

NKT/KS/17/5120

Bachelor of Science (B.Sc.) Semester—III (C.B.S.) Examination**MICROBIOLOGY****(Chemistry of Organic Constituents and 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) Describe the structure of starch. 5
 (b) Describe the structure of glycerophospholipid. 5

OR

- (c) Describe the structure of glycogen and hyaluronic acid. 5
 (d) Give the structure of raffinose and lactose. 5
 2. (a) Describe the α -helical and β -pleated sheet structure of proteins. 10

OR

- (b) Discuss the structures of dicarboxylic acid mono amino acids diaminomono carboxylic acids and aromatic amino acids. 10
 3. (a) Explain why enzymes are called catalysts. 2½
 (b) Discuss the significance of LB plot. 2½
 (c) Explain the Allosterism with suitable example. 2½
 (d) Explain the terms holozyme, apoenzyme and co-enzyme. 2½

OR

- (e) Write a note on multienzyme complex. 2½
 (f) Explain isoenzyme with suitable example. 2½
 (g) Discuss the different classes of enzymes. 2½
 (h) Explain Katal, specific activity and turn over number. 2½
 4. (a) Describe the different types of RNA and give their functions. 10

OR

- (b) Describe the structure of different types of purines and pyrimidine bases. 10

5. Solve any **TEN** :—

- (i) What are epimers ?
- (ii) What are sterols ?
- (iii) What are simple triglycerides ?
- (iv) Name any two quaternary proteins.
- (v) What are neutral amino acids ?
- (vi) What is proline ?
- (vii) What are zymogens ?
- (viii) What is a transition state ?
- (ix) What is activation energy ?
- (x) What are nucleosides ?
- (xi) What is Z-DNA ?
- (xii) What is beri-beri ?

1×10