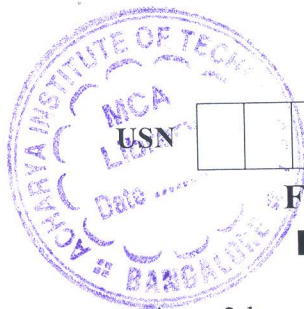


# CBCS SCHEME

18BT53



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Fifth Semester B.E. Degree Examination, Jan./Feb. 2023

## Enzyme Technology and Biotransformation

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Define enzyme. Explain the classification of enzyme in detail. (10 Marks)  
b. Explain the advantage of biocatalyst over chemical catalyst. (10 Marks)

OR

- 2 a. Discuss in detail any two methods used for determining molecular weight of enzymes. (10 Marks)  
b. Explain the application of enzymes in different industries. (10 Marks)

### Module-2

- 3 a. Describe about standardization and optimization methods for enzyme activity. (10 Marks)  
b. Explain the mechanism of co-enzyme PLP, TPP and Biotin. (10 Marks)

OR

- 4 a. Define immunoassay. Explain enzyme immunoassay techniques in detail. (10 Marks)  
b. Explain the mechanism of co-enzyme NAD/NADP. (10 Marks)

### Module-3

- 5 a. Define immobilized enzymes. Explain the techniques of immobilization in detail. (10 Marks)  
b. "Extremozymes represent the technology of future." Give reasons with suitable examples. (10 Marks)

OR

- 6 a. Explain the kinetics of immobilized enzymes. (10 Marks)  
b. Explain applications of immobilized enzyme technology. (10 Marks)

### Module-4

- 7 a. Explain the design and construction of novel enzymes. (10 Marks)  
b. Highlight on the clinical significance of Angiotensin Converting Enzyme (ACE) and Immunoreactive Trypsinogen (IRT). (10 Marks)

OR

- 8 a. Describe the synthesis of artificial enzymes. Add a note on its applications. (10 Marks)  
b. Write short notes on HMG CoA reductase inhibitors and Glucose-6-phosphate dehydrogenase (GPD). (10 Marks)

### Module-5

- 9 a. Explain the importance of enzymes in diagnostics. (10 Marks)  
b. Discuss industrial production of glucose syrup from starch. (10 Marks)

OR

- 10 a. How enzyme like SGOT and SGPT track myocardial infarction disease. (10 Marks)  
b. Explain the role of enzymes in detergents and food industry. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.