

FACULTY OF SCIENCE
M. Sc. IV – Semester Examination, April / May 2014

Subject : Microbiology
Paper – II: Microbial Biotechnology

Time : 3 Hours

Max. Marks: 80

Note: Answer All questions from Part – A and Part – B. Each question carries 4 marks in Part – A and 12 marks in Part – B.

PART – A (8 x 4 = 32 Marks)
(Short Answer Type)

- 1 Maturation of beer
- 2 Importance of aging in wine preparation
- 3 Brief mechanism of citric acid production
- 4 Downstream steps involved in glutamic acid
- 5 Semisynthetic Chlorotetracyclin
- 6 Broad spectrum antibiotics
- 7 Serine proteases
- 8 Biotransformation

PART – B (4 x 12 = 48 Marks)
(Essay Answer Type)

- 9 (a) Define pitching and its role in alcohol production.
OR
(b) Describe the advantages and disadvantages associated with continuous production of alcohol.
- 10 (a) Describe different fermentation parameters that influence on citric acid production.
OR
(b) What is the importance of production medium for glutamic acid and briefly describe the steps involved in medium development.
- 11 (a) What are semisynthetic penicillins and tetracycline? Explain strategies for their production.
OR
(b) Explain the fermentative production of benzyl penicillin.
- 12 (a) Explain the commercial importance of microbial enzymes and their downstream processing.
OR
(b) Write on recombinant production and explain with an example of most successful recombinant product you studied.
