REV-01
BMLT/78/39/44

2024/12

SET B

BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
FIRST SEMESTER
BIOCHEMISTRY I
BMLT – 103

[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. Examples of Disaccharides
   a. Maltose, lactose, sucrose
   b. Maltose, lactose, trehalose
   c. Maltose, glucose, galactose
   d. Maltose, lactose, glucose

2. Examples of Acidic amino acid
   a. Lysine, Arginine
   b. Histidine,lysine
   c. Aspartic acid and glutamic acid
   d. Tyrosine, phenylalanine

3. The Amino acid found in protein structure
   a. Valine
   b. Arginine
   c. Proline
   d. Alanine

4. Hydroxyl group containing amino acid
   a. Serine
   b. Lysine
   c. Valine
   d. Leucine

5. Lactose is made up of
   a. Glucose and glucose
   b. Glucose and fructose
   c. Fructose and galactose
   d. Galactose and glucose

6. Examples of Monosaccharides
   a. Glucose, Fructose
   b. Sucrose, maltose
   c. Galactose, sucrose
   d. Trehalose, sucrose

7. Which of the following is a saturated fatty acid?
   a. Palmitoleic acid
   b. Palmitic acid
   c. Oleic acid
   d. None of the above

8. Which of the following is not a phospholipid
   a. Sphingomyelin
   b. Cephalin
   c. Cerebrosides
   d. Lecithin

9. Hydrolysis of fat by alkalis is called
   a. Esterification
   b. Alkylation
   c. Saponification
   d. Mutarotation

10. One of the following is not an aldose.
    a. Glucose
    b. Galactose
    c. Mannose
    d. Fructose

11. The major fat in adipose tissue is
    a. TAG
    b. Cholesterol
    c. Fatty acids
    d. Phospholipids

12. Which of the following is not present in vegetable oils
    a. Cholesterol
    b. Oleic acid
    c. Linoleic acid
    d. Stearic acid

13. Examples of reducing disaccharides
    a. Sucrose
    b. Trehalose
    c. Lactose
    d. Glucose

14. ..... mostly produce by sugarcane and sugar beets
    a. Maltose
    b. Sucrose
    c. Lactose
    d. Galactose

15. Carbohydrates are often referred as
    a. Disaccharides
    b. Monosaccharides
    c. Saccharides
    d. Polysaccharides

16. Which one of the following is the structural protein
    a. Keratin
    b. Hemoglobin
    c. Actin
    d. Insulin

17. The steroids contain a cyclic ring known as
    a. Cyclopentanoperhydrophenanthrene
    b. Cycloparaphenylene
    c. Cyclopentanophenanthrene
    d. Cyclopentanophenylene

18. Amino acids which are highly basic in character.
    a. Tyrosine, Tryptophan
    b. Lysine, Arginine and Histidine
    c. Methionine, Leucine and isoleucine
    d. Serine, Threonine and Tyrosine

19. Dicarboxylic mono-amino acids aspartic acid and glutamic acid are considered in which group
    a. Polar amino acids (-ve R group)
    b. Non- Polar amino acids(-ve R group)
    c. Polar amino acids (+ve R group)
    d. Non-Polar amino acids(+ve R group)

20. Gelatin is an example of
    a. Incomplete protein
    b. Partially incomplete protein
    c. Complete protein
    d. Derived protein

-- --- --

Descriptive

Time : 2 hrs. 30 min. Marks : 50

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

1. Define amino acids. Describe its classification with suitable examples. **10**

2. Define protein. Describe its function and its classification. **2+8=10**

3. Define lipids. Write its function.Describe its classification. Differentiate between fats and oils. **10**

4. Define fatty acids. Describe essential fatty acids. Discuss saturated and unsaturated fatty acids. Write a short note on Phospholipids. **1+4+2+3=10**

5. Discuss sucrose and lactose. Define cell. Differentiate between prokaryotic and eukaryotic cells. **4+1+5=10**

6. Write the properties of lipids. Write a short note on Triacylglycerides and steroids. **5+5=10**

7. Describe five important mucopolysaccharides. Write about the derivatives of Monosaccharides. **5+5=10**

8. Write a short note on Saponification and Rancidity. Discuss on amino acid useful as drugs. **8+2=10**

= = *** = =