

GUJARAT TECHNOLOGICAL UNIVERSITY**B. Pharm-Semester-V May-2012 Examination****Subject code: 250003****Subject Name: Pharmaceutical Chemistry -V (Biochemistry)****Time: 02:30pm to 5:30pm****Date:18 -05-2012****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) What are phospholipids? Classify them and write the functions of phospholipids. **06**
(b) Describe the structures and function of mucopolysaccharides. **05**
(c) What are fatty acids? Explain the various parameters measured to check the purity of fats and oils. **05**
- Q.2** (a) Discuss the organization of protein structure. Write a note on the determination of primary structure of proteins. **06**
(b) Describe the mechanism for transport of solutes (metabolites) and macromolecules across the biological membranes. **05**
(c) Give an account on mechanism of enzyme action. **05**
- Q.3** (a) What are co-enzymes? Write a note on the role of co-enzymes in enzyme action. **06**
(b) Write a detailed note on iso-enzymes. **05**
(c) Discuss in detail the regulation of enzyme activity. **05**
- Q.4** (a) Define oxidative phosphorylation. Discuss chemiosmotic hypothesis in detail. **06**
(b) Describe the components of electron transport chain and add a note on oxidation of NADH. **05**
(c) Write a note on enzyme inhibition. **05**
- Q.5** (a) Discuss the synthesis of glucose from non-carbohydrate sources. **06**
(b) Explain the importance of Cori-cycle. **05**
(c) Describe the role of hormones in maintenance of blood sugar level. **05**
- Q.6** (a) Describe the hexose monophosphate shunt and add a note on its significance. **06**
(b) Write a note on glycogen storage disease. **05**
(c) Explain the uronic acid pathway in detail. **05**
- Q.7** (a) Draw a schematic diagram explaining the various stages of TCA cycle. Add a note on the energetic of the cycle **07**
(b) Write a detailed note on glycolysis. Describe the significance of Rapaport-Leubering cycle. **09**
