

Bachelor of Science (B.Sc.) Semester-III (C.B.S.) Examination
MICROBIOLOGY
(Chemistry of Organic Constituents & Enzymology)
Paper-I

Time : Three Hours]

[Maximum Marks : 50]

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. (a) Give the pyranose and furanose structure of glucose.	2½
(b) Give the structure of maltose.	2½
(c) Give the structure of lactose.	2½
(d) Give the structure of sucrose.	2½

OR

(e) Write a note on triglycerides.	2½
(f) What are phospholipids ? Give example.	2½
(g) Discuss the formation of osazone.	2½
(h) Give the structure of cholesterol.	2½
2. Describe in detail the secondary structure of proteins.	10

OR

Discuss the classification of amino acids.	10
3. Describe in detail the different types of enzyme inhibition.	10

OR

Derive Michaelis and Menten equation and explain LB plot.	10
4. (a) Discuss the different types of water soluble vitamins.	5
(b) Discuss the structure of tRNA.	5

OR

(c) Discuss the diseases due to deficiency of Vit. B group.	5
(d) Discuss the structure of different types of Pyrimidines.	5

5. Solve any **ten** : 1×10

- (i) What are epimers ?
- (ii) What are anomers ?
- (iii) What is a neutral lipid ?
- (iv) What is an imino acid ?
- (v) Name any two proteins with oligomeric form.
- (vi) What is a peptide bond ?
- (vii) What are zymogens ?
- (viii) What is turn over number ?
- (ix) What are coenzymes ?
- (x) What are nucleosides ?
- (xi) What is Z DNA ?
- (xii) Name any two fat soluble Vitamins.