilization.	03
(b) Explain collision theory of enzyme action.	04
(c) Give the Classification of enzymes in detail.	07
Q.2 (a) Explain collision theory of enzyme catalysis.	03
(b) Explain the competitive inhibition of enzyme.	04
(c) What is enzyme immobilization? Discuss various physical techniques of enzyme immobilization.	07
OR	
(c) Discuss the concept of active site and energetics of enzyme substrate complex formation.	07
Q.3 (a) Comment on the diagnostic use of enzymes.	03
(b) Comment on the allosteric regulation of enzyme action.	04
(c) Give the derivation of Michelis-Menten equation and comment on the significance of it.	07
OR	
Q.3 (a) Write the advantages of enzyme immobilisation.	03
(b) Write the limitations of enzyme immobilisation.	04
(c) Explain industrial applications of Enzymes.	07
Q.4 (a) Diagnostic use of enzymes.	03
(b) What is enzyme specificity?	04
(c) Explain General properties of protein-protein interfaces.	07

OR

- Q.4** (a) Explain about protein secondary structure. **03**
(b) Discuss features of structural relationship among homologous proteins. **04**
(c) Discuss in detail about protein mis-folding diseases. **07**
- Q.5** (a) What is native state of protein structure **03**
(b) How new functions evolved in proteins. **04**
(c) Explain thermodynamics of protein folding with example of free energy funnels. **07**

OR

- Q.5** (a) What is proteostasis? **03**
(b) What are chaperons? **04**
(c) Discuss effects of different protein denaturation agents on protein. **07**
