K20U 1538

Reg. No. : ....

Name : ....

V Semester B.Sc. Degree (CBCSS – Reg./Sup./Imp.) Examination, November 2020
(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. Peptidoglycan synthesis in bacterial cell wall is inhibited by the antibiotic
2. Viruses that are pathogenic to insects are known as
3. The bacterial species commonly used for protease enzyme production is
4. The residue from the first distillation of fermented substrate is known as

(4×1=4)

SECTION – B

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

5. Biosensors.
6. Semisynthetic penicillins.
7. Auxanography.
8. Immobilized enzymes.
9. Strain improvement.
10. Microbes used in industrial production of enzymes.
11. Continuous fermentation.
12. Cell recycle.
13. Pyruvate decarboxylation.
14. Minimum bactericidal concentration.

(7×2=14)

P.T.O.

SECTION – C

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

15. Ethanol producing microbes and their substrates.
16. Primary metabolites and secondary metabolites.
17. Raw materials used for industrial media preparation.
18. Chemostat and turbidostat.
19. β-Lactam group of antibiotics.
20. Ethanol production using *zymomonas* bacterium. **(4×3=12)**

SECTION – D

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

21. Explain the steps involved in the microbial enzyme production.
22. Describe the design of an industrial fermenter.
23. What are antibiotics ? Explain various classes of antibiotics. What are the strains used for penicillin production ?
24. Write a detailed account on fermentative production of amino acids. **(2×5=10)**
