

Seat No. \_\_\_\_\_

Enrollment No. \_\_\_\_\_

**THE CHARUTAR VIDYA MANDAL UNIVERSITY**  
**BACHELOR OF PHYSIOTHERAPY – SEMESTER 1**  
**APR 2025 (REGULAR) EXAMINATION**

Course Title: Biochemistry

Course Code: BPT- 103

Total Printed Pages: 02

Date: 05/04/2025

Time: 10.00 am to 11.30 am

Maximum Marks: 40

**Instructions:**

1. There are total 4 Questions given in this paper.
2. All the answer should be written in the answer book.
3. Marks on the right side suggest the total marks of that question.
4. Draw the figure where necessary.

**Q.1. Multiple Choice Questions: (MCQs)**

**(05 × 1 = 05)**

1. The specific dynamic action (SDA) is the greatest for the following foodstuff.
  - a) Protein
  - b) Carbohydrates
  - c) Fats
  - d) Vitamins
2. \_\_\_\_\_ is a complex of DNA and proteins that forms chromosomes within the nucleus of eukaryotic cells.
  - a) Chromatin
  - b) Chromosomes
  - c) Mitochondria
  - d) Golgi apparatus
3. \_\_\_\_\_ molecules of pyruvate is generated when one molecule of glucose is degraded?
  - a) 2
  - b) 3
  - c) 4
  - d) 5

4. Lipids are stored in \_\_\_\_\_ form.

- a) Fatty acids
- b) Fats
- c) Triacyl glycerol
- d) Waxes

5. When the amino group of an amino acid combines, with the carboxyl group of another amino acid, a \_\_\_\_\_ bond is formed.

- a) Glycosidic bond
- b) Peptide bond
- c) Hydrogen
- d) Hydrophobic

**Q. 2. Short answers (5 out of 7) (Answer not exceeding 50 words) (5 × 2 = 10)**

- a. Classification of vitamins.
- b. Define essential and non-essential amino acids with examples.
- c. Explain the functions of cell membranes.
- d. Describes Calorific Value.
- e. Define polysaccharides with examples.
- f. Lock and key hypothesis of enzymes.
- g. Structure of proteins.

**Q. 3. Short Notes (3 out of 4) (Answer not exceeding 150 words) (3 × 5 = 15)**

- a. Classification of enzymes with suitable examples.
- b. Define the lipoproteins with examples.
- c. Urea cycle for ammonia elimination.
- d. Explain TCA cycle.

**Q. 4. Essay (1 out of 2) (1 × 10 = 10)**

- a. Describe glycolysis with its regulation.
- b. B-oxidation of fatty acids.