



QP CODE: 25050615



Reg No :

Name :

MSc DEGREE (CSS) EXAMINATION DECEMBER 2025

First Semester

M Sc FOOD AND INDUSTRIAL MICROBIOLOGY

Core Courses - MG020103 - MICROBIAL PHYSIOLOGY METABOLISM AND GENETICS

2019 Admission Onwards

5999A88B

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. List the characters of aerobes and anaerobes.
2. What is aerobic respiration?
3. Explain mixed acid fermentation.
4. Write note on Electron Transport Carriers.
5. Illustrate the structure of peptidoglycan.
6. What are the advantages of using budding yeast as a genetic system?
7. Explain Gene mapping.
8. Explain insertion sequences.
9. Comment on AMES test.
10. Comment on photolyase .

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Define fragmentation.
12. Write the steps involved in Entner-Doudoroff pathway.
13. Write note on any 2 alternative pathways for CO₂ Fixation.
14. Explain the structure and characteristics of bacterial cell membrane.





15. Differentiate between replicative and non replicative transposition.
16. Explain mutagenesis.
17. What are environmental mutagens?
18. What are the 3 types of DNA repair?

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write an essay on bacterial growth curve and generation time.
20. What are the transport systems across cell membrane?
21. Explain lac operon and trp operon.
22. Comment on the mechanisms by which a cell maintains the integrity of its genetic code.

(2×5=10 weightage)

