



DAG-M-20175-O

Seat No. _____

First Year M. B. B. S. (W.E.F. 2016) Examination

April - 2022

Biochemistry : Paper - I
(Old Course)

Time : 3 Hours]

[Total Marks : 50

- Instructions :** (1) Each section is to be answered in separate answer book.
(2) Answers should be brief and to the point.

SECTION - I

- 1 State true or false with reasons on any six : **1×6=6**
- (a) Vitamin C deficiency leads to scurvy.
 - (b) Lactose is also known as malt sugar.
 - (c) Arginine is an example of acidic amino acid.
 - (d) Immunoglobulin-G can cross placental barrier.
 - (e) Albumin globulin ratio is reversed in liver cirrhosis.
 - (f) Primary structure of protein contains only peptide bonds.
 - (g) Cytochrome oxidase is inhibited by cyanide ions.

- 2 (a) Read the following case report and answers the **1×5=5** questions :

A paediatrician was called to attend a 3 days old neonate as the baby's skin had become yellowish in colour. Paediatrician was found the icterus was present. Lab investigation showed: Serum total bilirubin = 14 mg/dl, Direct bilirubin = 0.8 mg/dl, indirect bilirubin = 13.2 mg/dl. He advised phototherapy to baby and drug phenobarbitone. Daily monitoring of serum bilirubin level was advised.

Questions :

- (i) Why do many neonates suffer forms jaundice?
- (ii) How and where bilirubin from in the body?
- (iii) Differentiate between direct and indirect bilirubin.
- (iv) How is phototherapy and drug phenobarbitone helpful in this condition?
- (v) Why it is important to monitor bilirubin levels?

- (b) Discuss the following : **3+2=5**
- (i) Vitamin E- Functions and Dietary sources
 - (ii). Night blindness - Causes and types
- 3** Write short notes on any three : **3×3=9**
- (i) Homopolysaccharides
 - (ii) Classification of enzymes
 - (iii) Proteins denaturation
 - (iv) Synthetic nucleotides

SECTION - II

- 4** Give your comments with justification on any six : **1×6=6**
- (a) Lysosomes are called suicidal bags.
 - (b) Active transport needs ATP
 - (c) Sugars exhibit various forms of isomerism
 - (d) Agar is used as laxative.
 - (e) Fats get rancid on exposure to air, humidity and temperature.
 - (f) Glutathione keeps cell membrane in reduced state.
 - (g) FMN and FAD act as coenzymes in various H-transfer reactions.
- 5** Discuss any two of the following : **5×2=10**
- (a) Diagnostic significance of enzymes
 - (b) Centrifugation and its applications
 - (c) Haemoglobin derivatives
- 6** Write short notes on any three : **3×3=9**
- (a) Essential amino acids
 - (b) Electron transport chain (ETC)
 - (c) Biochemical functions of calcium
 - (d) Biologically active peptides.
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