TKN/KS/16–6972

First Semester Examination For the Degree of Bachelor of Pharmacy

PHARMACEUTICAL BIOCHEMISTRY

1T4

Time : Three Hours] [Max. Marks : 80

N. B. : (1) Question No.1 is Compulsory.
(2) Attempt any **Four** questions from the remaining.
(3) Draw neat labeled diagram wherever necessary.

1. Solve any **Five** of the following :—
   (a) Classify lipids with suitable examples. Write about their structural features.
   (b) Give the various reactions of glucose.
   (c) Enlist the various factors affecting enzyme action and explain the effect of substrate concentration and pH on enzyme action.
   (d) Define Acid value and saponification value with its significance.
   (e) Differentiate between DNA and RNA.
   (f) Justify sucrose is non reducing while maltose and lactose are reducing sugars.
   (g) Write about α-helical structure of protein.

   4 x 5 = 20

2. Write a detail account of Embden-Meyerhof pathway. Give the energetics in aerobic and anaerobic conditions. 15

3. Define enzyme inhibition. Explain its various types along with their therapeutic applications. 15

4. (a) Explain Transamination, Deamination and Decarboxylation reaction of amino-acid. 10
   (b) Write about galactose metabolism. 5

5. (a) Discuss the reactions of β-oxidation of fatty acids. 10
   (b) Explain biosynthesis of prostaglandins. 5

6. Write a detail account of TCA cycle. Calculate the total number of ATP utilized in TCA cycle. 15

7. Write short notes on any **Three** of the following :—
   (a) Nucleotide and Nucleoside.
   (b) Urea cycle.
   (c) Phospholipid and Sphingolipid.
   (d) Michaelis-Menten equation. 15