

AQ - 836

**First Semester M. Sc. (Part - I) Microbiology
(CBCS) Examination**

MICROBIAL ENZYMOLOGY

Paper - II

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

Note : All questions are compulsory and carry equal marks.

1. Describe how enzyme accelerates the rate of biochemical reaction. 16

OR

- (a) Give differences and similarities between chemical catalyst and enzyme. 8

- (b) Define :—

Enzyme activity units,

Specific activity of enzymes,

Enzyme active site, and

Allosteric Enzymes. 8

2. Classify enzymes according to the IuB nomenclature.

OR

Explain various steps in Enzyme purification. 16

3. Explain the Kinetics of Bi – substrate reaction.

OR

Derive the Michaelis – Menten equation.

Transform it into a linear equation.

Define K_m . and explain its significance. 16

4. Give the graphical presentation of three different types of reversible enzyme inhibition. Derive the M. M. equation for competitive inhibition.

OR

Give mechanism of action of following coenzymes.

(a) NAD

(b) FMN

(c) TPP

(d) Pyridoxal phosphate. 16

5. (a) Give the chemistry of active centre. 8
(b) Describe substrate specificity. 8

OR

(c) Explain how distortion and strain helps in enzyme catalysis. 8

(d) Give theories of mechanism of enzyme action. 8

