

3. Complete the table given below, on precursors used by bacteria in the synthesis of amino acids.

Precursor	Amino acid
Oxaloacetate	
3-Phosphoglycerate	
.....	Glutamic acid
Phosphoenol pyruvate	
.....	Alanine

4. Explain the benefits that man has derived from the process of methanogenesis.

5. How do microorganisms synthesize nucleotides?

6. Explain how photosynthetic bacteria generate ATP.

7. How is ethanol produced in the Entner-Doudroff pathway?

8. Explain the role of the three key enzymes of rTCA cycle.

SECTION B: Essays (30 marks each)

1. Discuss the use of the Triple-Sugar Iron Test in the identification of members of Enterobacteriaceae.
2. Write an essay on the energy yielding processes in microorganisms.
3. Discuss the metabolism of C1 compounds in bacteria.