



K18U 1480

Reg. No. : .....

Name : .....

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.)  
Examination, November 2018  
(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. The microorganism commonly used for invertase enzyme production is \_\_\_\_\_
2. The antibiotic penicillin inhibits the synthesis of \_\_\_\_\_ in bacterial cell wall.
3. Viruses that are pathogenic to insects are known as \_\_\_\_\_
4. Amino acids such as lysine and glutamate are synthesized by the microbe \_\_\_\_\_ **(4×1=4)**

SECTION – B

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

5. Biosensors.
6. *Bacillus thuringiensis*.
7. Semisynthetic penicillins.
8. Flocculation.
9. Auxotrophic mutants.
10. Biotransformations.

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11. Immobilized enzymes.
12. Zymomonas mobilis.
13. Strain improvement.
14. Stillage.

(7×2=14)

SECTION – C

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

15. Mention the industrial applications of any three microbial enzymes.
16. Ethanol producing microbes and their substrates.
17. Primary metabolites and secondary metabolites.
18. Explain the steps involved in the conversion of pyruvate to ethanol.
19. Continuous fermentation and batch fermentation.
20. Chromatography as a technique for compound purification.

(4×3=12)

SECTION – D

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

21. Explain the steps involved in the production of microbial enzyme.
22. Describe various stages in the conversion of biomass to ethanol.
23. Write a detailed account on fermentative production of amino acids.
24. Describe the design of an industrial fermenter.

(2×5=10)