MBCE-013

ASSIGNMENT BOOKLET

Master Degree Programme
M.Sc in Biochemistry (MSCBCH)

HUMAN PHYSIOLOGY

Valid from January, 2024 to Dec, 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 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 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: ……

……

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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) 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.

6) This assignment is **valid from 1st January, 2024 to 31st Dec, 2024** and submit it as per the instructions given in the Programme Guide.

7) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

ASSIGNMENT

HUMAN PHYSIOLOGY

Course Code: MBCE-013
Assignment Code: MBCE-013/TMA/2024
Maximum Marks: 100

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

1. A) Describe the significance of intercellular junctions with suitable examples.
   B) Define the term collagens. Explain the structural difference between various types of collagens with suitable examples. (5+5) 10

2. Write short notes on the following:
   i. Role of hypothalamus in thermoregulation
   ii. Compare and contrast negative and positive feedback mechanisms with special reference to homeostasis. (5+5)10

3. With the help of neatly labeled diagrams explain the mechanism of gas exchange (external and internal respiration). 10

4. Discuss the significance of various digestive secretions (glands, segments of GI tract, and stomach) with relevant examples. (4+3+3) 10
5. A. Write a detailed note on urine formation with suitable diagrams. (5+5)= 10
   B. Explain metabolic acidosis and alkalosis.
6. (a) Explain the physiological significance of heart with suitable diagram. (5+5)=10
   (b) Describe the Conduction system of the heart.

7. (a) Discuss the hematopoietic process. (5+5)=10
   b) Discuss the role of kidney in regulation of blood volume.

8. Explain the following: 4 x 2.5=10
   i) Role of vitamin K in blood coagulation
   ii) Extracellular fluid
   iii) Neurotransmitters
   iv) Smooth Muscle cells

9. (a) Discuss the structure and functions of neurons with suitable diagram. (5+5)=10
   b) Explain the microscopic organization of sarcomeres.

10. Write short notes on the following: (5+5=10)
    (a) Excitation-Contraction (EC) coupling in skeletal muscle.
    (b) Nerve membrane potential

Note: Draw the figures/flowcharts/tables wherever required.