

## B.Pharm. First Semester (C.B.S.) Examination

## PHARMACEUTICAL BIOCHEMISTRY

## Paper-4

Time : Three Hours]

[Maximum Marks : 80

**N.B.** :— (1) Question No. 1 is compulsory.(2) Solve any **four** questions from the remaining.

(3) Assume suitable data wherever necessary.

1. Solve any **five** of the following :
  - (a) Describe various types of RNAs.
  - (b) What are the different types of enzyme inhibition ?
  - (c) Enlist various tests for the evaluation of quality of oils. Write the significance of each test.
  - (d) Write a note on blood glucose metabolism.
  - (e) Give biological role of proteins.
  - (f) Write a note on acid base behaviour of amino acids. Define isoelectric pH.
  - (g) Give chemical reaction and procedure for Molisch test and Ninhydrin test. 20
2. What are carbohydrates ? Give their chemical classification. Enlist different steps of carbohydrate metabolism. Write glycolysis in detail. 15
3. (a) Write a detailed account on structure of proteins. 7
  - (b) Describe transamination and deamination reactions in detail. 8
4. Classify lipids and fatty acids. Give  $\beta$ -oxidation of fatty acids. 15
5. (a) What are the different types of enzymes ? Explain their biological role. 7
  - (b) Describe mechanism of enzyme action. Enlist and explain various factors affecting enzyme activity. 8
6. (a) Write a note on structure of DNA. What is the biological role of DNA ? 7
  - (b) Write a note on TCA cycle. 8
7. Write short notes on any **three** of the following :
  - (a) Urea cycle
  - (b) Michaelis-Menten equation
  - (c) Formation and breakdown of ketone bodies
  - (d) Hyperbilirubinemia. 15