



K17U 1700

Reg. No. :

Name :

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)
Examination, November 2017
(2014 Admn. Onwards)
Core Course in Microbiology
5B07 MCB : MICROBIAL BIOTECHNOLOGY

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer **all** the **four** questions.

1. Technique used to detect microbes producing growth factor is _____
2. Device used to mix the components in a fermenter is _____
3. Commonly used organism for the industrial production of alcohol is _____
4. Best suited substrate for the production of streptomycin is _____ (4×1=4)

SECTION – B

Answer very briefly on **any seven** questions out of ten.

5. Cane molasses.
6. Antifoam agents.
7. What is batch sterilization ?
8. What are chemical mutagens used for strain improvement ?
9. Describe the uses of protease.
10. What is corn steep liquor ?
11. What are semisynthetic penicillin ?
12. Write briefly on giant colony technique.
13. Bread production.
14. Comment on the mutant strains used for amino acid production.

(7×2=14)

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SECTION - C

Answer **any four** questions out of six briefly.

15. Characteristics of an ideal fermenter.
16. Brief account on industrial production of citric acid.
17. Comment on the application of biosensors.
18. Briefly describe the types of spargers used in fermenter.
19. Production of vitamin B₁₂.
20. Discuss the inoculum development for fermentation.

(4×3=12)

SECTION - D

Answer **any two** questions out of four.

21. Describe the media used for industrial fermentation.
22. Discuss the chromatographic techniques used in product recovery.
23. Describe the production of penicillin.
24. Describe the design and parts of fermenter.

(2×5=10)