

M.Sc. (Microbiology) (NEP Pattern) Semester-I
NEP-74-1 / 01MSCMB04 - Paper-IV - Microbial Physiology & Metabolism

P. Pages : 1

Time : Three Hours



GUG/W/23/15128

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw diagrams wherever necessary.

1. Describe in detail about EMP pathway. 16
- OR**
- a) Discuss Homo and Hetero Lactic fermentation in details. 8
- b) Discuss the process of Glycogenolysis. 8
2. What is Photosynthesis? Explain the process of light and dark reaction. 16
- OR**
- a) Describe the Synthesis of Triacylglycerol detail. 8
- b) Explain the Energy Generation mechanism in Cyanobacteria. 8
3. Explain Urea Cycle and its regulation in detail. 16
- OR**
- a) Discuss the biosynthesis of Pyrimidine Nucleotides by Salvage Pathway. 8
- b) Write a note on Breakdown of amino acids. 8
4. Describe Nitrogen cycle in detail with its diagrammatic representation. 16
- OR**
- a) Write a note on Free living and symbiotic Organism. 8
- b) Explain the process of Nitrification and Denitrification. 8
5. Write a note on
- a) Substrate level phosphorylation 4
- b) Chemolithotrophs. 4
- c) Degradation of purines and pyrimidines nucleotides. 4
- d) Regulation of nif gene. 4
