

M. Sc. Sem-4

Sub = Enzymology Full Marks = 70

Paper = 22 code = B+404

GROUP-A

(1) Match the column (1x5 = 05)

<u>'A'</u>	<u>'B'</u>
(i) 2° Structure of Protein	a) site directed Mutagenesis
(ii) Packed Bed Reactor	b) ELISA
(iii) HR Peroxidase	c) Enzyme Inhibition
(iv) Nerve gas	d) Enzyme Immobilization
(v) Enzyme Modifications	e) $\beta$ -pleats <del>etc</del>

(2) Fill in the blanks (1x5 = 05)

- The enzyme catalysis involves transfer of electrons are named as \_\_\_\_\_.
- \_\_\_\_\_ is an example of co-enzyme.
- The  $K_m$  of an enzyme is \_\_\_\_\_.
- Gel filtration is a common method for \_\_\_\_\_.
- Allosteric Enzymes comes under \_\_\_\_\_ Enzyme.

GROUP-B

(3) Write short notes on any Two of the following (7½ x 2 = 15)

- Enzyme Immobilization

- b) Significance of  $V_{max}$  and  $K_m$  values.
- c) Site directed Mutagenesis.
- d) Mechanism of Enzyme Action.

### GROUP-C

Answer Any Three questions (15x3=45)

- (4.) Discuss Nomenclature, characteristics and different classes of Enzyme.
- (5.) Briefly describe the various Extraction and Purification techniques of Enzymes.
- (6.) Describe the Process and Applications of Enzyme Immobilization.
- (7.) What is Enzyme Inhibition. Discuss the various type of Enzyme Inhibition w.r.t the effect on  $V_{max}$  and  $K_m$  values.
- (8.) What is Enzyme Modification. Discuss the techniques used for Enzyme modification and their commercial significances.
- (9.) Discuss the In-vitro applications of Enzymes.