4. What is Bioenergetics? Describe the principles of Bioenergetics. What is a spontaneous and non-spontaneous reaction. 14

UNIT-III

5. Write the schematic representation of TCA cycle. Mention the names of intermediates and enzymes involved in the process. 14

6. Write short notes on the following : 7x2=14

   (i) Glycolysis

   (ii) Electron transport system

UNIT-IV

7. What is histidine & its function? What is importance of histidine biosynthesis? Describe the biosynthesis of histidine from its precursor. 14

8. Write short notes on the following : 7x2=14

   (i) β-Oxidation

   (ii) Ammonia assimilation

UNIT-V

9. Write short notes on the following : 7x2=14

   (i) Chlorophylls

   (ii) Bacterial Photosynthesis

10. Describe the process of Dark reaction. 14

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PG Odd Semester Examination, March, 2023

MICROBIOLOGY

(1st Semester)

Course No.: MIBCC-502

(General Microbiology)

Full Marks: 70

Pass Marks : 28

Time: 3 hours

The figures in the margin indicate full marks for the questions. Answer any five question taking one from each unit.

UNIT-I

1. What are the different classification of enzymes based on their functions? How do enzymes work? What is lock and key mechanism? What are the factors affecting enzymes catalysis? 14

2. Write short notes on any two of the following : 7x2=14

   (i) Principle of Allosteric regulation

   (ii) Enzyme inhibition

   (iii) Classification of amino acids

UNIT-II

3. Write short notes on : 7x2=14

   (i) Coupled reactions and energy coupling

   (ii) Enthalpy, Entropy & Free Energy