

# BIOCHEMISTRY

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## Paper - 1

MAY/JUNE 2008

(2 ½ hours)

Total marks : 40

### SECTION – B

2. Answer in brief : (any 6 of 7) :

(6x4=24)

- a) Secondary and tertiary structure of proteins and forces stabilizing them.
- b) Lac operon and its regulation in presence of lactose.
- c) Salvage pathway of purine synthesis and its significance.
- d) A one year old child with delayed milestone was brought to the hospital. His mother gave history of mousy odour from diapers.
  - i) What is the probable disease?
  - ii) What is the biochemical basis of diaper odour ?
  - iii) What should be the management of this patient ?
  - iv) Draw the reaction catalyzed by the deficient enzyme.
- e) Name three enzymes most commonly estimated in the diagnosis of myocardial infarction. Describe importance and limitations of each.
- f) An alcoholic individual had symptoms of memory loss and unstable gait. His blood pyruvate level was increased.
  - i) What is the probable diagnosis?
  - ii) What is the biochemical basis of increase in pyruvate and presence of neurological signs?
  - iii) Which test can confirm diagnosis?
- g) Mention the site of reactions and enzymes involved in activation of cholecalciferol. Justify the action of active form as a hormone.

### SECTION – C

3. Answer (any 2) :

(2x8=16)

- a) Describe electron transport chain. Mention the sites of ATP synthesis. Discuss the action of inhibitors.
- b) Describe the process of transcription and post transcriptional modification. Name any two antibiotics inhibiting this process.
- c) Describe the general reactions of catabolism of amino acids. What is the role of liver and kidney in detoxication of ammonia?