

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER 2013****Subject Code: 170401****Date: 26-11-2013****Subject Name: Enzymes and Proteins****Time: 10:30 TO 01:00****Total Marks: 70****Instructions:**

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

Q.1 (a) Write a detail description on Classification of Enzymes with suitable example. **07**

(b) Discuss the mechanism of enzyme action as catalyst. **07**

Q.2 (a) Derive the Michalis – Menton equation. **07**

(b) What are the effects of temperature and pH on activity of enzyme? **07**

OR

(b) Explain various methods to determine protein structure. **07**

Q.3 (a) Define the term enzyme immobilization. Discuss physical and chemical techniques for enzyme immobilization. **10**

(b) Write a note on advantages and disadvantages of enzyme immobilization. **04**

OR

Q.3 (a) Discuss in detail various types of inhibition with suitable example.

(b) Define the term cooperativity. Discuss the Monod changeux wyman model for allosteric regulation of enzyme.

Q.4 (a) Give significances of enzyme purification. Enlist and explain how one can go for selection of purification technique depending upon enzyme properties? **07**

(b) Describe in detail about strategies can be adopted for purification and characterization of any enzyme. **07**

OR

Q.4 (a) What do you mean by molecular chaperones? How Gro EL and Gro ES mediate the function of protein folding at cellular level? **07**

(b) Describe about classification of protein folding pattern. **07**

Q.5 (a) Write in detail about protein expression pattern in space and time. **07**

(b) Write a note on computing in protein science. **07**

OR

Q.5 (a) Define the term chromatographic techniques. Discuss the principle of it. Enlist various chromatographic techniques with its characteristics features. **07**

(b) Enlist and explain the uses of enzyme in pharmaceuticals and food industry. **07**
