

001/20

The West Bengal University of Health Sciences
MBBS 1st Professional Examination, January 2020

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) Name the membrane phospholipids. Draw the structure of lecithin. Write the products formed by the action of different types phospholipases on lecithin. State the physiological role of lysophospholipids & fatty acids produced by the breakdown of lecithin. 3+1+4+4

or

- b) I) State at least one pathological condition which increases the activity of following enzyme in blood: 4
 ii) Lipase. iii) CPK-MB. iv) RBC glutathione reductase. v) SGOT
 II) Explain with the help of enzyme velocity curve how following factors regulate the enzyme Activity: 8
 i) Concentration of enzyme. ii) Concentration of substrate. iii) PH. iv) Temperature.

Group B

2. Answer *any two* of the following:
 a) Write down the Henderson Hasselbalch equation. Explain the role of kidney in the maintenance of acid base balance in our body. 1+6
 b) Name the components of the electron transport chain with the help of a diagram. Explain how the electron flows from the NADH+H⁺ to the molecular oxygen through the different components of ETC. 2+5
 c) State different types of transport of molecule across biomembrane. Mention characteristics of Carrier Mediated Transport. Differentiate between Primary active transport with that of secondary active transport. 2+2+3

Group C

3. Write a brief account on *any four* of the following: 4 x 3
 a) Phospholipases.
 b) Peptide bond.
 c) RBC Group Antigen.
 d) Thin layer Chromatography.
 e) Glycosides.

Group D

4. Explain the following statements: 4 x 3
 a) DNA is alkali resistant, where as RNA is alkali labile. - *easily broken down*
 b) Methotrexate inhibits the formation of Tetrahydrofolate from folic acid.
 c) F₀F₁ ATPase give rise to ATP synthesis in intact mitochondria.
 d) HbF has more affinity towards oxygen than HbA.