1048

B.E. (Bio-Technology) Eighth Semester BIO-802: Enzyme Catalyzed Organic Synthesis

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Write briefly:-

- a) What is stereroselective biocatalyst?
- b) Define enzyme activity and specific enzyme activity.
- c) What do you understand by V_{max} and K_m value of enzymes?
- d) What are advantages and disadvantages of enzyme immobilization?
- e) Enlisted four anticancer drugs?
- f) What do you mean by enzyme inhibition?
- g) Name four starch hydrolyzing enzymes.
- h) List four Industrial applications of lipase enzyme.
- i) Write down procedure for enzyme immobilization by carrageenan method.
- i) Define substrate inhibition.

(10x1)

<u>UNIT – I</u>

- II. "Chirality and Biological Activity"-with examples explain statement. (10)
- III. a) pH plays a crucial role in enzyme catalysed reaction, explain?
 - b) Define biocatalyst. List taking advantages and disadvantages of biocatalyst with suitable example. (3,7)
- IV. a) What do you mean by "Enzyme Immobilization"? Explain.
 - b) Discuss the various support systems for immobilizing enzymes.
 - c) Explain various types of enzyme inhibitions. (2,5,3)

<u>UNIT – II</u>

V. Explain Calcium-Channel Blockers and Potassium channel openers. (10) P.T.O. VI. a) What are ACE inhibitors? Explain with suitable examples. What are side effects of ACE inhibitors?

b) Write a notes on Antiviral and anticancer drug. (5.5)

VII. Discuss recent development in synthesis of anti cholesterol drug using biocatalysts. (10)

x-x-x