



## M.Sc. I Semester Degree Examination, April/May - 2024

### BIOTECHNOLOGY

#### Principles of Biochemistry

#### (NEP)

Time : 3 Hours

Maximum Marks : 70

**Note :** Answer **any five** of the following questions with **Question No. 1 (Q1) Compulsory**, each question carries **equal** marks.

- |    |     |   |   |
|----|-----|---|---|
| 1. | (a) | Discuss in brief about enzyme kinetics.                             | 7 |
|    | (b) | Describe MM equation.   | 7 |
| 2. | (a) | Describe the steps involved in HMP shunt pathway.                   | 7 |
|    | (b) | Explain in brief about glycolysis pathway.                          | 7 |
| 3. | (a) | Discuss briefly about degradation of proteins and amino acids.      | 7 |
|    | (b) | Write an account on protein folding mechanism.                      | 7 |
| 4. | (a) | Explain in brief about lipoproteins- types and functions.           | 7 |
|    | (b) | Discuss about membrane lipids and its types.                        | 7 |
| 5. | (a) | Describe the synthesis of Deoxyribonucleotides.                     | 7 |
|    | (b) | Write an account on nitrogenous bases, nucleosides and nucleotides. | 7 |
| 6. | (a) | Discuss and describe the types of RNA.                              | 7 |
|    | (b) | Write a note on urea cycle and its significance.                    | 7 |
| 7. | (a) | Cholesterol biosynthesis.   | 5 |
|    | (b) | Chemical synthesis of oligonucleotides.                             | 5 |
|    | (c) | Hydroxy fatty acids.  | 4 |
| 8. | (a) | Oligosaccharides  | 5 |
|    | (b) | Ramachandran plot   | 5 |
|    | (c) | Classification of vitamins  | 4 |

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