



Fifth Semester B.E./B.Tech. Degree Examination, June/July 2025
Enzyme Technology + LAB

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. M : Marks , L: Bloom's level , C: Course outcomes.

| Module – 1 | | | M | L | C |
|------------|----|--------------------------------------------------------------------------------------|----|----|-----|
| Q.1 | a. | What are Enzymes and classify according to the enzyme nomenclature. | 10 | L1 | CO1 |
| | b. | Illustrate the mechanism of Enzyme action | 10 | L1 | CO1 |
| OR | | | | | |
| Q.2 | a. | Explain the action of co-enzymes and their mechanism. | 10 | L1 | CO1 |
| | b. | Summarize the strategies involved in the purification of enzyme. | 10 | L1 | CO1 |
| Module – 2 | | | | | |
| Q.3 | a. | Distinguish between the advantages of biocatalysts and chemical catalysts. | 10 | L2 | CO2 |
| | b. | What are the basic principles of enzyme assays. | 10 | L2 | CO2 |
| OR | | | | | |
| Q.4 | a. | Exemplify about the measurement of enzyme activity. | 10 | L2 | CO2 |
| | b. | What are extremozymes and summarize their applications. | 10 | L2 | CO1 |
| Module – 3 | | | | | |
| Q.5 | a. | Give an account on kinetics of immobilized enzymes. | 10 | L3 | CO2 |
| | b. | Write a detailed note on enzyme immobilization Techniques. | 10 | L3 | CO3 |
| OR | | | | | |
| Q.6 | a. | Discuss about design and configuration of Immobilized enzyme reactors. | 10 | L3 | CO3 |
| | b. | Assess regarding economical argument for enzyme immobilization and its applications. | 10 | L3 | CO3 |
| Module – 4 | | | | | |
| Q.7 | a. | Demonstrate basic reaction mechanism involved in Biotransformation of drugs | 10 | L3 | CO3 |
| | b. | Explain in detail about modified enzymes | 10 | L3 | CO3 |
| OR | | | | | |
| Q.8 | a. | What are synzymes and give a brief account on host-guest complexation chemistry. | 10 | L3 | CO3 |
| | b. | Illustrate about enzyme design using steroids, abzymes and peptide synthesis. | 10 | L3 | CO3 |
| Module – 5 | | | | | |
| Q.9 | a. | What are diagnostic enzymes and explain in brief with examples. | 10 | L4 | CO3 |
| | b. | Write an account on therapeutic enzymes and their clinical significance. | 10 | L4 | CO3 |
| OR | | | | | |
| Q.10 | a. | Explain the significance of enzymes in food and beverage industries. | 10 | L3 | CO3 |
| | b. | Discuss in detail about the importance of enzymes in textile industry. | 10 | L3 | CO3 |
