

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

-
- 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**
