ASSIGNMENT BOOKLET

CERTIFICATE IN SMART CITY DEVELOPMENT AND MANAGEMENT (CSCDM)

Last date for submission:

30th April 2026 for January 2026 Session
30th September 2026 for July 2026 Session

School of Engineering and Technology
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068

Dear Student,

We advise you to go through your course material carefully and read all the section pertaining to assignments. 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 each of MIO-001, MIO-002, MIO- 003 and MIO-004 of these courses. You have to score a minimum of 40 marks out of 100 marks in each of the assignments. Submit your assignment response at **Programme Coordinator (CSCDM), Block-C, School of Engineering & Technology, Indira Gandhi National Open University, Maidan Garhi, New Delhi - 110068**

Instructions for Formatting Your Assignments

Before attempting the assignment, please read the following instructions carefully.

1) On top of the first page of your Tutor Marked Assignment (TMA) answer sheet, please write the details exactly in the following format:

ENROLMENT NO: …………………………………………

NAME: …………………………………………

ADDRESS: …………………………………………

…………………………………………

…………………………………………

COURSE CODE: …………………………….

COURSE TITLE: …………………………….

ASSIGNMENT CODE: …………………………..…

STUDY CENTRE: SOET, IGNOU Campus   **DATE:** ………………….….……………....

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

2) Use only full-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) While solving problems, clearly indicate the question number along with the part being solved. Be precise. Recheck your work before submitting it.

Answer sheets received after the due date shall not be accepted.

We strongly feel that you should retain a copy of your assignment response to avoid any unforeseen situation and append, if possible, a photocopy of this booklet with your response.

We wish you good luck.

Course Title: Smart Technologies (Hardware and Software)
Assignment Code: MIO-002/TMA/2026
Maximum Marks: 100

Note:

1.   **In any question, whenever we ask you to suggest an activity, we expect you to give one other than those covered in the units**
2.   **For any question worth 5 marks the word limit is 200 words, for 10 marks question it is 350 words.**
3.   **All questions are compulsory. All questions carry equal marks.**

Q.1		How Internet of Things (IoT) is playing a key role in protecting the environments?	10
Q.2		What is Internet of Everything (IoE)? Discuss the application of IoE in Supply Chain Management.	10
Q.3		What do you understand by Smart Grid? Explain. Also compare existing grid with future grid.	10
Q.4		Discuss the concept of Blockchain Technology. Explain the working of Blockchain Technology giving an example.	10
Q.5		Discuss the application of Blockchain Technology in Trade Finance.	10
Q.6		What do you understand by Monte Carlo Tree Search? Explain.	10
Q.7	a)	Briefly describe the Iterative K-means clustering algorithm?	5
	b)	What is perceptron? Explain.	5
Q.8	a)	Discuss the applications of Sensors in Smart Cities.	5
	b)	Discuss the applications of Actuators in Smart Cities.	5
Q.9		What is SCADA? Discuss the Architecture of SCADA and Its applications.	10
Q.10		What is AI/ ML? Explain the various applications of AI/ ML in Healthcare.	10