B. Tech.

(SEM. IV) EXAMINATION, 2006-07

BIOCHEMISTRY

Time : 2 Hours] [Total Marks : 50

Note : Answer all questions.

1. Discuss any four parts of the following:
   (a) Fibrous and globular proteins.
   (b) Vitamins and co-enzymes.
   (c) Properties of enzymes.
   (d) Enzyme activity and its determination.
   (e) Enzymatic degradation of starch and glycogen.
   (f) Line weaver Burk plot and its significance.

2. Answer any four parts of the following:
   (a) How is pyruvate formed from fructose 6 – phosphate?
   (b) Describe two substrate level phosphorylation reactions with examples.
   (c) How is pyruvate converted to isocitric acid?
   (d) Give examples of transalldase and transketolase reactions.
   (e) Describe the bypass reactions of gluconeogenesis.
   (f) Discuss galactose metabolism.
3. Discuss any two parts of the following:
   (a) Degradation of fatty acids by B-oxidation into acetyl CoA.
   (b) Structure of DNA double helix.
   (c) Activation and initiation steps of protein synthesis.

4. Write notes on any two:
   (a) Competitive and non-competitive inhibition.
   (b) Structure and function of tRNA
   (c) Inhibitors of electron transport chain and protein synthesis.