



CBCS SCHEME

18BT53

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 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 enzymes in details. (10 Marks)
b. Discuss in detail any two methods used for the determination of molecular weight of enzymes. (10 Marks)

OR

- 2 a. Discuss the methods used for the investigating criteria of purity and characterization of enzymes. (10 Marks)
b. Give an account on advantages of biocatalyst versus chemical catalysts. Add a note on application of enzymes in different industry. (10 Marks)

Module-2

- 3 a. Explain the significance of enzymes in immune assay techniques. (10 Marks)
b. Explain the methods for investigating the kinetics of enzymes? Add a note on enzyme measurement methods. (10 Marks)

OR

- 4 a. Write a note on:
(i) PLP co-enzyme. (10 Marks)
(ii) Biotin co-enzyme. (10 Marks)
b. Explain the mechanism of coenzyme TPP. (10 Marks)

Module-3

- 5 a. Give an account on methods used for enzyme immobilization. (10 Marks)
b. Discuss the effect of solute partition and diffusion on kinetics of immobilized enzymes. (10 Marks)

OR

- 6 a. Explain design and configuration of immobilized enzyme reactor in detail. (10 Marks)
b. Discuss the economic argument for immobilization techniques? Add a note on extremophiler. (10 Marks)

Module-4

- 7 a. Discuss the design and construction of novel enzymes in details. (10 Marks)
b. Explain the role of enzymes in biotransformation of steroids. (10 Marks)

OR

- 8 a. Write a note on:
(i) HMG Co A reductase inhibitors. (10 Marks)
(ii) Immuno Reactive Trypsinogen. (IRT) (10 Marks)
b. Define therapeutic enzymes. Explain amylase isoenzymes in detail. (10 Marks)

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.

Module-5

- 9 a. Discuss the significance of Lactate Dehydrogenase (LDH) and SGPT in clinical diagnosis of myocardial infarctions. (10 Marks)
- b. Write a short notes on:
- (i) CK isoenzymes.
 - (ii) ALP isoenzymes. (10 Marks)

OR

- 10 a. Discuss the industrial production of glucose syrup from corn starch. (10 Marks)
- b. Write short notes on:
- (i) Glucose oxidase.
 - (ii) Enzymes used in leather and wool industries. (10 Marks)

* * * * *