

The West Bengal University of Health Sciences
BS 1st Professional (Supplementary) Examination 2014

: Biochemistry
: I

Full Marks : 50
Time : 2½ hours

Use separate answer script for each group
Attempt all questions. The figures in the margin indicate full marks

Group – A

1. a) Describe in detail how pH of blood is regulated by lung and kidney. Give an account of metabolic acidosis and anion gap. 4+4+2+2

or

- b) Describe all the complexes with their components of the respiratory chain in mitochondria with the probable sites of ATP synthesis. Indicate the names of different inhibitors with their sites of inhibition. Name some uncouplers associated with respiratory chain and indicate their significance. 8+2+2

Group – B

2. Answer **any two** of the following :

- a) Describe how monosaccharides and amino acids are absorbed from the gut. 4+3
b) Discuss in detail how covalent modification and repression/derepression mechanism can regulate the enzyme action in vivo. 7
c) Describe the principle and an outline of methodology of ELISA. Indicate the significance of the test. 7

Group – C

3. Write short notes on **any four** of the following :

- a) Osmosis.
b) Isoelectric pH.
c) Z DNA.
d) Ribozyme.
e) Optical isomerism in amino acids.

Group – D

4. Explain the following statements :

- a) Methotrexate is a competitive enzyme inhibitor.
b) Presence of deoxysugar makes DNA more stable.
c) Apolipoproteins are enzyme cofactors.
d) In competitive inhibition, larger amount of substrate can overcome the effect of inhibition.