

Please check whether you have got the right question paper.

- N.B:
1. All questions carry equal marks.
 2. All questions are compulsory.
 3. Draw a necessary diagram whenever necessary.

- Q. 1**
- a) Explain Hydrophobicity. How its define and it's estimated? What is the relationship between accessible surface area, hydrophobicity and free energy of amino acids? **06**
 - b) Explain Chou and Fasman rule of structure prediction. **06**
- OR**
- a) Explain Lennard -Jones curve with reference to Vander Waal forces. **06**
 - b) Discuss Debye-Huckel concept of inter ionic interactions. **06**
- Q. 2**
- a) Explain Ramachandran's Plot. **06**
 - b) What is Allostery? Explain Hills plot with reference to T & R state of hemoglobin. **06**
- OR**
- a) What are the pathways of protein folding? **06**
 - b) What is the effect of charges side chain amino acids on protein structure? What is degeneracy? **06**
- Q. 3**
- a) Which amino acids are present are active side of the enzyme. What methods are used to identify the amino acids? **06**
 - b) Describe the mechanisms action of chymotrpsin and the charge relay system. **06**
- OR**
- a) Describe two graphical methods for obtaining V_{max} and K_m of enzymes. Show how these graphs are influenced by the presence of competitive and noncompetitive inhibitors **06**
 - b) Describe the amino acids present on active site of carboxypeptidase, What roles do they play in catalysis? **06**
- Q. 4**
- a) What are O'linked and N-Linked glycoproteins? write briefly on the loacalization, role of dolichol and trimming that occur during glycoprotein synthesis **12**
- OR**
- a) What are proteoglycans? Write brief account of their structure function and occurrences with examples. **06**
 - b) Write an account basis for classification of sugars into D & L forms. What is hemiacetal and what is its significant in sugars structure? **06**
- Q. 5** Write short notes on **any three** **12**
- a) Collagen structure
 - b) Two random walk
 - c) Significance of histidine and phynely alanine during evolution
 - d) parachloro mercury benzoid
 - e) Specificity of proteases
 - f) Mettalo enzymes