

BIOCHEMISTRY

Paper - 2

WINTER 2012

(2 ½ hours)

Total marks : 40

SECTION – B

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

(6x4=24)

- a) Significance of HMP shunt.
- b) Describe any two buffer systems involved in maintenance of normal blood pH.
- c) Oncogenes.
- d) Explain the principle of chromatography and its applications.
- e) Lipoproteins.
- f) A person with untreated diabetes mellitus and acidosis was admitted to the hospital.
 - i) What is the type of acidosis?
 - ii) What is the normal bicarbonate Carbonic acid ratio?
 - iii) Explain the mechanism of compensation.
- g) A 4-year old boy was brought to the hospital with complaints of nausea, vomiting, abdominal pain. He also had typical symptoms of hypoglycemia. It was told that child skipped of his routine means and ate sweets and fruits only. The mother informed the physician that he had similar complaints in the past also whenever he consumed large quantities of fruits and cane sugar.
- h) The laboratory data showed that the child had a low blood glucose level (50 mg/dl) and his urine gave a positive test fructose. The oral glucose tolerance test for the child was absolute normal.
 - i) Name the condition.
 - ii) Which is the deficient enzyme and the reaction?
 - iii) What is the precaution to be taken in diet?

SECTION – C

3. Solve : (any 2 of 3) :

(2x8=16)

- a) Describe the starvation metabolism.
- b) How water and electrolyte balance is maintained in the body?
- c) Give role of various enzymes in liver function tests.

