MBBS I (First) Professional Examination 2017-18

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 metabolism of Phenylalanine in detail. Enumerate the synthesis of different products obtained from Phenylalanine/Tyrosine. (10)

2. Explain the causes, clinical manifestations and laboratory diagnosis of the following: (5+5)
   a) Type 2 Diabetes Mellitus
   b) Sickle-cell anemia

3. Write in detail: (5+5)
   a) Lipotropic Factors
   b) Gout

4. Describe the following: (5+5)
   a) Metabolic changes during starvation
   b) Factors affecting enzyme action

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

Student's Name

Student's Signature

Invigilator's Signature

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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.

Q.1 Which of the following is an epimeric pair:
a) Glucose & maltose
b) Glucose & Fructose
c) Glucose & mannose
d) Glucose & ribose

Q.2 G-proteins act as:
a. Hormone carriers
b. Hormone receptors
c. Signal transducers
d. Second messengers

Q.3 Allopurinol is a competitive inhibitor of:
a) Dihydrofolate reductase
b) Xanthine oxidase
c) Carbonic anhydrase
d) Acetylcholinesterase

Q.4 Cyanide inhibits phosphorylation at:
a) Site I
b) Site II
c) Site III
d) Site IV

Q.5 Factty liver is caused due to accumulation of:
a) Fatty acids
b) Cholesterol
c) Phospholipids
d) Triacylglycerol

Q.6 Aspirin and indomethacin inhibit:
a) Phospholipase A_1
b) Phospholipase A_2
c) Cyclo-oxygenase
d) Lipo-oxygenase

Q.7 Primary structure of a protein is broken by:
a) Heat
b) Ammonium sulphate
c) Pepsin
d) All of the above

Q.8 Which of the following nitrogenous base is absent from DNA:
a) Uracil
b) Thymine
c) Adenine
d) Guanine

Q.9 Following myocardial infarction, the last serum enzyme to return to normal is:
a) Creatine kinase
b) Aspartate transaminase
c) Alanine transaminase
d) Lactate dehydrogenase

Q.10 Glycine is required for the formation of all of the following except:
a) Creatine
b) Porphyrins
c) Pyrimidines
d) Glutathione

Q.11 Lipogenesis is decreased in all the following except:

a) Restricted caloric intake
b) High fat intake
c) Deficiency of insulin
d) High carbohydrate intake

Q.12 Free glycerol cannot be used for triglyceride synthesis in:
a) Liver
b) Kidney
c) Intestine
d) Adipose tissue

Q.13 Hypocholesterolemia can occur in:
a) Hyperthyroidism
b) Nephrotic syndrome
c) Obstructive jaundice
d) Diabetes Mellitus

Q.14 Congenital absence of ornithine transcarbamoylase causes:
a) Hyperammonemia type I
b) Hyperammonemia type II
c) Hyperornithinemia
d) Citrullinemia

Q.15 The nitrogen atoms of pyrimidine nucleus:
a) Glutamate
b) Glutamine
c) Glutamate and Aspartate
d) Glutamine and Aspartate

Q.16 Kernicterus can occur in:
a) Retention hyperbilirubinemia
b) Regurgitation hyperbilirubinemia
c) Both of the above
d) None of the above

Q.17 Rate limiting step fo glycolysis is catalyzed by :
a) Glucokinase
b) Pyruvate kinase
c) Phosphofructokinase-I
d) Phosphohexose isomerase

Q.18 A coenzyme present in muscle phosphorylase is:
a) NAD
b) Pyridoxal phosphate
c) Thiamin pyrophosphate
d) Coenzyme A

Q.19 Urinary excretion of homogentisic acid is increased in:
a) Tyrosinemia
b) Alkaptonuria
c) Phenylketonuria
d) Homocystinuria

Q.20 Ciprofloxacin inhibits the synthesis of:
a) DNA in prokaryotes
b) DNA in prokaryotes and eukaryotes
c) RNA in prokaryotes
d) RNA in prokaryotes and eukaryotes