

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 170401****Date: 25-11-2014****Subject Name: Enzymes and Proteins****Time: 10:30 am - 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.

- Q.1 (a)** What is enzyme immobilization? Discuss any two methods of immobilization of enzymes. **07**
- (b)** Describe various forces responsible for stabilizing protein structures. **07**
- Q.2 (a)** Differentiate between domain and motif of proteins. Give suitable examples. **07**
- (b)** Comment on protein folding and protein modular structure. **07**
- OR**
- (b)** Explain the evolution of globin and dehydrogenase proteins. **07**
- Q.3 (a)** Describe different levels of protein organization. **07**
- (b)** Whether base sequence of genome is related with amino acid sequence of proteins? Justify. **07**
- OR**
- Q.3 (a)** Comment on the control and integration of functions of proteins. **07**
- (b)** Comment on protein expression patterns in space and time. **07**
- Q.4 (a)** Discuss the use of computer in the field of protein science. **07**
- (b)** Discuss the evolution of protein function with suitable example. **07**
- OR**
- Q.4 (a)** Comment on the roles of molecular chaperons in protein folding. **07**
- (b)** How and why you will use affinity chromatography in protein science. **07**
- Q.5 (a)** What is electrophoresis? Describe its applications in protein science. **07**
- (b)** What is enzyme specificity? Discuss different kinds of enzyme specificities. **07**
- OR**
- Q.5 (a)** Describe the basic strategies involved in the purification of protein mixture. **07**
- (b)** Discuss various types of enzyme inhibition. **07**
