

BBCCT-105

ASSIGNMENT BOOKLET

**Bachelor's Degree Programme
B.Sc. Hons in Biochemistry (BSCBCH)**

PROTEINS

Valid from January, 2024 to December, 2024



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110068.**

Dear Student,

Please read the section on assignments in the Programme Guide for Core Courses that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this course. The total marks of all the parts are 100, of which 35% are needed to pass it.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully:

- 1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ROLL NO.:

NAME:

ADDRESS:

.....

.....

COURSE CODE:

COURSE TITLE:

ASSIGNMENT NO.:

STUDY CENTRE: **DATE:**

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

- 2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- 3) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 4) Your answers should be precise.
- 5) The assignment answer sheets are to be submitted to your Study Centre as per the schedule made by the study centre. **Answer sheets received after the due date shall not be accepted.**

We strongly suggest that you retain a copy of your answer sheets.

- 6) This assignment is **valid from January 2024 to December, 2024** and submit it as per the instructions given in the Programme Guide.
- 7) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

ASSIGNMENT
PROTEINS

Course Code: BBCCT-105
Assignment Code: BBCCT-105/TMA/2024
Maximum Marks: 100

Answer all the questions given below.

1. Explain the classification of amino acids based on structure and metabolic fate. 10 M
2. Write a short note on biologically active peptides. 5 M
3. With the help of schematic diagrams explain non-mechanical methods of cell disruption. 5 M
4. Discuss the protein concentrating technique that is based on freeze drying principle. 5 M
5. Write the principles of thin layer, gel filtration and affinity chromatography. Explain their applications. 10 M
6. Give a detailed account on chromatographic technique used for the separation of volatile compounds. 5 M
7. A) Describe the working principle of electrophoresis and list its applications. 5 M
B) Explain the N-terminal protein sequencing method 5 M
8. A) Discuss how enzymes are used for generation of protein fragments? 5 M
B) Explain the working principle of mass spectrometry 5 M
9. A) Write a short note on applications of tandem mass spectrometry. 5 M
10. A) Draw Ramachandran plot and explain its importance. 5 M
B) What is NMR? List its important applications of protein structure determination. 5 M
11. Describe principles of three techniques used for protein 3-D structure analysis. 10 M
12. What is a Biological data base? Give suitable examples. 5 M
13. Give a detailed account of structural proteins with diagrams. 5 M
14. What are immune globulins? Give a short account on their classifications. 5 M