

**D 72947**

(Pages : 2)

Name

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2014**

(CUCSS)

Microbiology

MB 1C 04—INDUSTRIAL MICROBIOLOGY

Maximum : 36 Weightage

Time : Three Hours

**Section A**

*Write briefly on the following. Weightage for each answer is 1.*

1. *Clostridium acetobutylicum*.
2. Monosodium glutamate.
3. Salting out.
4. Cooling coil in fermentors.
5. Secondary metabolite.
6. Disc stack centrifuge.
7. Broad spectrum antibiotic.
8. Pullulanase.
9. Molasses medium.
10. Baffles.
11. Beta carotene.
12. *Aspergillus niger*.
13. Bacteriological filter.
14. Sodium alginate.

(14 x 1 = 14 weightage)

**Section B**

*Write notes on any seven. Weightage for each answer is 2.*

15. Anaerobic fermentations.
16. Mashing procedure.
17. Artificial penicillins.
18. Biological assay.
19. Continuous fermentations.
20. Citric acid production.
21. Thin layer chromatography.

**Turn over**

22. Media economics.
23. Patents.

## Section C

(7 × 2 = 14 weightage)

*Write an essay on any two of the following.  
Each question carries 4 weightage.*

24. Different types of bio-reactors.
25. Strain selection and improvement techniques.
26. Downstream processing.

(2 × 4 = 8 weightage)