

BACHELOR OF SCIENCE (LABORATORY SCIENCES) (CBCS - 2019 COURSE)

B.Sc. (Lab Sci) Sem-III : WINTER- 2022

SUBJECT : CLINICAL BIOCHEMISTRY-I

Day : Wednesday

Time : 10:00 AM-12:00 PM

Date : 18-01-2023

W-22559-2022

Max. Marks : 20

**N.B.**

- 1) There are three sections as  
Section – A = Objective Type questions - 20 marks.  
Section – B = Long Answer questions - 20 marks.  
Section – C = Short Answer questions - 20 marks.
- 2) Section A is given in **SEPARATE** sheet and has to be answered on same sheet. This sheet should be completed with the first 20 minutes of starting of the examination. This sheet with Section A only will be collected by Supervisor.
- 3) Section B has four long questions and **ANY TWO** questions have to be answered.
- 4) Section C has six short questions and **ANY FOUR** questions have to be answered.
- 5) You have to make  $\surd$  such kind of mark in the box of the appropriate answers.

Seat No. : \_\_\_\_\_

**SECTION - A**

**M.C.Q's**

**(20)**

- 1 Gluconeogenesis occurs predominantly in the \_\_\_\_\_
  - a)  Brain
  - b)  Skeletal Muscle
  - c)  Adipose tissues
  - d)  Liver
- 2 Which of the following molecules is required for fatty acid synthesis?
  - a)  Acetyl CoA
  - b)  NADPH
  - c)  ATP
  - d)  All of the above
- 3 The rate limiting enzyme of Cholesterol biosynthesis is \_\_\_\_\_.
  - a)  Squalene epoxidase
  - b)  HMG CoA synthase
  - c)  Mevalonate kinase
  - d)  HMG CoA reductase
- 4 One of the following is considered a 'Good Cholesterol' for obese person.
  - a)  LDL-Cholesterol
  - b)  VLDL-Cholesterol
  - c)  HDL -Cholesterol
  - d)  None of the above

**PTO**

- 5 The enzyme defect in Phenylketonuria is \_\_\_\_\_.
- a)  Tyrosinase
  - b)  Phenylalanine Hydroxylase
  - c)  Tyrosine Hydroxylase
  - d)  Parahydroxy Phenylpyruvate Dioxygenase
- 6 Edema occurs due to lack of albumin in \_\_\_\_\_.
- a)  Marasmus
  - b)  Kwashiorkor
  - c)  Both
  - d)  None
- 7 Lipids are stored in adipose tissue as \_\_\_\_\_.
- a)  Triacylglycerol
  - b)  Phospholipids
  - c)  Cholesterol
  - d)  Free fatty Acid
- 8 Following system is responsible for maintaining the blood pH
- a)  Buffer System
  - b)  Respiratory System
  - c)  Renal System
  - d)  All of the above
- 9 Electrolyte analysis is carried out by \_\_\_\_\_.
- a)  Colorimetry
  - b)  Fluorimetry
  - c)  Ion selective electrode
  - d)  Spectrophotometry
- 10 HbA1c reflects mean blood glucose concentration of \_\_\_\_\_.
- a)  Preceding six months
  - b)  Preceding three weeks
  - c)  Current Plasma levels
  - d)  Preceding three months

Total marks obtained : \_\_\_\_\_

Signature of Invigilator : \_\_\_\_\_

Signature of Examiner : \_\_\_\_\_

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Max. Marks : 40

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Section – B = Long Answer questions - 20 marks.  
Section – C = Short Answer questions - 20 marks.
  - 2) Section B has four long questions and **ANY TWO** questions have to be answered.
  - 3) Section C has six short questions and **ANY FOUR** questions have to be answered.
  - 4) Answer to both the sections should be written in **SAME** answer book.
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**SECTION – B**

Long answer (Attempt **ANY TWO**) **(20)**

- 1) Describe the process of Glycolysis with its energetics and regulation.
- 2) What is Quality control? Describe in details 'Internal quality control'.
- 3) What is normal blood pH? Describe role of blood buffer and kidney in regulation of pH.
- 4) Define atherosclerosis. Discuss risk factors, pathogenesis and preventing measures of atherosclerosis.

**SECTION – C**

Short answer (Attempt **ANY FOUR**) **(20)**

- 1) ketosis
- 2) Urea Cycle
- 3) Electrophoresis principle, diagram, applications
- 4) Functions of cholesterol
- 5) Protein energy malnutrition
- 6) Glucose Tolerance Test (GTT)

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