QP Code:P25DRIS006

Reg. No : .....
Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER (CBCSS - PG) DEGREE EXAMINATIONS, OCTOBER 2025
(Regular/Improvement/Supplementary)
M. Sc. Microbiology
MBG1C01 : General Biochemistry and Microbial Metabolism
2024 Admission Onwards

Time:3 Hours **Maximum Weightage:30**

Part A

*Short answer type questions. Answer **any four.** Weightage **2** for each.*
(4x2 = 8 Weightage)

1. What are the common functions of lipids?
2. What is Glyoxylate cycle?
3. What are essential fatty acids?
4. Compare and contrast the synthesis of saturated fatty acid and unsaturated fatty acid.
5. Identify Ketogeneic amino acids.
6. Write a note on Glycogenolysis.
7. What are coenzymes? Give examples.

Part B

*Short essay-type questions. Answer **any four**. Weightage **3** for each.*
(4x3 = 12 Weightage)

8. Briefly explain prokaryotic photosynthesis.
9. Summarise De novo synthesis and salvage pathway.
10. Differenciate between Competitive and Non competitive inhibition of enzymes.
11. Build a flowchart explaining the steps involved in the synthesis of saturated fatty acids.
12. Evaluate the Chemical properties of amino acids and their biological roles.
13. Identify the differences between Transamination and Deamination.
14. Build a flowchart for the purification of enzymes.

Turn Over

Part C

*Essay-type questions. Answer **any two**. Weightage **5** for each.*
(2x5 = 10 Weightage)

15. Discuss different types of polysaccharides and their functions.
16. Inspect the importance of β - oxidation of fatty acids.
17. Illustrate the major biochemical mechanisms involved in Electron transport chain.
18. Compare and contrast the effect of various factors on enzyme activity.

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