

21/2015

Enzyme Engineering

(3 HOURS)

(MAX. MARKS: 80)

16

extra

Note:

1. Question No. 1 is compulsory.
2. Attempt any three questions out of remaining five questions.
3. Assume suitable data wherever necessary.
4. Figures to right indicate full marks.

- Q.1 Write short notes on: (Any four)
- a. Define enzymes and explain why they are proteins?
 - b. Describe activation energy
 - c. Types of enzyme reactor
 - d. Spectrophotometry
 - e. Biosensors
- Q.2
- a. Explain the role of enzyme in food industry. 10
 - b. Give models for bi substrate reaction of enzyme with appropriate examples. 10
- Q.3
- a. Derive Briggs Haldane modification of Michaelis Menten equation 10
 - b. Explain how Michaelis Menten equation gets modified in presence of non competitive inhibitor. 10
- Q.4
- a. Explain various method for cell disruption 10
 - b. Write a note on western blotting 10
- Q.5
- a. Write a note on different methods of immobilization 10
 - b. Write a note on coupled kinetic assay 10
- Q.6
- a. What are various strategies for genetic modification of enzyme? Explain 10
 - b. Write a note on the structure of active site 5
 - c. What is Gel filtration Chromatography? Explain 5