



R-3923

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

May / June – 2010

IBT 801 : Bioprocess Technology - II

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

नीचे दर्शावेल 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. 8)	<input type="text"/>
Name of the Subject :	<input type="text"/>
IBT 801 : Bioprocess Technology - 2	<input type="text"/>
Subject Code No. : <input type="text"/> 3 <input type="text"/> 9 <input type="text"/> 2 <input type="text"/> 3	<input type="text"/>
Section No. (1, 2,...): <input type="text"/> 1&2	
	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 Explain in detail various strategies used for the improvement of industrial microorganisms. **10**

OR

- 1 Describe in detail various methods for preservation of industrially important microorganisms. **10**

- 2 Explain in detail pathway and regulation of Lysine biosynthesis from glucose in *Brevibacterium lactofermentum*. **10**

OR

- 2 Explain in detail about Gluconic acid fermentation. **10**

- 3 Write short notes on : (any **three**) **15**

- (a) Use of auxotrophs for strain improvement for primary metabolites.
- (b) Production of Xanthan gum
- (c) L-Glutamic acid permeability in relation to phospholipid biosynthesis.
- (d) Control of metabolic pathways
- (e) Vitamin B₁₂ production.

SECTION-II

- 4 Define secondary metabolite. Explain in detail biosynthesis, regulation and strain development in Penicillin fermentation. 10

OR

- 4 Write an exhaustive note on the industrial production of Single Cell Protein. 10
- 5 Explain in detail various methods of synthesis of chiral building blocks for organic chemistry. 10

OR

- 5 Elaborate on production of cortisone, prednisolone and prednisone from diosgenin. 10
- 6 Write short notes on : (any three) 15
- (a) Hydrolytic enzymes
 - (b) Biotransformation related to synthesis of ascorbic acid
 - (c) Strain improvement for Cephalosporin production.
 - (d) 11-Hydroxylation
 - (e) Uses of Baker's yeast.
