

BACHELOR OF MEDICAL LABORATORY
TECHNOLOGY
THIRD SEMESTER
BIOCHEMISTRY III
BMLT – 303

**SET
B**

(USE OMR SHEET FOR OBJECTIVE PART)

Duration: 3 hrs.

Full Marks: 70

(Objective)

Time: 30 min.

Marks: 20

Choose the correct answer from the following:

1×20=20

1. A complex disease characterized by thickening or hardening of arteries due to the accumulation of lipids
 - a. Gout
 - b. CAD
 - c. Atherosclerosis
 - d. Hypoglycemia
2. The synthesis of glucose from noncarbohydrate precursors
 - a. Glycogenesis
 - b. Glycogenolysis
 - c. Gluconeogenesis
 - d. Glycolysis
3. Which of the following is an important lipotropic factor
 - a. Choline
 - b. Valine
 - c. Histidine
 - d. Lysine
4. Synthesis of ketone bodies is known as
 - a. Ketoacidic
 - b. Ketogenesis
 - c. Ketogenic
 - d. Ketoacidosis
5. Three ketone bodies are
 - a. Acetone, Acetoacetate, Beta-hydroxybutyrate
 - b. Beta-hydroxybutyrate, Acetoacetyl, Acetone
 - c. Acetoacetyl, Acetone, Acetoacetate
 - d. Acetoacetyl Co A, Acetone, Thiolasase
6. Which enzyme is responsible for the conversion of citrate to isocitrate?
 - a. Citrate synthase
 - b. Citrate dehydrogenase
 - c. Isocitrate dehydrogenase
 - d. Aconitase
7. Under anaerobic condition what is the end product of glycolysis
 - a. Pyruvate
 - b. Lactate
 - c. Aspartate
 - d. Glucose
8. Which of the following is not a supporting medium in electrophoresis?
 - a. Agarose gel
 - b. Starch gel
 - c. Silica gel
 - d. Polyacrylamide Gel

9. Other name of Cori cycle
- | | |
|----------------------|-----------------|
| a. Lactic acid cycle | b. Lactate |
| c. Gluconeogenesis | d. Glycogenesis |
10. Which of the following is used as the visualising agent in paper chromatography
- | | |
|------------------------|--------------|
| a. Glacial acetic acid | b. Ninhydrin |
| c. Ethanol | d. Butanol |
11. In which type of ELISA formation of colour indicates a negative report
- | | |
|-------------|----------------|
| a. Direct | b. Indirect |
| c. Sandwich | d. Competitive |
12. Formation of glycogen is known as
- | | |
|--------------------|--------------------|
| a. Glycolysis. | b. Gluconeogenesis |
| c. Glycogenolysis. | d. Glycogenesis |
13. Hormone that regulates blood glucose
- | | |
|-------------------|----------------|
| a. Insulin | b. Epinephrine |
| c. Growth hormone | d. Adrenaline |
14. Other name of glycolysis
- | | |
|-------------------------------|-----------------------------------|
| a. Hexose monophosphate shunt | b. Embden-Meyerhof-Parnas pathway |
| c. Emden Pathway | d. Gluconeogenesis from lactate |
15. Which enzyme is a regulatory enzyme for glycolysis
- | | |
|---|-------------------------------------|
| a. Hexokinase, phosphofructokinase, pyruvate kinase | b. Glucokinase, aldolase, enolase |
| c. Enolase, pyruvate kinase, hexokinase | d. Phosphatase, enolase, hexokinase |
16. PRPP full form
- | | |
|------------------------------------|--------------------------------------|
| a. Phosphoribosyl Pyrophosphate | b. Phosphoribosylamine Pyrophosphate |
| c. Phosphoribosyl-5- Pyrophosphate | d. Phosphoribosyl Phosphate |
17. The end product of purine metabolism in humans is
- | | |
|--------------|-----------------|
| a. Uric acid | b. Urea |
| c. Pyruvate | d. Pyruvic acid |
18. What is the mobile phase in HPLC?
- | | |
|----------|-----------|
| a. Solid | b. Liquid |
| c. Gas | d. Vapour |
19. How many molecules of pyruvate is formed as the product of glycolysis?
- | | |
|------|---|
| a. 1 | 2 |
| c. 3 | 4 |
20. What is the mobile phase in Gas Chromatography?
- | | |
|----------|-----------|
| a. Solid | b. Liquid |
| c. Gas | d. Fluid |

(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

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

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 concept of analytical chromatography. Write a short note on paper chromatography and HPLC. 5+5=10

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