

**BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
THIRD SEMESTER
BIOCHEMISTRY III
BMLT – 303 [SPECIAL REPEAT]
[USE OMR SHEET FOR OBJECTIVE PART]**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

- Formation of glycogen is known as
 - Glycolysis.
 - Gluconeogenesis
 - Glycogenolysis.
 - Glycogenesis
- Hormone that regulates blood glucose
 - Insulin
 - Epinephrine
 - Growth hormone
 - Adrenaline
- Other name of Cori cycle
 - Lactic acid cycle
 - Lactate
 - Gluconeogenesis
 - Glycogenesis
- Which enzyme is a regulatory enzyme for glycolysis
 - Hexokinase, phosphofructokinase, pyruvate kinase
 - Glucokinase, aldolase, enolase
 - Enolase, pyruvate kinase, hexokinase
 - Phosphatase, enolase, hexokinase
- Other name of glycolysis
 - Hexose monophosphate shunt
 - Emden-Meyerhof-Parnas pathway
 - Emden Pathway
 - Gluconeogenesis from lactate
- PRPP full form
 - Phosphoribosyl Pyrophosphate
 - Phosphoribosylamine Pyrophosphate
 - Phosphoribosyl-5- Pyrophosphate
 - Phosphoribosyl Phosphate
- The end product of purine metabolism in humans is
 - Uric acid
 - Urea
 - Pyruvate
 - Pyruvic acid
- What is the mobile phase in Gas Chromatography?
 - Solid
 - Liquid
 - Gas
 - Fluid

9. Which of the following is not a supporting medium in electrophoresis?
 - a. Agarose gel
 - b. Starch gel
 - c. Silica gel
 - d. Polyacrylamide Gel
10. What is the mobile phase in HPLC?
 - a. Solid
 - b. Liquid
 - c. Gas
 - d. Vapour
11. How many molecules of pyruvate is formed as the product of glycolysis?
 - a. 1
 - b. 2
 - c. 3
 - d. 4
12. Which enzyme is responsible for the conversion of citrate to isocitrate?
 - a. Citrate synthase
 - b. Citrate dehydrogenase
 - c. Isocitrate dehydrogenase
 - d. Aconitase
13. Under anaerobic condition what is the end product of glycolysis
 - a. Pyruvate
 - b. Lactate
 - c. Aspartate
 - d. Glucose
14. Synthesis of ketone bodies is known as
 - a. Ketoacidic
 - b. Ketogenesis
 - c. Ketogenic
 - d. Ketoacidosis
15. Three ketone bodies are
 - a. Acetone, Acetoacetate, Beta-hydroxybutyrate
 - b. Beta-hydroxybutyrate, Acetoacetyl, Acetone
 - c. Acetoacetyl, Acetone, Acetoacetate
 - d. Acetoacetyl Co A, Acetone, Thiolase
16. In which type of ELISA formation of colour indicates a negative report
 - a. Direct
 - b. Indirect
 - c. Sandwich
 - d. Competitive
17. Which of the following is used as the visualising agent in paper chromatography
 - a. Glacial acetic acid
 - b. Ninhydrin
 - c. Ethanol
 - d. Butanol
18. A complex disease characterized by thickening or hardening of arteries due to the accumulation of lipids
 - a. Gout
 - b. CAD
 - c. Atherosclerosis
 - d. Hypoglycemia
19. Which of the following is an important lipotropic factor
 - a. Choline
 - b. Valine
 - c. Histidine
 - d. Lysine
20. The synthesis of glucose from noncarbohydrate precursors
 - a. Glycogenesis
 - b. Glycogenolysis
 - c. Gluconeogenesis
 - d. Glycolysis

(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

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| 1. Describe TCA cycle along with its appropriate steps. | 10 |
| 2. Write the steps of glycolysis. Describe its salient features. | 5+5=10 |
| 3. Write the steps or cycle of glycogenesis. Describe beta-oxidation of fatty acids. | 5+5=10 |
| 4. Define glycogenolysis and write its steps or cycle. Describe Glycogen Storage Disease. | 1+4+5
=10 |
| 5. Describe Lipoproteins in details. | 10 |
| 6. Discuss briefly about ELISA and Explain its types. | 10 |
| 7. Describe the degradation and disorders of Purine nucleotides. | 5+5=10 |
| 8. Describe the general concepts of analytical chromatography. Write a short note on paper chromatography and HPLC | 5+5=10 |

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