



Code No. : 933

FACULTY OF SCIENCE
M.Sc. IV Semester Examination, April/May 2013
MICROBIOLOGY
Paper – II : Microbial Biotechnology

Time: 3 Hours]

[Max. Marks : 80

- Note :** 1) Answer *all* questions.
2) Section **A** questions carry 4 marks and Section **B** questions carry 12 marks *each*.

SECTION – A

(Short answer type)

(8×4=32 Marks)

1. Preparation of wort.
2. Importance of sulphite in wine preparation.
3. Industrial importance of citric acid.
4. Critical steps involved in Vitamin B 12 production.
5. Semisynthetic penicillins.
6. Tetracyclines.
7. Commercial importance of amylases.
8. Biopesticides.

SECTION – B

(Essay type)

(12×4=48 Marks)

9. a) What are third generation biofuels ? Explain critical steps involved in alcohol production from renewable materials.

OR

- b) Describe the steps involved in production of Beer and importance of grain selection in different types of beer production.

(This paper contains 2 pages)

10. a) Explain the downstream processing of Vitamin B 12 production.

OR

b) Write on the glutamic acid production by fermentation.

11. a) Write the merits and demerits of semisynthetic penicillines and briefly explain key nutrients required for penicillin production by biotechnological route.

OR

b) Describe downstream processing steps involved in tetracycline production.

12. a) Describe the microbial strains in biotransformation reactions.

OR

b) Explain various methods adopted for vaccines production.
