

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-III Remedial Examination May 2011****Subject code: 130403****Subject Name: Basic Biochemistry****Date: 28-05-2011****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) Describe the process of De novo synthesis of IMP with structural representation. **07**

(b) Draw Urea Cycle.(Without Structure) **07**

Q.2 (a) Give classification of monosaccharide. **07**

(b) Write a short note on Glycogenolysis. **07**

OR

(b) Write a short note on Glycogenesis. **07**

Q.3 (a) Discuss the chemistry, biological functions and biologically active form of Vitamin D along with their biosynthesis. **07**

(b) Describe Glyoxylate cycle. **07**

OR

Q.3 (a) Write a note on physical and chemical properties of water. **07**

(b) Draw Gluconeogenesis pathway with structures. **07**

Q.4 (a) Describe Pentose Phosphate Pathway.(With Structure) **10**

(b) If Fatty acid containing 20 carbon, then at the end of fatty acid oxidation how many ATP released? **04**

OR

Q.4 (a) Write a short note on oxidation of Saturated fatty acids. **10**

Q.4 (b) If 200 molecules of Glyceraldehyde-3-Phosphate enter into Glycolysis then how many ATP produced till the end of TCA cycle? **04**

Q.5 (a) Give the structural classification of hormone. Explain the mechanism of action of steroid hormones. **07**

(b) Give the structural presentation of following: **07**

- Adenine
- Cytosine
- Vitamin B12
- Guanine
- Uracil
- Pantothenic acid
- Niacin

OR

Q.5 (a) Write a short note on various physiological functions of various plant hormones. **07**

(b) What are the microelements? Explain the physiological significance of them. **07**
