

SEMESTER	IV	QP CODE	23MIBO
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**P.R. GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA
SEM END EXAMINATIONS APRIL -2025**

II B.SC: MICROBIOLOGY : MICROBIAL PHYSIOLOGY AND METABOLISM

TIME: 2 HRS

DATE & SESSION	09.04.2025 & AN	REG NO	2	3	2	M	1	C	2	22	MAX MARKS
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SECTION-I

Answer any **THREE** of the following questions. And attempt one question from Each section part Each question carries **TEN** marks **3X10=30Marks**

PART-A

1. Explain nutritional groups of microorganism.
2. Discuss various factors influencing bacterial growth.
3. Explain TCA Cycle with enzymatic reactions and net ATP generated.

PART-B

4. Explain lactic acid fermentation with example.
5. Discuss about oxygenic photosynthesis in bacteria.
6. Write EMP pathway and its significance with net ATP generated.

SECTION-II

Answer any **FOUR** of the following questions. Each question carries **FIVE** marks

4 X 5=20Marks

7. Define Enrichment media with two examples.
8. Explain oxidative phosphorylation with two examples.
9. Define bacterial growth and discuss phases of bacterial growth and generation time.
10. Structure and functions of NAD.
11. Photosynthetic pigments in bacteria
12. Chemo lithotrophs
13. Discuss structure of ATP