REV-01
BMLT/06/11

2023/12

SET A

BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
FIRST SEMESTER
BIOCHEMISTRY I
BMLT – 103 [REPEAT]
[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 reducing disaccharides
   a. Sucrose
   b. Trehalose
   c. Lactose
   d. Glucose

2. 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

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

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

5. 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)

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

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

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

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

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

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

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

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

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

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

16. The glycosaminoglycan that serves as an anticoagulant
   a. Heparin
   b. Hyaluronic acid
   c. Chondroitin sulfate
   d. Dermatan sulfate

17. The number of peptide bonds present in a decapeptide
   a. 6
   b. 7
   c. 8
   d. 9

18. Name the sulfur containing essential amino acid
   a. Cysteine, cystine, and methionine
   b. Valine, leucine and isoleucine
   c. Serine, threonine and tyrosine
   d. Tyrosine and tryptophan

19. Which term used to represent the deterioration of fats and oils resulting in an unpleasant taste
   a. Rancidity
   b. Antioxidants
   c. Saponification
   d. Lipid peroxidation

20. Which type of cell division takes place in eukaryotic cell
   a. Mitosis
   b. Fusion
   c. Meiosis
   d. Fission

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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. 1+4+5 =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 the physical and chemical properties of amino acids. Discuss on amino acid useful as drugs. 8+2=10

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