

**BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
SECOND SEMESTER
BIOCHEMISTRY II
BMLT – 203 [REPEAT]
[USE OMR SHEET FOR OBJECTIVE PART]**

**SET
A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

- RNA
 - brings about protein synthesis in the cell.
 - genetic material of certain viruses.
 - the primer essential for starting replication of DNA.
 - All of the above
- Example of purines
 - adenine and guanine
 - thymine and cytosine
 - adenine and thymine
 - cytosine and guanine
- The process in which the separated complementary DNA strands can form a double helix
 - Renaturation
 - Denaturation
 - Configuration
 - genetic information.
- According to Chargaff's rule which complementary base pairing proves to be true
 - A=T&G=C
 - A=U&G=C
 - A G&C=U
 - C=T&A=U
- What facilitates the regulation of the quantity of water in the vapor generator
 - control valve
 - filter
 - condenser
 - water level gauge
- In DNA which pyrimidine is present
 - Thymine and Cytosine
 - Cytosine and Uracil
 - Adenine and Cytosine
 - Guanine and Cytosine
- The term nucleoside refers to
 - Base + phosphate
 - Nucleoside + sugar
 - Phosphate + sugar
 - Nitrogenous bases + sugar
- Enzyme inhibitor is defined as a substance which binds with the enzyme and brings about
 - decrease in catalytic activity of the enzyme.
 - increase in catalytic activity of the enzyme.
 - Competitive inhibition.
 - Non-competitive inhibition.

9. The functional unit of the enzyme is known as
 - a. holoenzyme
 - b. coenzyme
 - c. apoenzyme
 - d. multienzyme
10. are portable, inexpensive pH meters the size of a pocketbook.
 - a. Pen tester
 - b. Handheld meters
 - c. Benchtop pH meters
 - d. None
11. According to this law the amount of light absorbed is proportional to the solute concentration present in solution.
 - a. Beer's law
 - b. Lambert's law
 - c. Chargaff's rule
 - d. None
12. Scientist Arnold J. Beckman and his colleagues at the National Technologies Laboratory (NTL) invented the Beckman DU spectrophotometer in
 - a. 1940
 - b. 1941
 - c. 1950
 - d. 1952
13. Samples to be studied in the ultraviolet (or) visible region are usually glasses (or) solutions and are put in cells known as
 - a. Cuvettes
 - b. Glass tube
 - c. Test tube
 - d. All of the above
14. A device that allows water flow toward the vapor generator tank to be controlled mechanically or electromechanically.
 - a. control valve
 - b. filter
 - c. condenser
 - d. water level gauge
15. Which can only produce 1 gallon of water at once
 - a. Manual distiller system
 - b. Automated distiller system
 - c. Both a and b
 - d. None of the above
16. Enzymes involved in oxidation-reduction reactions.
 - a. Oxidoreductases
 - b. Lyases
 - c. Hydrolases
 - d. Isomerases
17. The inhibitor binds non-covalently with enzyme and the enzyme inhibition can be reversed if the inhibitor is removed
 - a. Reversible inhibition.
 - b. Irreversible inhibition.
 - c. Allosteric inhibition.
 - d. Competitive inhibition.
18. At this stage the metal ions that were in the solvent are reduced to metal atoms.
 - a. Desolvation
 - b. Vapourisation
 - c. Atomisation
 - d. Excitation
19. The number of moles (or millimoles) per liter of solution.
 - a. Osmolarity
 - b. Osmolality
 - c. Osmosis
 - d. All of the above

20. In a healthy individual, the urine output is about
- a. 1-2 l/day.
 - b. 3-4 l/day.
 - c. 2-3 l/day.
 - d. 4-5 l/day.

(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

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

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| 1. Describe about the water distillation apparatus. | 10 |
| 2. Define Nucleic acids. Write its functions. Who discovered Watson and crick model. Write the salient features. | 2+8=10 |
| 3. Write a note on Spectrophotometer. | 1+4+5
=10 |
| 4. Define enzymes with its classification with suitable examples. Write the mechanisms of action of enzyme catalysis. | 1+4+2+3
=10 |
| 5. Discuss the important clinical importance and applications of enzymes. Define active site. Write its salient features. | 2+8=10 |
| 6. Explain about water balance. | 10 |
| 7. Explain about electrolyte balance. | 5+5=10 |
| 8. Give the principle of ph meter. Explain its working, applications, advantages and disadvantages. | 8+2=10 |

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