Roll No. .....

## 91049

# B. Sc. (Bio-Technology) 1st Semester (w.e.f. 2012-13)

Examination - November, 2023

## **BIOCHEMISTRY & METABOLISM**

Paper: BT-104

Time: Three Hours]

[ Maximum Marks: 40

Before answering the questions candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note: Attempt five questions in all, selecting one question.

from each Unit Question No. 1 is compulsory. All
questions carry equal marks.

Write note on the following :

 $1 \times 8 = 8$ 

- (a) Apoenzymes
- (b) Nucleosides
- (c) Gluconeogenesis
- (d) TCA cycle

P. T. O.

- (e) Forces stabilizing protein structure
- (f) Denaturation of proteins
- (g) Bacterial cell wall
- (b) Renaturation of proteins

#### UNIT - I

- What are proteins? Briefly explain their properties and classification.
  8
- Write a brief note on structure and function of various types of carbohydrates.

### UNIT - II

- 9. (a) Briefly describe structure and function of lipids.
  - (b) Classify different types of fatty acids.
  - . Write note on:  $4 \times 2 = 8$ 
    - (a) Structure of DNA.
    - (b) Physical and chemical properties of nucleic acids.

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Write note on :

- $4 \times 2 = 8$
- (a) Nomenclature and classification of enzymes.
- (b) Cofactors in enzyme catalysis.
- J. Briefly describe:
  - (a) Enzyme specificity
  - (b) Activation energy of crayines

UNIT - IV

**8.** Describe ETC in detail.

- 8
- Describe Pentose phosphate pathway and explain its significance.

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