CETM-2025

ASSIGNMENT BOOKLET

CERTIFICATE IN ENERGY TECHNOLOGY AND MANAGEMENT (CETM)

Last date for submission:

15th May, 2025
30th September, 2025

School of Engineering and Technology
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110 068

Dear Student,

We advise you to go through your programme guide carefully and read the section pertaining to assignments. A weightage of 30 percent, as you are aware, has been earmarked for continuous evaluation which would consist of **one tutor-marked assignment** for each of OEY 001, OEY 002 and OEY 003 of this course. You have to score a minimum of 40 marks out of 100 marks in each of the assignments. **Submit your assignment response at your Study Centre.**

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully.

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

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

6) The assignment should be in your own handwriting. Typed assignments will not be accepted.

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.

Assignment -1
(To be done **after** studying the course material)

Course Code: OEY 001
Assignment Code: OEY-001/TMA/2025
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 a 10 mark question it is 350 words, and for a 15 mark question it is 500 words.

3. All questions are compulsory. All questions carry equal marks.

Q.1 What are the types of energy sources? State various forms of renewable and non-renewable energy sources.

Q.2 A car of mass 2000 kg is lifted up a distance of 30 m by a crane in 1 minute. A second crane does the same job in 2 minutes. Do the cranes consume the same or different amounts of fuels? What is the power applied by each crane? Neglect power dissipation against friction.

Q.3 Define energy conversion efficiency. Also state the first law of thermodynamics and mention its significance through fuel input as in petrol. An IC engine has an input of 500KWh. Energy equivalent to 350 KWh is utilized for running a motor. What is the energy conversion efficiency?

Q.4 Define charcoal and discuss its prominent properties.

Q.5 Differentiate between low, medium and high temperature solar collectors.

Q.6 List the biomass technologies and describe their applications.

Q.7 Discuss in brief advantages and disadvantages of liquid fuel.

Q.8 Explain the principle and working of horizontal and vertical axis wind machines.

Q.9 Describe in detail, the various uses of hydrogen as a fuel.

Q.10 Write short notes on the following:
a) Wind energy
b) Tidal energy