Assignment Booklet

MSCRWEE Programme
M.Sc (Renewable Energy and Environment)

Third Semester (Compulsory)	
MRW-005	Solar Energy and Applications
MRW-006	Bioenergy Conversion and Utilization
MRW-007	Energy Economics and Planning

Third Semester (Electives)	
MRWE-001	Nano Technology in Energy & Environment
MRWE-002	Energy Storage
MEV-021	Introduction to Climate Change
MEVE-001	Environmental Impact Assessment for Environmental Health
MCS-224	Artificial Intelligence and Machine Learning
MCS-226	Data Science and Big Data
MCS-227	Cloud Computing and IoT
MCS-231	Mobile Computing

SCHOOL OF ENGINEERING & TECHNOLOGY
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
Maidan Garhi, New Delhi – 110 068

JANUARY 2026

Dear Student,

Please read the information on assignments in the Programme Guide that we have sent you after your enrolment. A weightage of 30%, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this Programme. The assignment for MSCRWEE (Third semester) has been given in this booklet.

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:

ENROLLMENT NO :………………………………………………

NAME :………………………………………………

ADDRESS :………………………………………………

………………………………………………

………………………………………………

PROGRAMME CODE: ………………………..

COURSE CODE: ………………………………

COURSE TITLE: ………………………………

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) **These assignments submitted should be hand written in your own hand writing.**

We strongly suggest that you should retain a copy of your answer sheets.

6) **You cannot fill the Exam Form without** submission of the assignments. So solve it and **submit it at the earliest.** If you wish to appear in the **TEE, June 2026,** you should submit your TMAs by **April 30, 2026.** Similarly, if you wish to appear in the **TEE, December 2026,** you should submit your TMAs by **September 30, 2026.**

7) Assignments will be submitted at **your respective regional centre.**

We wish you good luck!

Assignment -7
(To be done **after** studying the course material)

Note:

1. **For any question worth 10 marks the word limit is 350 words, for a 20 mark question it is 550 words.**

2. **Attempt all questions. All questions carry equal marks.**

Q.1   What is Cloud Computing ? How Cloud Computing differs from Cluster   20
        Computing , Grid Computing ? Explain the characteristics of Cloud
        Computing. Also, give benefits & applications of Cloud Computing.

Q.2   What do you understand by the term "Cloud Deployment Model". Explain the   20
        following Cloud Deployment Models, with suitable example for each.

        *   Public Cloud Deployment Model

        *   Private Cloud Deployment Model

        *   Community Cloud Deployment Model

        *   Hybrid Cloud Deployment Model

        Also, discuss when it is suitable to use which cloud deployment model

Q.3   Explain the virtualization environment with the help of suitable diagram and   20
        example

Q.4   What is Tenancy in context of cloud computing? Compare Multi-Tenancy   20
        model and Single Tenancy model of resource sharing. Explain the various
        ways through which Multi-Tenancy can be implemented.

Q.5   Explain the term Internet of Things (IoT).List and explain the various   20
        components used to implement IoT. Give characteristics of IoT. Briefly
        discuss the following types of IoT:

        1. Consumer IoT (CIoT)

        2. Industrial IoT(IIoT)

        3. Infrastructure IoT

        4. Internet of Military Things (IoMT)