

2062

B.E. (Biotechnology) Eighth Semester  
BIO-812: Enzyme Catalyzed Organic Synthesis

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

- 1) Write briefly: (2×5 =10)
- a) What is stereoselective biocatalyst?
  - b) Write a procedure for estimation of amylase activity.
  - c) Explain substrate inhibition with kinetics?
  - d) Define the term of enzyme immobilization? What are advantages and disadvantages?
  - e) Define enzyme activity and specific enzyme activity?

**SECTION-A**

2. a) Explain the effect of substrate and enzyme concentration on enzyme activity.  
b) List six advantages and disadvantages of biocatalyst over chemical catalyst with suitable example. (3, 7)
3. a) Discuss the different type of enzyme inhibition and compare with controlled enzyme.  
b) "Chirality and Biological Activity"- discuss the statement? (5, 5)
4. a) Write notes on enzymes involved for synthesis of organic solvents.  
b) Briefly write notes on Industrial applications of enzyme. (5, 5)

**SECTION-B**

5. a) What is the calcium channel blocker, discuss?  
b) Write a note on potassium channel openers. (5, 5)
- 6) Explain immobilizing and discuss the various methods for immobilizing enzymes? (10)
- 7) Explain following:
- i) Antiviral compounds.
  - ii) Anticancer drug.
  - iii) ACE inhibitors. (3, 3, 4)

x-x-x