

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – III • EXAMINATION – WINTER 2012****Subject code: 130403****Date: 05-01-2013****Subject Name: Basic Biochemistry****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) Enlist various properties of water. Explain any one in detail. **07**
(b) Draw TCA cycle. **07**
- Q.2** (a) Describe in detail about structural properties of disaccharides. **07**
(b) Discuss in detail about structural properties of polysaccharides. **07**
- OR**
- (b) What are the structure and physiological significances of proteoglycans? **07**
- Q.3** (a) Define the term oxidative phosphorylation. Discuss the process in detail. **07**
(b) What are the structural classifications of proteins? **07**
- OR**
- Q.3** (a) Draw the pentose phosphate pathway with structure. **10**
(b) Define and differentiate between polar, non polar and intermediate polar amino acids **04**
- Q.4** (a) How fat transport and digestion is taking place in living system? **07**
(b) Define hormone. Write a note on mechanism of hormone action. **07**
- OR**
- Q.4** (a) Discuss the pyrimidine biosynthetic pathway with structure. **10**
Q.4 (b) Draw the structure of adenine (A) and guanine (G) nitrogenous base with chemical name. **04**
- Q.5** (a) Give definition and two example of following: **07**
Monosaccharide, disaccharide, polysaccharide
(b) Explain structural classification of lipids. **07**
- OR**
- Q.5** (a) What are the physiological and chemical properties of water? **07**
(b) Differentiate between fat soluble and water soluble vitamins with suitable example. **07**
