

BBCET-145

ASSIGNMENT BOOKLET

Bachelor (Honours) Degree in BIOCHEMISTRY (BSCBCH)
MOLECULAR BASIS OF NON-INFECTIOUS HUMAN DISEASES

Valid from 1st July, 2022 to 30th June, 2023

Last date for the assignment submission is on or before 30th June, 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 of B.Sc. (Hons.) Biochemistry (BSCBCH) that we sent you after your enrolment. A weightage of 30 percent, 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.

SPECIFIC INSTRUCTIONS FOR TUTOR MARKED ASSIGNMENTS (TMA)

- 1) Write your Enrolment Number, Name, Full Address, Signature and Date on the top right hand corner of the first page of your response sheet.
- 2) Write the Programme Title, Course Code, Course Title, Assignment Code and Name of your Study Centre on the left hand corner of the first page of your response sheet.

Course Code and Assignment Code may be reproduced from the assignment.

The top of the first page of your response sheet should look like this:

ENROLMENT NO.:

PROGRAMME TITLE	:	NAME:
COURSE CODE	:	ADDRESS:
		
COURSE TITLE	:
ASSIGNMENT CODE	:	SIGNATURE:
STUDY CENTRE	:	DATE:

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

- 3) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

- 4) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 5) Your answers should be precise.
- 6) Solve questions of the assignment, and submit the complete assignment answer sheets within the due date.
- 7) 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.
- 8) We strongly suggest that you retain a copy of your answer sheets.
- 9) **This assignment is valid from 1st July, 2022 to 30th June, 2023.** If you have failed in this assignment or fail to submit it by December, 2022, then you need to get the assignment for the year 2023-24, and submit it as per the instructions given in the Programme Guide.
- 10) You cannot fill the exam form for this course till you have submitted this assignment.

We wish you good luck!

Assignment

Molecular Basis of Non-infectious Human Diseases

Course Code: **BBCET-145**

Assignment code: **BBCET-145/TMA/2022-23**

Maximum marks: **100**

Note: Attempt all questions. The marks for each question are indicated against it.

PART-(A)

1. (a) Explain the balanced diet and its importance in life. [5]
(b) Discuss briefly Indian food groups. [5]
2. (a) Give a brief account on beriberi deficiency diseases. [5]
(b) Discuss the biochemical basis of scurvy disease. [5]
3. (a) Explain xerophthalmia with its classification. [5]
(b) What is lifestyle disorder? Enlist any five effective ways to prevent lifestyle disorders. [2+3=5]
4. (a) What is Body Mass Index (BMI)? Calculate BMI if the body weight is 55kg and the height 5.8. [2+3=5]
(b) Discuss the eating disorders [5]
5. Define the following metabolic disorders; [5x2=10]
 - (a) Diabetes Mellitus
 - (b) Atherosclerosis
 - (c) Hypertension
 - (d) Hypothyroidism
 - (e) Irritable bowel syndrome

PART-(B)

6. Describe the polycystic ovary syndrome (PCOS). [10]
7. (a) Discuss the TNM system of cancer. [5]
(b) Differentiating polygenic and monofactorial disorders. [5]
8. (a) Explain what is Protein misfolding. [5]
(b) Explain the molecular basis of Alzheimer disease [5]
9. Enlist the defective gene and enzymes of the following metabolic diseases. [4x2.5 =10]
 - a) Phenylketonuria (PKU),
 - b) Alkaptonuria,
 - c) Maple syrup urine disease
 - d) Cystic fibrosis
10. Write short notes on the following: [5+5=10]
 - (a) Long QT Syndrome
 - (b) Hemoglobinopathies