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(20516)

Roll No.

B.Sc.(Biotech.)-II Year

NS-3472

B. Sc. (Biotechnology) Examination, May 2016

ENZYMES AND ENZYME TECHNOLOGY

(B-209)

(New)

Time : Three Hours]

[Maximum Marks : 50

Note: Attempt any Five questions. All questions carry equal marks.

1. Define enzyme. Discuss various uses of enzymes in pharmaceutical and food industry. 10

2. What is an immobilized enzyme ? Discuss the adsorption methods of immobilization. Also describe the advantages of using an immobilized enzyme. 10

3. Describe in detail the chromatographic procedures to purify enzymes. 10

(4)

4. Differentiate between the following : 3+3+4

- (a) Competitive and non-competitive inhibitors
- (b) Endoenzyme and exoenzyme
- (c) Coenzymes and cofactors.

Discuss the enzyme on the following headings: 3+3+4

- (a) Classification
- (b) General properties
- (c) Mode of action.

6. Write short notes on the following : 2½ each

- (a) Isozyme
- (b) Apoenzyme
- (c) Extraction of enzymes from plant and animal tissues.
- (d) Multienzyme complexes.

How the enzyme activity is regulated ? Discuss feedback inhibition in detail. 10

Write detailed notes on the following : 5 each

- (a) Gel entrapment
- (b) Covalent binding.

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9. Describe in detail the various approaches of enzyme engineering. 10

10. Write detailed notes on the following: 5 each

- (a) Genetic engineering approaches for large scale production of enzyme
- (b) Michaelis-Menten law and its significance.