

## M.Sc. (Part-I) Semester-I (C.B.C.S. Scheme) Examination

## MICROBIOLOGY

## (Microbial Enzymology)

## Paper—II

Time : Three Hours]

[Maximum Marks : 80

**Note :—** (1) All questions are compulsory.

(2) All questions carry equal marks.

(3) Draw diagrams wherever necessary.

1. Describe enzyme as catalyst and explain enzyme activity unit. 16

**OR**

Describe in detail physicochemical properties of an enzyme. 16

2. Describe in detail isolation and purification of an enzyme. 16

**OR**

(a) Describe the criteria for purity of an enzyme. Comment on test for homogeneity. 8

(b) Describe with example : The Constitutive, Inducible and Marker Enzymes. 8

3. Describe the Michaelis-Menton equation and comment on significance of  $K_m$  and  $V_{max}$ . 16

**OR**

Describe in detail Haldane and Briggs equation. 16

4. Describe in detail competitive, noncompetitive and uncompetitive inhibitors. 16

**OR**

(a) Describe the enzyme activators with examples. 8

(b) Describe the co-enzyme with examples. 8

5. Describe effect of proximity and orientation on catalytic efficiency of enzyme. 16

**OR**

(a) Describe the theories of mechanism of enzyme action. 8

(b) Describe the chemical modification of active site by reagents. 8

