QP CODE: 26022450

26022450

Reg No : .....

Name : .....

M Sc DEGREE (CSS) EXAMINATION, MAY 2026

Second Semester

M Sc ZOOLOGY

CORE COURSE - ZL010204 - MICROBIOLOGY AND BIOTECHNOLOGY

2019 ADMISSION ONWARDS

E27C35AD

Time: 3 Hours Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What are the general characters of virus?
2. Comment on bacterial cytoskeleton.
3. Explain the protozoan - termite mutualistic interaction.
4. What is meant by Quorum sensing?
5. Write the characteristics of a vector. Cite an example.
6. What is blue white screening?
7. What are the uses of genomic library?
8. Comment on Gene knockout.
9. Write one industrial application of α – amylase.
10. What are nanoparticles? Describe any one example.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Give an illustrated account on Gram negative bacteria and its cell wall composition.
12. Many prokaryotes take up molecules by group translocation. The best-known group translocation system is the PEP-dependent sugar phosphotransferase system (PTS) system. Explain the bacterial PTS transport with suitable diagram.
13. Differentiate adaptors and linkers.

14. Write short notes on Microinjection and liposome mediated gene transfer.

15. Compare Gene cloning and Polymerase chain reaction.

16. Describe the methods to assess cell viability of animal cell cultures.

17. Write the detailed steps and processes involved in the production of DNA Vaccines.

18. Comment on IPR. Discuss about various types of intellectual property.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Give an account on different bacterial identification methods.

20. Antagonistic interactions helps in maintaining equilibrium in nature. Substantiate with examples

21. Explain in detail on rDNA technology and its uses.

22. Describe in detail about bioproduction of one antibiotic and organic acid. Discuss raw materials used and its applications.

(2×5=10 weightage)