

**B.Sc. MICROBIOLOGY
FIRST SEMESTER
BIOCHEMISTRY
BMB-102**

**SET
B**

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

1. Write a note on essential and non essential amino acids. 5
2. Describe in detail: 5+5=10
 - a) Fate of pyruvate under aerobic and anaerobic condition.
 - b) Write the importance of hexose monophosphate shunt.
3. a) What are lipids, how are they classified? 5+5=10
b) Write short notes on:
 - i) Essential fatty acid
 - ii) Prostaglandins
4. Define Proteins. What are the forces stabilizing the structure of proteins? 3+7=10
5. Describe electron transport chain in brief. 10

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