

Time: 2:30 hours

Total Marks: 75

- (1) All questions are compulsory.
- (2) All questions carry equal marks.
- (3) Figures to the right indicate marks.
- (4) Draw neat labelled diagrams / structures wherever necessary.
- (5) Use of log table and non-programmable calculator is allowed.

Q.1. Do as directed: (Any fifteen)**(15M)****Define the following terms-**

- i) Carbohydrate
- ii) Saponification number
- iii) Zwitter ion
- iv) Pitch of the helix

Fill in the blanks-

- v) Proteins are the polymers of -----.
- vi) The three-letter symbol for Glycine is -----.
- vii) The phospho-protein found in milk is -----.

Give examples of

- viii) Amino acids with hydroxyl group.
- ix) Storage proteins.
- x) Keto Sugar
- xi) Essential fatty acid
- xii) Lipoprotein

Enlist one function of

- xiii) hnRNA.
- xiv) Glutathione

Draw structure of

- xv) Triacylglycerol
- xvi) D – Ribulose
- xvii) Pyrimidine base.

State true or false

- xviii) rRNA carries information from DNA for protein synthesis.

Name the following

- xix) Sugar present in DNA.
- xx) Type of bond present between base pair.

64496

Page 1 of 2

- Q.2. a) Explain the structure and function of cholesterol in detail. (08M)
b) Explain the structure and function of cellulose. (07M)

OR

- Q.2. c) What are carbohydrates? Give its classification in detail. (08M)
d) Distinguish between unsaturated fatty acid and saturated fatty acid. (07M)

- Q.3. a) Discuss classification of amino acids based on the structure. (08M)
b) Write a note on denaturation of proteins. (07M)

OR

- Q.3. c) Enlist the properties of proteins. (08M)
d) Write a note on β pleated sheet structure of proteins. (07M)

- Q.4. a) Diagrammatically explain Watson-Crick model of DNA. (08M)
b) Give detailed account of the components and functions of nucleotide. (07M)

OR

- Q.4. c) Explain clover leaf structure of tRNA using a suitable diagram. (08M)
d) Compare and contrast the A and B form of DNA (07M)

Q5. Write a note on any three of the following. (15M)

- Types of triacylglycerol.
- Compare and contrast between maltose and lactose.
- Peptides and their importance.
- Ribosomal RNA.
- Chargaff's rule.
