



THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

BCH 3424/3624/3634

Protein Chemistry and Proteomics

Max Marks: 75

Time: 3 Hrs.

PART A

I. Answer any Five questions each not exceeding 4 pages:

(5 x 15 = 75)

1. Explain the classification and biological role of proteins.
2. Define peptide bond. Explain the 5 types of classification of aminoacids and their structure based on the amino acid side chains.
3. Explain in detail the 5 steps involved in the sequencing of large proteins with illustration.
4. Describe the α - helix and β -pleated structures of proteins.
5. Write a detailed account on Ramachandran plot and chaperones.
6. What is Hemoglobin? Elaborate on the various structural features of haemoglobin with a neat diagram.
7. Describe the principle and instrumentations of tandem mass spectrometry for protein identification.