

BBCCT-105

ASSIGNMENT BOOKLET

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

PROTEINS

Valid from January, 2022 to December, 2022



**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 2022 to December, 2022** 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/2022
Maximum Marks: 100**

Answer all the questions given below.

1. Classify amino acids based on their nutritional importance and metabolic fate. 10 M
2. Describe non mechanical methods of cell disruption with suitable examples. 5 M
3. With the help of schematic diagram explain separation of proteins using dialysis. 5 M
4. List four important applications of each of the following: gel filtration chromatography, affinity chromatography, ion exchange chromatography and gas chromatography. 10 M
5. Write the principle of electrophoresis. Explain SDS page electrophoresis using a neatly label diagram. 10 M
6. Give a detailed account on protein sequencing. 10 M
7. Write the working principle of mass spectrometry and its applications. 5 M
8. Illustrate the oxygen binding curve of hemoglobin and myoglobin. 5 M
9. Describe the role of chaperones in protein folding. 5 M
10. What is a database? Give a detailed account on biological databases. 10 M
11. Describe three important cell signaling events. 5 M
12. Differentiate between hemoglobin and myoglobin. 5 M
13. What is immunoglobulin? Describe the general structure of immunoglobulin using IgG as an example. 10 M
14. Explain sliding filament model of muscle contraction. 5 M