



## BIOTECHNOLOGY

## Paper - IV

## Bio-Molecule

**Note** : Answer **all** questions in which Question Number 1 is compulsory. All questions carry equal marks.

1. Write very short answers of the following :
  - (a) Acid, bases and buffers
  - (b) Ramachandran map
  - (c) Pigments and isoprenoids
  - (d) Polysaccharides

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**Unit-I**

2. Describe about analytical technique in biochemistry laboratory for quantification of macromolecules.

**OR**

Write short notes on the following :

- (a) Chromatographic technique
- (b) Spectrophotometer

**Unit-II**

3. Discuss about classification, purification and separation techniques of protein.

**OR**

Write short notes on the following :

- (a) Chemical and physical properties of amino acids
- (b) Urea cycle

**Unit-III**

4. Explain about metabolism of lipids.

**OR**

Describe about the structure and synthesis of nucleic acid.

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**Unit-IV**

5. Explain in detail about electron transport chain.

***OR***

Write short notes on the following :

(a) Oligosaccharides

(b) Krebs cycle

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