

K-18/2110

7499/N

**ENZYMOLOGY (PAPER IX)**

**— PART II (Semester III)**

Maximum Marks-75

Time Allowed-3 h

**Instructions for candidates**

1. Attempt any two questions from section A and B. All questions carry equal marks.
2. Section C is compulsory.

**Section A**

- I. What are the factors contributing to enzyme specificity? Describe different types of enzyme specificity. 15
- II. Give a general account on factors affecting large scale production of industrial enzymes. 15
- III. How is enzyme activity regulated? Explain. 15
- IV. Write a note on co-immobilization. How does immobilization alter kinetic properties of enzymes? 15

**Section B**

- V. What is enantioselectivity and chirality? Describe the role of enzymes in production of chiral compounds. 15
- VI. Give a detailed account on enzyme therapy. 15
- VII. How can enzyme properties be altered by genetic engineering approaches? 15
- VIII. Write notes on:
  - (a) Steroid biotransformation 5
  - (b) Enzymes in food processing 5
  - (c) Membrane-associated enzymes 5

**Section C**

1.5 X 10 = 15

Cont —

- IX. (i) Which class does enzyme phosphorylase belong to?
- (ii) What do you mean by spontaneous reaction?
- (iii) How do enzymes act?
- (iv) Which forces stabilize tertiary structure of enzymes?
- (v) What is the significance of multiple subunits of enzymes?
- (vi) What are the salient features of induced fit theory?
- (vii) What are biochips used for?
- (viii) Name an enzyme that requires  $Zn^{+2}$  for its activity.
- (ix) Describe the importance of enzymes in laundry.
- (x) What are lyases and ligases?

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