



R-3839

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

May / June – 2010

IBT 603 : Microbial Biotechnology

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दर्शाविए निशानीवाणी विगतो उत्तरवडी पर अवश्य कपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
M. Sc. Integrated Biotechnology (Sem. 6)	<input type="text"/>
Name of the Subject :	<input type="text"/>
IBT 603 : Microbial Biotechnology	<input type="text"/>
Subject Code No. : <input type="text"/> 3 <input type="text"/> 8 <input type="text"/> 3 <input type="text"/> 9	<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 Describe various criteria to be considered when medium is formulated for large scale use. Give various characteristics of an ideal production medium. **10**

OR

- 1 Explain in detail various Carbon and Nitrogen sources used for industrial fermentation. **10**
- 2 Define fermentor and fermentation. Give basic functions of fermentor. Briefly describe various factors involved in fermentor design. **10**

OR

- 2 Write a detail note on aseptic operation and containment. **10**
- 3 Write short notes on : (any **three**) **15**
- (a) Batch fermentor
 - (b) Microbial metabolites
 - (c) Antifoam agents
 - (d) Operating characteristics of fermentors.

SECTION-II

- 4 Define strain improvement. What types of improvement are needed in the native strain? 10

OR

- 4 How preservation of industrially important microorganisms can be carried out? 10

- 5 Define antibiotic. Explain in detail fermentation process overview of antibiotic penicillin. 10

OR

- 5 Explain in detail fermentative production of Glutamic acid. 10

- 6 Write short notes on : (any three) 15

- (a) Primary and Secondary screening
- (b) Recovery of citric acid
- (c) Biochemistry of Ethanol production.
- (d) Enrichment using liquid culture.
