K24P 3875

Reg. No. : .....

Name : .....

I Semester M.Sc. Degree (C.B.C.S.S. – OBE-Reg./Supple./Imp.) Examination, October 2024
(2023 Admission Onwards)
BOTANY
MSBOT01C01 : General and Applied Microbiology

Time : 3 Hours Max. Marks : 60

PART – A

Answer **any five** questions. **(5×3=15)**

1. Classify bacteria based on oxygen requirements.
2. Describe types of nutrient media used in microbial growth.
3. Explain the taxonomy of viruses based on genetic material.
4. What are toxoids ? How are they used in immunization programs ?
5. Define transposons and their role in antibiotic resistance.
6. Explain unique features of Halophiles and their habitat.

PART – B

Answer **any three** questions. **(3×6=18)**

7. Describe the concept and application of metagenomics in studying microbial communities.
8. Summarize the steps involved in introducing a foreign gene into a bacterial cell.

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9. Discuss the containment measures in place for biosafety level IV labs.
10. Differentiate between vector-borne and airborne diseases with examples.
11. As a microbiologist in a hospital, outline the disinfection procedures to control healthcare-associated infections.

PART – C

Answer **any three** questions. **(3×9=27)**

12. Discuss the use of ribosomal RNA (rRNA) in phylogenetic classification of microbes.
13. Differentiate viroids from viruses and outline their transmission.
14. Evaluate the impact of biofertilizers on soil health and crop yield.
15. Discuss public health policies for controlling an outbreak of hepatitis A.
16. Explain the principle of the Ziehl-Neelsen staining method and its use in microbiology.

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