001/19

The West Bengal University of Health Sciences
MBBS 1st Professional Examination, July 2019

Subject: Biochemistry
Paper : I

Full Marks : 50
Time : 2 ½ hours

*Attempt **all** questions. The figures in the margin indicate full marks.*

Group A

1. a) Classify protein on the basis of their biological function and give one example of each protein.
   b) Compare and contrast the structure of keratin, myoglobin and haemoglobin.
   c) Draw O_2 dissociation curve of HbA (adult haemoglobin) and HbF (foetal haemoglobin) and explain the difference between them. 3+6+3

   or

   a) State the class in which the following enzymes do belong: 3+6+3
   i) Acetyl carboxylase. ii) Fumarase. iii) Phosphoglucomutase.
   iv) Aldolase. v) Pepsin. vi) Restriction Endonuclease

   b) Classify the regulatory enzyme. Explain the process of covalent regulation of rate limiting enzyme with suitable example.

   c) State at least one pathological condition with rise in activity of the following enzymes in blood:
   i) SGPT. ii) Alkaline Phosphatase. iii) Amylase.
   iv) RBC Transketolase. v) Creatine phosphokinase. vi) LDH

Group B

2. Answer ***any two*** of the following: 2 X7
   a) Describe with the help of a diagram digestion of a triglyceride and its absorption from intestine, with special reference to the role of bile in the process.
   b) Draw the representative structure of IgG. Classify immunoglobulin and mention the function of each class.
   c) Name the blood buffers. Explain the role of blood buffers in the maintenance of normal pH of blood.

Group C

3. Write a brief account on ***any four***: 4 X3
   a) Uncoupler of oxidative phosphorylation. b) Reactive Oxygen species.
   b) Eicosanoids. d) Glycosaminoglycan.
   e) cAMP.

Group D

4. Explain the following statements: 4x3
   a) Oral Rehydration Solution contains glucose.
   b) Dipalmitoyl lecithin acts as surfactant of alveolar fluids.
   c) Allopurinol lowers the uric acid concentration of blood.
   d) Coenzymes act as co-substrate in the enzyme catalyzed reaction.