BBCCT-103

ASSIGNMENT BOOKLET

B.Sc. (Major) Biochemistry (BSCFBC)

CELL BIOLOGY

Valid from 1st January, 2024 to 30st December, 2024

Last date for the assignment submission is on or before 31st December, 2024

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 BSc (Major) Biochemistry (BSCFBC) 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 in this booklet consists of two parts, Part A and B which 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.

- Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- Leave 4 cm margin on the left, top and bottom of your answer sheet.
- Your answers should be precise.

- Solve questions of the assignment, and submit the complete assignment answer sheets within the due date.
- 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.
- **This assignment is valid from 1st January, 2024 to 31th December, 2024. If you have failed in this assignment or fail to submit it by December, 2024, then you need to get the assignment for the year 2025,** and submit it as per the instructions given in the Programme Guide.
- You cannot fill the exam form for this course till you have submitted this assignment.

We wish you good luck!

Assignment
Cell Biology

Course Code: **BBCCT-103**
Assignment code: **BBCCT-103/TMA/2024**
Maximum marks:**100**

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

PART-(A) Maximum marks: 50

1. (a) Explain the cell theory. [5]

(b) What are experimental models? Give any two examples along with their specific features. [5]

2. (a) Explain the structural organisation of eukaryotic cells with suitable diagram. [5]

(b) What is tissue fixation? Why it is necessary in microscopy. [5]

3. (a) Write the principle and application of Light microscopy. [5]

(b) Differentiate between confocal microscopy and phase contrast microscopy. [5]

4. (a) Describe the different rotors used in centrifugation. [5]

(b) Explain why mitochondria is called the power house of cell. [5]

5. Write short notes on the following: [5+5=10]

(a Nuclear envelop

(b) Role of actin filament

PART-(B) Maximum marks: 50

6. Describe the Mitochondrial protein import machinery. [10]

7. Discuss how proteins modify within the Golgi Body with the help of suitable diagram. [10]

8. (a) Describe the protein transport pathway of thylakoid lumen with the help of labelled diagram. [10]

9. (a) How does a cell prepare to divide during Interphase? Explain. [5]

(b) State the role of cyclin in cell cycle regulation. [5]

10. Write short notes on the following: [5+5=10]

(a) Salient features of transformed cells

(b) Fluorescence Activated Cell sorting (FACS)