

# BIOCHEMISTRY

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## Paper - 2

MAY/JUNE 2010

(2 ½ hours)

Total marks : 40

### SECTION – B

2. Brief answer questions ( any 6 of 7 ) :

(6x4=24)

- a) Detoxication by conjugation.
- b) Chemical carcinogens.
- c) Creatinine clearance tests.
- d) Significance of HMP shunt.
- e) Role of calcium as second messengers.
- f) A 13 year old boy reported with jaundice, fatigue, muscle stiffness, tremors and behavioural changes. Examination revealed an enlarged liver and spleen, Kayser-ring was noted.
  - i) What is the probable diagnosis?
  - ii) Which organ are affected?
  - iii) What are the causes for the disease?
  - iv) What is the treatment suggested?
- g) A one year old child was reported with diarrhea, vomiting, jaundice, lethargy. Examination revealed hepatosplenomegaly and cataracts. His blood galactose levels were raised.
  - i) What is the probable diagnosis?
  - ii) Which enzymes is deficient?
  - iii) Which abnormal metabolites are excreted in the urine?
  - iv) What is the cause of cataract?

### SECTION – C

3. Solve (any 2 of 3 ):

(2x8=16)

- a) What is metabolic acidosis? Enumerate its causes and describe the various compensatory mechanisms operating in the body.

**b)** Describe the process of glycogenolysis in the body and its regulation. Write briefly about any three glycogen storage disease.

**c)** Describe the roles of low density lipoprotein (LDL) and high density lipoprotein (HDL) in cholesterol transport. Discuss their role in atherosclerosis.

