

Code No: C0304

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I - SEMESTER EXAMINATIONS APRIL/MAY-2012
BIOCHEMISTRY AND METABOLIC REGULATION
(BIOTECHNOLOGY)**

Time: 3hours**Max.Marks:60**

**Answer any five questions
All questions carry equal marks**

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- 1.a) Define glycolysis. Name types of glycolysis and write in detail any one process along with energetics.
- b) Describe hormonal regulation of glycogen metabolism.
- 2.a) Write salient features of salvage pathways. How pyrimidine bases are salvaged?
- b) Trace purine nucleotide degradation reactions.
- 3.a) Describe urea cycle. Write a note on the disorders of urea cycle.
- b) Define beta oxidation. Describe beta oxidation of myristic acid and add a note on energetics on this oxidation.
- 4.a) Discuss the evidence in support of light phase reactions in photosynthesis.
- b) Differentiate between cyclic photophosphorylation and non cyclic photophosphorylation.
- 5.a) Account on the structure, chemical composition and functions of plasma membrane.
- b) Define Apoptosis and give its significance in cancer disease.
- 6.a) Describe various transport systems that move molecules across cell membrane.
- b) Give the biosynthesis of aminoacid alanine.
- 7.a) Describe the structure of ribosomes and write their role in protein synthesis.
- b) Write some of the post translation modifications in protein targeting.
- 8.a) Define inhibition. Explain competitive and feed back inhibition with suitable examples.
- b) Give clinical applications of enzymes.

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