

BBCCT-107

ASSIGNMENT BOOKLET

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

ENZYMES

Valid from 1st Jan, 2023 to 31st Dec, 2023



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110068
(2023)**

Dear Student,

Please read the section on assignments in the Programme Guide for B. Sc. (Hons) Biochemistry 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 two parts, Part A and B. It covers all blocks of the 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) Solve Part (A) and Part (B) of this assignment, and **submit the complete assignment answer sheets within the due date.**
- 6) The assignment answer sheets are to be submitted to your Study Centre within the due date. **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 Jan, 2023 to 31st Dec, 2023**. If you have failed in this assignment or fail to submit it by Dec, 2023, then you need to get the assignment for the year 2024-25, and submit it as per the instructions given in the Programme Guide.
- 8) **You cannot fill the examination form for this course** until you have submitted this assignment.

We wish you good luck.

ASSIGNMENT

Enzymes Core Course in Biochemistry

Course Code: BBCCT-107
Assignment Code: BBCCT-107/TMA/2023
Maximum Marks: 100

Note: Attempt all questions. The marks for each question are indicated against it. Write all answers in your own words; do not copy from the course material.

PART-(A)

(50)

1. Write short note on the following: (2.5*4=10)
 - a) Non-competitive inhibition
 - b) Reaction Rate
 - c) Co-factor and Co-enzyme
 - d) Active site
2. a) Give an overview of enzyme specificity and its different types. (5)
b) What is the effect of pH on enzyme activity? (5)
3. Explain ordered and random mechanism of bisubstrate enzyme reactions. (10)
4. Differentiate between: (5+5=10)
 - a) Fischer lock and Key hypothesis and Induced Fit Model
 - b) Hydrolases and Isomerases
5. Derive Albery rate equation for bisubstrate enzyme catalyzed reactions. (10)

PART-(B)

(50)

6. Explain the mechanism of chymotrypsin enzyme. (10)
7. Write short note on the following: (2.5*4=10)
 - a) Biotin
 - b) Tetrahydrofolate
 - c) Diagnostic Enzymes
 - d) Enzymes in baking industry
8. Discuss the Pyruvate Dehydrogenase complex and its mechanism of regulation. (10)
9. Differentiate between the following: (5+5 =10)
 - i) Covalent and Ionic method of enzyme immobilization
 - ii) Concerted and Cooperative feedback inhibition
10. Draw a table specifying five marker enzymes, their organelle site and associated metabolic pathway. (10)

