



23104653

QP CODE: 23104653

Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR/IMPROVEMENT/REAPPEARANCE
EXAMINATIONS, FEBRUARY 2023**

First Semester

B.Sc Microbiology Model III

Core Course - MB1CRT02 - MICROBIAL PHYSIOLOGY & METABOLISM

2017 Admission Onwards

9BC9D76C

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. What is Micronutrients?
2. Define Phototroph.
3. What are Microaerophiles, give example?
4. Name the different phases of microbial growth in a closed system.
5. Explain Binary fission.
6. Define ATPase.
7. Write the effect of pH on enzyme reaction.
8. Write about the role of reducing power of NADPH.
9. What is the end product of glycolysis?
10. Define hetrofermentative bacteria.
11. Write the main steps involved in Glyoxalate cycle.
12. Write about the localisation of ETC.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Write about Cryopreservation.
14. Briefly explain about transport media.
15. Describe counting chambers and their uses.
16. Discuss the different photometric methods used for measuring microbial growth.
17. Write a short note on Transition state in Enzyme catalysed reaction.
18. Explain the structure and functions of GTP.
19. Write about TCA cycle.
20. Write a short note on oxidative phosphorylation.
21. Write briefly about Pentose phosphate pathway.

(6×5=30)

Part C

*Answer any **two** questions.
Each question carries **15** marks.*

22. Explain bacterial photosynthesis.
23. What is growth ?Discuss the mathematics of growth and growth kinetics.
24. Why ATP is called the 'energy currency' of cell?Write on high energy compounds.
25. Write about the mechanism and application of Nitrogen fixation.

(2×15=30)

