

Dr. V.S. Krishna Government Degree College and PG College (A)

Department of Biotechnology

SEMESTER III

Course III

BIOCHEMISTRY AND BIOPHYSICAL TECHNIQUES

Time: 3hrs

Max Marks: 75

Section – A

Answer ALL questions

5 x 10 = 50 Marks

1. a) What are carbohydrates? Give the classification, structure and functions of different monosaccharides.

OR

b) Explain in detail various structural levels of proteins.

2. a) Write in detail about different forms of DNA.

OR

b) Give the nomenclature and classification of enzymes with suitable examples.

3. a) What is glycolysis? Explain its pathway and significance.

OR

b) Explain in detail the process of ETC.

4. a) What is chromatography? Write the principle and applications of thin layer and column chromatography techniques.

OR

b) Explain the principle and procedure of gel electrophoresis.

5. Explain the principle, procedure and applications of preparative centrifugation.

OR

b) Explain in detail about the determination of sedimentation coefficient.

Answer any FIVE of the questions:

5 x 4 = 20 Marks

6. Structures and properties of aromatic amino acids

7. Saturated and unsaturated fatty acids

8. Purines

9. Competitive enzyme inhibition

10. ATP

11. Urea cycle

12. Principle of Spectrophotometry

13. Ultracentrifugation