MBBS I (First) Professional Examination 2014-15

Course Code: MBS103 **Paper ID**: 0322208

Biochemistry -I

Time: 2 Hours 40 Minutes **Max Marks:** 40

Note: Attempt all questions. Draw proper diagrams to support your answer.

Part 'B'

1. Discuss the regulatory mechanism for maintenance of normal blood glucose levels in humans. How are these disturbed in diabetes mellitus? (10)

2. a) Describe the regulation of cholesterol biosynthesis in the cell and its association with heart diseases. (5)
   b) Define uremia. Explain the steps of urea cycle. (5)

3. Differentiate between:
   a) Competitive and non competitive inhibition of enzymes. (6)
   b) Active and passive transport. (2)
   c) Carbamoyl phosphate synthetase I and II (2)

4. Define oxidative phosphorylation. Describe the various components of ETC (Election Transport Chain) along with its inhibitors. (10)

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Roll No. | | | | | | | | | | |

Student's Name

Student's Signature

Invigilator's Signature

Course Code:MBS103 **Paper ID**: 0322208

Biochemistry - I

Part 'A'

Time: 20 Minutes **Max Marks:** 10

Note: 1. Attempt all questions and return this part of the question paper to the invigilator after 20 Minutes.
2. Please tick (√) correct one only. Cutting, overwriting or any other marking are not allowed.
3. For answering please use Ball- pen only.

c) Phe & Trp
d) Gly & Ala

Q.2 The number of Fe^{++} atoms present in a molecule of hemoglobin is:
a. 4 b. 3
c. 2 d. 1

Q.3 The excretory and product of protein (amino acid) metabolism in humans is:
a) Ammonia
b) Urea
c) Uric acid
d) Allantoui

Q.4 585 amino acid long polypeptide will contain:
a) 585 peptide bonds
b) 586 peptide bonds
c) 584 peptide bonds
d) 1170 peptide bonds

Q.5 The urea cycle is linked to TCA cycle via:
a) Succinate
b) Fumarate
c) Ornithine
d) Argininosuccinate

Q.6 In biochemical reactions S-adenosyl methionine (SAM) is an active donor of the following group:
a) Adenosine b) Methyl
c) Sulphur d) Acetate

Q.7 Albumin is synthesized in:
a) Kidney
b) Liver
c) Skeletal muscles
d) Bone marrow

Q.8 A nucleoside is composed of:
a) Nitrogenous base + Sugar
b) Nitrogenous base + Phosphate
c) Nitrogenous base + Sugar + Phosphate
d) Sugar + Phosphate

c) Serine
d) Glycine

Q.17 The end product of purine catabolism in humans is:
a) Urea
b) Uric acid
c) Ammonia
d) Xanthine

Q.18 The action of glucagon is mediated by:
a) cAMP
b) cGMP
c) IP_3
d) DAG

Q.19 Which one of the following is not an amino acid derivative hormone:
a) Thyroxine
b) Epinephrine
c) Norepinephrine
d) Estrogen

Q.20 Which one of the following is a heteropolysaccharide:
a) Starch
b) Glycogen
c) Hyaluronic acid
d) Inulin

c) C-DNA
d) Z-DNA

Q.10 Which one of the following is circular and supercoiled DNA:
a) SS-DNA
b) B-DNA
c) A-DNA
d) Plasmid -DNA

P.T.O.

Q.11 Which one of the following acts as an auto catalyst in the digestion of protein:
a) Pepsin
b) Trypsin
c) Chymotrypsin
d) Entrokurasi

Q.12 Transaminases are mostly found in:
a) Heart
b) Brain
c) Liver
d) Kidney

Q.13 Purely ketogenic aminoacid is:
a) Tyrosine
b) Phenylalanine
c) Arginine
d) Leucine

Q.14 Albinism is due to deficiency of:
a) Phenylalanine hydroxylase
b) Tryphphan hydroxylase
c) Tyrosinase
d) Arginase

Q.15 In which disease homogentisate accumulates in the blood and excreted in urine:
a) Phenylketonuria
b) Alkaptonuria
c) Homocystinuria
d) Ketonuria

Q.16 The phospholipid lecithin contains which of the following nitrogenous compound:
a) Choline
b) Ethanolamine