



RN-3847

**M. Sc. (Sem. VII) (Integrated  
Biotechnology) Examination**

May / June – 2010

**IBT 702 : Enzyme Technology**

Time : 3 Hours]

[Total Marks : 70

**Instruction :**

(1)

नीचे दृशविले निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> M. Sc. (Sem. 7) (Integrated Biotechnology)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> IBT 702 : Enzyme Technology	<input type="text"/>
Subject Code No. : <input type="text"/> 3 <input type="text"/> 8 <input type="text"/> 4 <input type="text"/> 7	<input type="text"/>
Section No. (1, 2,.....) : <input type="text"/> 1&2	<input type="text"/>
	Student's Signature

- (2) Figures to the **right** indicate full marks of the question.
- (3) Draw neat and labelled diagrams whenever necessary.
- (4) Both sections must be written in **separate** answer books.

**SECTION - I**

- 1 Define Enzymes and mention its potential sources. 10  
Explain in detail various stages of screening procedure. What should be done if an enzyme with suitable properties has been located?

**OR**

- 1 Explain in detail various methods for the determination of molecular weights of enzymes. 10
- 2 Define Immobilization. Classify various types of support matrices used for immobilization of enzymes. Explain entrapment method for immobilization in detail. 10

**OR**

- 2 What are biosensors? Draw schematic diagram showing main components of Biosensor. Explain in detail Potentiometric biosensor. 10

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[Contd...

- 3** Attempt any **three** out of following : **15**
- (a) Media for enzyme production
  - (b) Applications of Immobilized enzymes
  - (c) Whole cell and microbial tissue based probes
  - (d) Immuno electrode probes
  - (e) SDS-Gel electrophoresis-a method to determine molecular weight of enzymes.

### SECTION - II

- 4** Explain in detail the role of enzymes during fruit juice processing. **10**

OR

- 4** Write a detail note on use of lactases in dairy industry. **10**

- 5** Write a detail note on Co-enzyme regeneration system. **10**

OR

- 5** Write a note on use of unnatural substrates as one of the most recent advances in enzyme technology. **10**

- 6** Answer any **three** : **15**

- (a) Microbial Keratinases
  - (b) Interesterification of lipids
  - (c) Applications of glucose oxidase and catalase in food industry
  - (d) Artificial enzymes
  - (e) Production of Maltose syrup.
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