

Exam.Code:0912  
Sub. Code: 6329

2053

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: (1×10 =10)
- a) Name three starch hydrolyzing enzyme.
  - b) Define competitive enzyme inhibition.
  - c) What are side effects of ACE inhibitors?
  - d) Define stereoselective biocatalyst?
  - e) What is bio catalyst? Give two examples.
  - f) Define extracellular enzyme? Give two examples.
  - g) Define enzyme activity and specific enzyme activity?
  - h) List two advantages and disadvantages of immobilization.
  - i) Write down the formula for the calculation of amylase activity.
  - j) What are the functions of protease and lipase enzyme?

**SECTION-A**

2. a) Discuss the various methods for immobilizing enzymes.
- b) List taking advantages and disadvantages of biocatalyst over chemical catalyst with suitable example. (5, 5)
3. a) How is chirality linked to biological activity? Describe with suitable examples.
- b) Explain effect of substrate concentration on enzyme activity. (6, 4)
4. a) Write notes on enzymes involved for synthesis of organic solvents.
- b) Discuss the different type of enzyme inhibition.
- c) Briefly write notes on Industrial applications of enzyme. (3, 3, 4)

**SECTION-B**

- 5) How are anticholesterol drug synthesized by biocatalysts. (10)
- 6) Explain Calcium-Channel Blockers and Potassium channel openers. (10)
- 7) Explain any two:
- i) Anticancer drug.
  - ii) Antiviral compounds.
  - iii) ACE inhibitors (5, 5)

x-x-x

