

NRT/KS/19/2087

Bachelor of Science (B.Sc.) Semester—III Examination

MICROBIOLOGY

(Chemistry of Organic Constituents and Enzymology)

Optional Paper—I

Time : Three Hours]

[Maximum Marks : 50

N.B. :— All questions are compulsory and carry equal marks.

1. Write notes on :
 - (a) Structure of starch. 5
 - (b) Structure of Lecithin and Cephalin. 5

OR

 - (c) Structure of Lactose and Sucrose. 5
 - (d) Structure of Cholesterol and prostaglandins. 5
2. Classify amino acids on the basis of structure of side chain. 10

OR

Define Protein. Describe tertiary structure of protein in detail. 10
3. Derive Michaelis-Menton equation and discuss its modifications. 10

OR

Describe different types of inhibition of enzyme with suitable example. 10
4. Write short notes on :
 - (a) Hypervitaminosis 2½
 - (b) Structure of t-RNA 2½
 - (c) Hypovitaminosis of Vitamin A 2½
 - (d) Structure of ATP. 2½

OR

 - (e) z-DNA 2½
 - (f) Difference between DNA and RNA 2½
 - (g) Sources and deficiency diseases of Vitamin C 2½
 - (h) Classification of vitamins on the basis of solubility. 2½
5. Solve any **TEN** :
 - (i) What is an Osazone ? 1
 - (ii) What are triglycerides ? 1
 - (iii) Name any one heteropolysaccharide. 1
 - (iv) What are essential amino acids ? 1
 - (v) Give an example of Oligomeric protein. 1
 - (vi) Define neutral amino acid. 1
 - (vii) What is a Cofactor ? 1
 - (viii) What are Zymogens ? 1
 - (ix) Define Katal. 1
 - (x) Name any two sources of Vitamin B₁₂. 1
 - (xi) Draw the structure of Thymine. 1
 - (xii) What is the function of m-RNA ? 1