

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – WINTER • 2014

Subject Code: 2130403**Date: 30-12-2014****Subject Name: Basic Biochemistry****Time: 02.30 pm - 05.00 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) Draw a TCA cycle with neat structural representation. **10**
(b) Write a brief account on monosaccharides. **04**
- Q.2** (a) Discuss in detail protein structural architecture. **07**
(b) Explain the process of protein digestion in GIT. **07**
- OR**
- (b) How ATP synthesis is taking place in mitochondria? **07**
- Q.3** (a) Define the term polarity. Classify the amino acids based on polarity and charge. **07**
(b) How the toxic product ammonia is converted to nontoxic compound urea? **07**
Discuss it in detail.
- OR**
- Q.3** (a) With structure write in detail about pentose phosphate pathway. **07**
(b) Describe the process of glycogen synthesis. **07**
- Q.4** (a) Carnitine is an importance of lipid carrier. Justify the statement with suitable explanation. **07**
(b) Differentiate the key features of fatty acid oxidation and biosynthesis. **07**
- OR**
- Q.4** (a) Discuss how purines (adenine and guanine) are synthesized via synthesis of IMP. **10**
(b) Write a short note on Gout. **04**
- Q.5** (a) How pyrimidines biosynthesis is regulated in eukaryotes and prokaryotes. **07**
(b) With physiological significances discuss micro elements. **07**
- OR**
- Q.5** (a) Give an account on ionization of water. **07**
(b) Explain in detail about water soluble vitamins. **07**
