

REV-01
BMB/04/14

2023/01

**SET
A**

**B.Sc. MICROBIOLOGY
FIRST SEMESTER
BIOCHEMISTRY
BMB-102 (IDMn)**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

(Objective)

Marks: 10

Choose the correct answer from the following:

1×10=10

- Which of the following is the general formula of Carbohydrates?
 - $(C_4H_2O)_n$
 - $(C_6H_2O)_n$
 - $(CH_2O)_n$
 - $(C_2H_2O)_n COOH$
- Which of the following techniques is used to determine the protein structures?
 - X-ray crystallography
 - Kryptonics X-ray vision
 - Magnetic resonance imaging (MRI)
 - None of the above
- A short length of DNA molecule has 80 thiamine and 80 guanine bases. The total number of nucleotide in the DNA fragment is:
 - 160
 - 40
 - 320
 - 640
- ATP is a:
 - Nucleoside
 - Nucleotide
 - Vitamin
 - Nucleic acid
- Sphingomyelins are found in:
 - Muscles
 - Nephrons
 - Brain tissues
 - Hepatocytes
- Which of the following Biomolecules simply refers to as "Staff of life"?
 - Lipids
 - Proteins
 - Vitamins
 - Carbohydrates
- Which of the following monosaccharides is the majority found in the human body?
 - D-type
 - L-type
 - LD-types
 - None of the above
- Which of the following is the smallest carbohydrate - triose?
 - Ribose
 - Glucose
 - Glyceraldehyde
 - Dihydroxyacetone
- All of the reactant will be converted to products:
 - Will never reach equilibrium
 - Will not occur spontaneously
 - Will proceed at a rapid rate
 - Will not proceed at a rapid rate

10. Metal ions that temporary binds substrate and active site of 'enzyme' is called:
- a. Inhibitors
 - b. Coenzymes
 - c. Prosthetic group
 - d. Cofactors

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

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| 1. Where does glycolysis happen? Explain its importance. | 5 |
| 2. Describe in detail: | 5+5=10 |
| a) Fate of Pyruvate under aerobic and anaerobic condition. | |
| b) Write the importance of TCA Cycle. | |
| 3. a) Write a short note on secondary structure of proteins. | 5+5=10 |
| b) Write short notes on: | |
| i) Reducing sugar and | |
| ii) Non reducing sugar | |
| 4. Define Carbohydrate. Write a note on the physical properties of carbohydrate. | 3+7=10 |
| 5. Describe electron transport chain in brief. | 10 |

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