Exam.Code:0035
Sub. Code: 0972

2012
B.Sc. (Hons.) Biotechnology
Third Semester
BIOT-301-T: Biochemistry

Time allowed: 3 Hours | Max. Marks: 67

***NOTE**: Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I. Answer the following:-

a) Define Gluconeogenesis. (2)

b) List names of activated energy carriers. (2)

c) What are the precursors of Cholesterol biosynthesis? (2)

d) What are Salvage reactions? Give examples. (3)

e) What are the end products of Urea cycle? (3)

f) What are Ketone bodies? Explain Physiological Role. (3)

UNIT - I

II. a) What are coupled Kinetic reactions? Explain with specific examples.

b) Comment on Structural basis of High energy phosphoryl Transfer Potential of ATP. (7,6)

III. Write notes on:-

a) Sources of Cellular energy

b) Substrate Level Phosphorylation (2x6½)

UNIT - II

IV. Discuss steps involved in Krebs cycle. How is it regulated? (13)

V. a) What are feeder pathways of Glycolysis?

b) List enzymes involved in Glycogen Biosynthesis and breakdown. (7,6)

UNIT - III

VI. Discuss Steps involved in β-Oxidation of Fatty acids. How is the pathway regulated? (13)

P.T.O.

VII. Write notes on:-

a) Multifunctional Enzyme complex in FA metabolism.

b) Key regulatory steps in Cholesterol Biosynthesis. (2x6½)

UNIT - IV

VIII. a) Discuss how amino acids act as precursors of biogenic amines.

b) What are salvage reactions in nucleotide biosynthesis? (7,6)

IX. Discuss pathway for biosynthesis of Pyrimidines. (13)

x-x-x