**BZYCT-135**

# ASSIGNMENT BOOKLET

**Bachelor's Degree Programme**

**(BSCM)**

**(Physiology and Biochemistry)**

**Valid from 1st January, 2026 to 31st December, 2026**

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

**(2026)**

Dear Student,

Please read the section on assignments in the Programme Guide for B. Sc. 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 is of 100 marks, 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:

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**ROLL NO.:** ……

**NAME:** ……

**ADDRESS:** ……

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**COURSE CODE:** …….

**COURSE TITLE:** …….

**ASSIGNMENT NO.:** ……

**STUDY CENTRE:** …….. **DATE:** ……..

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**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 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 January 2026 to 31st December, 2026**. If you have failed in this assignment or fail to submit it by December, 2026, then you need to get the assignment for next year, 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

**Course Code: BZYCT-135**
**Assignment Code: BZYCT-135/TMA/2026**
**Maximum Marks: 100**

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

1. a) What are carbohydrates? Give one example each for mono-, di- and polysaccharides. (5+5=10)

   b) Describe the exchange of respiratory gases in the alveoli.

2. a) Briefly discuss the role of the Juxtaglomerular Apparatus (JGA) in the mammalian kidney. (5+5=10)

   b) What is nerve impulse? Distinguish between membrane and action potential.

3. a) What are neurotransmitters? Enlist any four of them along with their physiological effects. (5+5=10)

   b) Draw Lineweaver-Burk plot.

4. a) List the hormones secreted by the pituitary gland and their functions. (5+5=10)

   b) Illustrate the steps of cellular division during oogenesis.

5. a) Compare and contrast between glycogenesis and glycogenolysis. (5+5=10)

   b) Which organ is the principal site of urea formation? Explain the urea cycle.

6. a) Name any five water soluble vitamins and diseases caused due to their deficiency. (5+5=10)

   b) Describe the reaction catalyzed by enzyme Gluthione Peroxidase (GPx).

7. a) Explain the significance of $K_m$ and $V_{max}$ in enzyme catalysed reactions. (5+5=10)

   b) Define enzyme inhibition. Explain any one type of enzyme inhibition.

8. a) Explain the factors that affect the $O_2$ dissociation curve. (5+5=10)

   b) Briefly explain the components of the Electron Transport Chain with the help of a suitable diagram.

9. a) Discuss the effects of temperature and pH on the rate of enzyme action. (5+5=10)

   b) Describe structural organization of protein.

10. Briefly describe the following: (5+5=10)

    a) Pheromones

    b) Free radicals and their sources in the body