

BBCCT-101

ASSIGNMENT BOOKLET

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

MOLECULES OF LIFE

Valid from January, 2023 to Dec, 2023



**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 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 January, 2023 to 31st Dec, 2023** 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/2023-2023
Maximum Marks: 100

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

1. A) Write a brief note on Friedrich Wholer's contribution to the origin of Biochemistry.
B) Discuss important inorganic elements and their biological functions. (5+5) 10
2. Define the following bonds/interactions with suitable examples: hydrogen bond, hydrophobic bond, Vander Waals and Electrostatic interactions 2.5 x 4 =10
3. A) Describe and draw the general structure of amino acid.
B) With the help of neatly labelled diagrams explain the peptide bond. (5+5) 10
4. A) What are stereoisomers?
B) Explain different types of glycosidic bonds with suitable examples?
C) Mutarotation. (5+3+2) 10
5. Write a detailed note on plant and animal storage polysaccharides with suitable diagrams and examples. (5+5) 10
6. A) What is disaccharide. Explain with two suitable examples.
B) Give a detailed account on glycoconjugates. (5+5) 10
7. A) Describe classification of lipids?
B) Explain the importance of lipids as signalling molecules. (5+5) 10
8. A) Enlist water and fat soluble vitamins. Write a detailed note on classification of vitamins with examples. 10
9. A) Describe and draw nucleosides and nucleotides.
B) Write the experimental evidences showing nucleic acids as genetic material. (5+5) 10
10. A) Describe and draw the structure of Watson-Crick Model of DNA. (5+5) 10
B) Explain the chemical basis behind the increased U.V. absorption of denatured DNA.