

BIOCHEMISTRY

Paper - 2

SUMMER 2014

(2 ½ hours)

Total marks : 40

SECTION – B

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

(6x4=24)

- a)** Enumerate the different types of glycosaminoglycans and give their biomedical importance.
- b)** Explain the role of kidney in maintaining acid base balance.
- c)** A 45 year old male came with complain of frequent occurrence of boils and ulcers which were not healing. On routine blood examination the blood sugar was found to be 'Fasting Blood Sugar – 250 mg / dl Urine glucose ++ He also gave a history of polyuria and polydipsia.
- What is the probable diagnosis?
 - What is the cause for polyuria and polydipsia?
 - What are the biochemical changes in lipid & protein metabolism in this disease?
- d)** One month old female child was brought to the OPD with failure to thrive and bilateral opacities in the eye. On examination the child had bilateral cataract and showed increased galactose in blood.
- What is the probable diagnosis?
 - What is the cause?
 - Explain the biochemical basis of cataract.
 - What dietary advice should be given to the patient?
- e)** Detoxification by conjugation with suitable examples.
- f)** Name the different second messenger hormones and explain the role of cAMP as a second messenger.
- g)** Biochemical changes in most severe phase of starvation.

SECTION – C

3. Long answer question : (any 2 of 3) :

(2x8=16)

a) Explain the absorption, regulation, functions, and deficiency manifestations of Iron.

b) Explain beta oxidation of palmitic acid with its regulation and energetics.

c) Describe hormonal regulation of blood glucose.

