BIOCHEMISTRY

Paper – 1

MAY/JUNE 2007

(2 ½ hours) **Total marks : 40**

SECTION – B

2. Answer in brief : (any 6 of 7) : **(6x4=24)**

a) What are the biochemical features and clinical manifestations of Alkaptonuria? Draw the reaction sequence catalyzed by the deficient enzyme.

b) Define 'activation energy' of an enzyme. Explain its relation to formation of ES complex with the help of a diagram.

c) A 42 year old male presented with a complaint of severe pain in his right leg toe and knee joint. Laboratory anealysis revealed elevated serum uric acid level.

a) Name the disease.

b) Name the metabolism affected.

c) What is the probable cause?

d) Name any two drugs used in the treatment of above disease.

d) What is recombinant DNA? Give atleast any 4 application of recombinant DNA technology

e) What is oxidative phosphorylation ?How it differs from substrate level phosphorylation?

f) What is protein energy malnutrition ? Explain the biochemical basis of any two clinical manifestaions os kwashiorkor.

g) Draw a well labelled diagram of 1-RNA. Explain its role in protein biosynthesis.

SECTION – C

3. Solve (any 2 of 3) : **(2x8=16)**

a) Describe the sources, coenzyme form, biochemical functions, deficiency manifestations and daily requirement of Thiamine.

b) Explain the reactions of urea cycle with the help of a diagram. Add a note on inherited disorders of urea cycle enzymes.

c) Describe the pathway of heme biosynthesis. Explain its regulation.