25025090

QP CODE: 25025090

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, MAY 2025

Second Semester

M Sc ZOOLOGY

CORE - ZL010204 - MICROBIOLOGY AND BIOTECHNOLOGY

2019 ADMISSION ONWARDS

63904139

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. Explain five kingdom classification.
2. Explain the difference between dry heat and moist heat sterilization.
3. Differentiate between active and passive transport.
4. How is quorum quenching different from quorum sensing?
5. Comment on Plasmids.
6. What is PUC19?
7. Comment on Chromosome jumping.
8. Comment on organ culture and its uses.
9. What are the features of Upstream Processing?
10. What is a nanobiosensor? Mention its applications.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Explain in detail the flagellar motility of bacteria.
12. Write short notes on a) rumen symbiosis and b) cooperation.
13. Differentiate electroporation and microinjection methods of gene transfer.
14. Describe generation of genomic library with illustration.
15. Explain the techniques of Automatic DNA sequencing. Mention its applications.

16. Write short notes on a) Primary culture, b) Cell line and c) cell strain.

17. Elaborate the production of any two therapeutic products from animal culture technology.

18. Write notes on Indian Patent Act 1970. Add note on the recent amendments.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Explain in detail about different pure culture techniques.

20. Discuss in detail about predation and parasitism with suitable example.

21. Give an account on restriction enzymes and different DNA modifying enzymes.

22. Discuss in detail the artificial production of microbial enzymes.

(2×5=10 weightage)