

LMDE/D-23
BIOMOLECULES
Paper : BT-101

Time : Three Hours]

[Maximum Marks : 80

Note : Q. No.1 is compulsory. Attempt any *one* question from each unit. All questions carry equal marks.

Compulsory Question

1. One word/line/fill ups answer of following :

- (a) In Anomerism there is spatial configuration with respect to the carbon atom in aldoses and carbon atom in ketoses.
- (b) Which is considered 21st amino acid?
- (c) H_2O is polar, draw labelled diagram.
- (d) Medium chain fatty acids have Carbon length.
- (e) What is OCFA, name one?
- (f) Which is considered 21st amino acid?
- (g) Sulphur containing amino acid.
- (h) Types of Nucleic Acids. (8×2=16)

UNIT-I

2. Define :
- (a) pH.
 - (b) Biological buffers.
 - (c) Ionization constant.
 - (c) Water as universal solvent significance. ($4 \times 4 = 16$)
3. (a) Elaborate structure of Proteoglycan.
- (b) Enlist various forms of Glycosidic bonds. ($8 \times 2 = 16$)

UNIT-II

4. (a) Detail various bonds responsible for stability of protein.
- (b) Short note on biologically significant short peptides. ($8 \times 2 = 16$)
5. (a) Enlist various structural conformations present in globular protein .
- (b) Note on chemical synthesis of a polypeptide. ($8 \times 2 = 16$)

UNIT-III

6. (a) Enlist various saturated and unsaturated essential Fatty acids.
- (b) Types and Biological significance of Prostacyclins and Terpenes. ($6 + 10 = 16$)

7. Notes on Rancidity and Reichert Meissel number. (16)

UNIT-IV

8. (a) Structure and properties of Purines and Pyrimidines.
(b) Note on chemical synthesis of Poly-Nucleotides.
(8×2=16)
9. Structural polymorphism of RNA and DNA. (16)
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