

BBCCT-101

ASSIGNMENT BOOKLET

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

MOLECULES OF LIFE

Valid from 1st July, 2020 to 30th June, 2021



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110068
(2020-2021)**

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 assignment is in this booklet, and it consists of three parts, Part A, B and C. 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) Complete each of Part A, Part B and Part C of this assignment separately, and **submit them together.**
- 6) 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.

- 7) This assignment is **valid from 1st July, 2020 to 30th June, 2021.** If you have failed in this assignment or fail to submit it by June, 2021, then you need to get the assignment for the year 2021-22, and submit it as per the instructions given in the Programme Guide.
- 8) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

ASSIGNMENT
MOLECULES OF LIFE

Course Code: BBCCT-101
Assignment Code: BBCCT-101/TMA/2020-2021
Maximum Marks: 100

Answer all the questions given below. All Questions carry equal marks.

PART-A

1. A) What do you understand by the term ‘Interdisciplinary’? Explain about interdisciplinary nature of Biochemistry.
B) Write a short note on Mutarotation (5+5) 10
2. A) With the help of a well labeled diagram briefly describe the various non-covalent interactions in aqueous system systems.
B) Differentiate between secondary and tertiary structure of a protein. (5+5) 10
3. A) Write a brief note on the following: a) Zwitterion b) Titration curve of amino acids
B) With the help of a labelled diagram explain the formation peptide bond. (5+5) 10
4. A) What is glycosidic bond? Explain different types of glycosidic bonds with suitable example? B) Draw the structures of Milk and Table sugars, (5+5) 10
5. A) Compare and contrast between storage and structural polysaccharides with suitable diagrams and examples.
B) Write detailed note on Blood group antigens (5+5) 10

PART-B

6. A) Explain the micelle formation and its significance in saponification.
B) Write note biological membranes. (5+5) 10
7. A) Differentiate between auto and paracrine signaling?
B) Explain paracrine signalling with the help of eicosanoids. (5+5) 10
8. A) Illustrate the role of vitamin-A in vision cycle with a neat diagram
B) Justify the role of vitamins as antioxidant with suitable examples. (5+5) 10
9. A) Describe the Griffith’s experiment of bacterial transformation
B) Explain the phenomenon of denaturation and renaturation with the help of suitable diagram. (5+5) 10
10. A) Draw the structure of ATP and explain why it is known as energy rich compound.
B) Give a detailed note on t-RNA. (5+5) 10