



DVV-003-019303

Seat No. _____

M. Sc. (Microbiology) (Sem. - III) (CBCS)

Examination

May / June - 2015

Micro - 315 : Fermentation Technology II

(Elective)

Faculty Code : 003

Subject Code : 019303

Time : 3 Hours]

[Total Marks : 70

1 Answer any 7 (2 marks each) 14

- (i) Enlist uses of citric acid.
- (ii) Enlist various by-products of ethanol fermentation.
- (iii) Illustrate the recovery of L-lysine from fermentation broth.
- (iv) What is a brewery?
- (v) What is the importance of enzyme formulations?
- (vi) Enlist various applications of pectinases.
- (vii) What is enzyme polishing?
- (viii) What is an azeotropic mixture?
- (ix) What are the disadvantages of algal SCP processes?
- (x) What is malo-lactic fermentation?

2 Answer any 2 of the following (7 marks each) 14

- (i) Discuss recovery of Glutamic acid.
- (ii) Discuss the methods used for microbial cell disintegration.
- (iii) Discuss the recovery of ethanol from fermented medium.

- 3** Answer the following (7 marks each) **14**
- (i) Comment on the use of thermophilic microbes in ethanol fermentation.
 - (ii) Discuss methods of enzyme immobilization by covalent attachment.

OR

- 3** Answer the following (7 marks each) **14**
- (i) Discuss the process for the production of penicillins.
 - (ii) Comment on the importance of medium formulation in glutamic acid fermentation.
- 4** Answer any 2 of the following (7 marks each) **14**
- (i) Discuss various types of enzyme formulations.
 - (ii) Give an account of commercial applications of amylases.
 - (iii) Give an account of strain improvement of enzyme producing microbes.
- 5** Write a short note on any 2 of the following (7 marks each) **14**
- (i) Ethanol tolerance
 - (ii) Molasses as substrates
 - (iii) Vit B₁₂ recovery
 - (iv) Enzyme-based detergents and bleaching agents
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