

**KB-55048**

Seat No. \_\_\_\_\_

**M. Sc. (Part-I) Examination**

April / May – 2003

**Chemistry of Biomolecules, Biochemistry & Biophysics**

Time : Hours]

[Total Marks :

1. Give detailed account of various enzymes associated with the degradation of homopolymer-starch.

OR

- (a) Define stereoisomer, optical isomer, epimer and enantiomer.  
(b) Explain enzymatic degradation of cellulose to glucose.
2. (a) Differentiate between lipid, fat, oil and wax.  
(b) Explain with examples the importance of glycolipids and phospholipids in the cells

OR

Explain degradation of purines and pyrimidines.

3. Explain the functions of riboflavin and thiamin.

OR

- (a) Explain rhodopsin cycle.  
(b) Explain the functions of retinal, retinal and retinoic acid

4. (a) Define essential and non-essential amino acids.

(b) List ketogenic and glucogenic amino acids and their role.

OR

Explain with examples the structure and functions of proteins

5. (a) Define  $K_m$ ,  $K_i$  and  $V_{max}$

(b) Explain the influence of temperature, pH and substrate concentration on enzyme activity.

OR

Explain electron transport chain and the role of its inhibitors