

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E. Sem-III Regular / Remedial Examination December 2010

Subject code: 130403

Subject Name: Basic Biochemistry

Date: 16 /12/2010

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) Discuss the process of purine degradation with structural representation. **07**  
(b) Draw Glycolysis pathway.(Without Structures) **07**
- Q.2** (a) Write a short note on structural classification of proteins. **07**  
(b) Write a short note on disaccharides and polysaccharides. **07**
- OR**
- (b) Describe classification of amino acids. **07**
- Q.3** (a) Define hormone. Enlist various mechanism of action of hormone. Describe the mechanism of hormone action for cell surface receptor. **07**  
(b) Write a short note on Electron Transport Chain. **07**
- OR**
- Q.3** (a) Write a note on various micro elements of the living system. **07**  
(b) Draw Urea cycle.(Without Structure) **07**
- Q.4** (a) Write a short note on oxidation of Saturated fatty acids. **10**  
(b) If 500 molecules of Glyceraldehyde-3-Phosphate enter into Glycolysis then how many ATP produced till the end of TCA cycle? **04**
- OR**
- Q.4** (a) Draw TCA cycle.(With structure) **10**  
(b) If Fatty acid containing 22 carbon, then at the end of fatty acid oxidation how many ATP released? **04**
- Q.5** (a) Describe in detail chemistry, biosynthesis, physiological significances of vitamin A. **07**  
(b) Define buffer. Discuss the chemical properties of water. **07**
- OR**
- Q.5** (a) Explain in detail how pyrimidine biosynthetic pathway is regulated in prokaryotic and eukaryotic system? **07**  
(b) What are the physiological significances of hormones secreted by endocrine gland? **07**

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