K23P 3068

Reg. No. : .....

Name : .....

I Semester M.Sc. Degree (C.B.C.S.S. – OBE – Regular) Examination, October 2023
(2023 Admission)
BOTANY
MSBOT01 C01 : General and Applied Microbiology

Time : 3 Hours Max. Marks : 60

PART – A

Answer **any five** questions. **Each** question carries **3** marks. **(5×3=15)**

1. Explain the classification of microorganisms based on the flagella.
2. Describe various types of microbial cultures.
3. Explain ICTV system of viral classification.
4. Define vaccines. What are different types of vaccines ? Explain industrial production of vaccines.
5. What are plasmids ? What are important classes of plasmids ?
6. Describe important features of Archaeobacteria.

PART – B

Answer **any three** questions. **Each** question carries **6** marks. **(3×6=18)**

7. For the identification of different bacterial cultures, your research mentor suggested to perform rRNA sequencing. On what basis this approach enable to identify various bacterial strains in the sample. What is the principle and procedure involved in this approach ?
8. One researcher attempting to clone a gene of interest from human genome to microbial system. What are steps he should follow to facilitate the cloning ?
9. Compare important safety features of biosafety level II and III laboratory.

P.T.O.

10. What are zoonotic and anthroponotic diseases ? Give example for each.

11. If you are working as a microbiologist in a dairy industry and have got responsibility to control spoilage of various dairy products due to microbial contamination, what are the control measures you are expected to follow ?

PART – C

Answer **any three** questions. **Each** question carries **9** marks. **(3×9=27)**

12. Give an account on molecular methods in microbial taxonomy.

13. Prepare a comparative note on viruses, viroid, and prions.

14. 'Biofertilizers are considered as a boon to modern agriculture' Analyze the statement.

15. What are the precautionary and control measures you can suggest if an outbreak of NIPAH occurred in your area ?

16. Prepare a flow chart to perform Gram's staining. Compare composition of Gram positive and Gram-negative cell structure.

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