

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code:3160413

Date:26-05-2025

Subject Name: Proteins and enzymes

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.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) Discuss about the role of entropy in catalyst. **03**
(b) Explain the mechanism of enzyme action. **04**
(c) Give detailed note on classification of enzymes. **07**
- Q.2** (a) Write down application of enzymes in solution **03**
(b) Explain in detail about Multi-substrate reaction. **04**
(c) Write a brief note on Michaelis–Menten equation. **07**
- OR**
- (c) Write a brief note on Monod Changeux Wyman Model. **07**
- Q.3** (a) Write down application of enzymes in solution. **03**
(b) Write a effect of kinetics of immobilized enzyme reaction . **04**
(c) Write a brief note on Enzyme immobilization **07**
- OR**
- (a) List out the method use for characterization of enzyme. **03**
(b) What are the enzyme used for analytical and diagnostic application. **04**
(c) Write down the commercial application of enzymes in food and pharmaceutical and other industries. **07**
- Q.4** (a) Write down significance of protein engineering. **03**
(b) Explain about Molten globule. **04**
(c) Write a brief about Protein –DNA interaction. **07**
- OR**
- (a) Explain about collision theory. **03**
(b) Write a note on Protein function **04**
(c) Explain method of characterizing protein in solution. **07**
- Q.5** (a) What are Ribosome's? **03**
(b) Describe about Molecular structure of protein. **04**
(c) Explain briefly about protein folding. **07**
- OR**
- (a) Write a note on Side chain Conformation **03**
(b) Give classification of protein folding pattern **04**
(c) Write a note on protein misfolding and GoEL- GroEs. **07**
