

Q.P. Code :03832

[Time: 2½ Hours]

[Marks:75]

Please check whether you have got the right question paper.

N.B:

1. Attempt all questions.
2. All questions carry equal marks.
3. Draw neat labelled diagrams wherever necessary.
4. Use of log tables and non-programmable calculator is allowed.

Q.1. Do as directed: (Any fifteen)

Define the following terms:

1. Carbohydrates
2. Dipeptide
3. Isoelectric pH
4. Isomers
5. Unsaturated fatty acid
6. Pitch of the helix
7. Saponification

Draw structures of the following biomolecules:

8. Purine base
9. D- glyceraldehyde
10. D-glucose
11. Serine
12. Acetone

Name the following:

13. An acidic amino acid
14. One keto sugar
15. Sterol of biological significance
16. Fibrous protein present in hair
17. Sugar present in DNA
18. Parent compound of phospholipids
19. The transport protein present the red blood cell
20. Type of bond present between base pair G-C

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TURN OVER

- Q.2.** a) Compare and contrast: Unsaturated fatty acids and Saturated fatty acids
b) Define and classify monosaccharides.

OR

- c) Compare and contrast:
i. Maltose and Lactose
ii. Starch and Cellulose

- d) What are phospholipids? Draw structures of Lecithin and Cephalin.

- Q.3.** a) Explain N - terminal sequencing of proteins using Edman's and Sanger's Methods.
b) Classify amino acids on the basis of the polarity of the R group.

- c) Schematically represent the titration curve of an amino acid and describe the different stages.
d) Explain the term conjugated Proteins. Give examples and state their functions.

- Q.4.** a) Give a brief account of types of RNA and discuss their functions.
b) Explain denaturation and renaturation of DNA in detail.

OR

- c) Give an account of different conformations of DNA double helix.
d) Explain Clover leaf model of tRNA using a suitable diagram.

- Q.5.** Write a short note on: (Any three)

- a) Types of Triacylglycerol
b) Structure and functions of Starch
c) Denaturation of proteins
d) Chargaff's rule
e) Functions of Nucleotides