

**BACHELOR OF SCIENCE (LABORATORY SCIENCES) (CBCS - 2019 COURSE)**  
**B.Sc. (Lab Sci) Sem-V : WINTER :- 2021**  
**SUBJECT: CLINICAL BIOCHEMISTRY-II**

Day : Monday  
Date 7/2/2022

W-22575-2021

Time : 10:00 AM-12:00 PM  
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 ✓ such kind of mark in the box of the appropriate answers.

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

**SECTION – A**

**M.C.Q's**

**Q.1** Multiple Choice questions

- 1) The end product of purine catabolism is
  - a) ☐ Uric acid
  - b) ☐ Hypoxanthine
  - c) ☐ Xanthine
  - d) ☐ None of the above
- 2) Which of the following disorders can be detected by new born screening?
  - a) ☐ Galactosemia
  - b) ☐ Congenital hypothyroidism
  - c) ☐ Phenylketonuria
  - d) ☐ All of the above
- 3) Which of the following Westgard's rule of quality control is a rejection criteria?
  - a) ☐ 1:2S
  - b) ☐ 1:3S
  - c) ☐ 1:4S
  - d) ☐ All of the above
- 4) Which of the following parameter of lipid profile is calculated using Friedwald's formula
  - a) ☐ HDL
  - b) ☐ LDL
  - c) ☐ Cholesterol
  - d) ☐ Triglycerides

**P.T.O.**

- 5) Which of the following enzyme causes separation of DNA strands during replication?
- a) ☐ Polymerase
- b) ☐ Ligase
- c) ☐ Helicase
- d) ☐ Primase
- 6) Which of the following liver function test is based on its excretory function?
- a) ☐ Serum bilirubin
- b) ☐ Serum albumin
- c) ☐ Serum alanine transferase
- d) ☐ Serum alkaline phosphatase
- 7) All of the following substances can be used for clearance test to assess glomerular function EXCEPT
- a) ☐ Urea
- b) ☐ Inulin
- c) ☐ Creatinine
- d) ☐ Uric acid
- 8) Which of the following is not a characteristics of Genetic code?
- a) ☐ Universal
- b) ☐ Degeneracy
- c) ☐ Unambiguous
- d) ☐ Overlapping
- 9) Which of the following enzyme is known as 'Molecular scissors'?
- a) ☐ Ligase
- b) ☐ Restriction endonuclease
- c) ☐ Polymerase
- d) ☐ None of the above
- 10) All of the following steps are involved in Polymerase Chain Reaction EXCEPT
- a) ☐ Denaturation
- b) ☐ Annealing of primers
- c) ☐ Amplification
- d) ☐ Ligation

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

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

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

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**Max. Marks: 40**

**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 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.

**SECTION – B**

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

**(20)**

- 1) Describe the chemistry, organization, functions and replication of DNA.
- 2) Explain briefly Recombinant DNA technology and its applications.
- 3) Classify liver function tests. Describe the tests based on excretory function.
- 4) Define quality assurance, precision, accuracy, sensitivity and specificity.

**SECTION - C**

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

**(20)**

- 1) Mutation
- 2) Clearance Tests
- 3) Biomarkers of Myocardial infarction
- 4) Chromatography: Principle, working and Application
- 5) Lipid profile: indications, sample collection, Normal range
- 6) Newborn screening: Sample collection and methods used

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