

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2021
(Regular/Improvement/Supplementary)

ZOOLOGY
FZOL3C09 - MICROBIOLOGY & BIOTECHNOLOGY

Time: Three Hours

Maximum Weightage: 30

Part A: All questions can be answered. Each carries *two* weightage (Ceiling 6 weightage).

1. Explain the features of bacterial growth curve.
2. Briefly describe different microbial nutritional types.
3. Distinguish between spread plate and pour plate techniques.
4. Enumerate the general structural properties of viruses.
5. Describe FISH and GISH.
6. Explain colony hybridization techniques.
7. Give a brief account of microbial bioremediation.

Part B: All questions can be answered. Each carries *four* weightage (Ceiling 12 weightage).

8. What are antibiotics? Explain the structure and mode of action of different types of antibiotics.
9. Write an account on utilization of energy in transport of nutrients in microbes.
10. Describe various types of media used for culture of microbes.
11. Explain genomic libraries.
12. Write on molecular probes and their applications.
13. Write notes on restoration of degraded lands by biotechnological methods.
14. Explain the role of enzymes in rDNA technology.

Part C: All questions can be answered. Each carries *six* weightage (Ceiling 12 weightage).

15. Explain the structure of bacterial cell wall and synthesis of peptidoglycan.
16. Write an essay on human diseases caused by bacteria.
17. Give a detailed account on PCR technology, its procedure, types and applications.
18. Explain the different steps involved in *in-vivo* cloning.