# 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 |

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THE PEOPLE'S UNIVERSITY

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

## JANUARY 2025

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 ANDTO 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 2025,** you should submit your TMAs by **April 30, 2025.** Similarly, if you wish to appear in the **TEE, December 2025,** you should submit your TMAs by **September 30, 2025.**

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.**

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Q.1     Explain the term Resource Provisioning in context of cloud computing. Also, explain the various approaches used for Resource Provisioning. Discuss the problems of Over-provisioning and Under provisioning.      20

Q.2     Explain the following types of network connectivity in cloud computing:      20

   1. Public Inter cloud Networking

   2. Private Inter cloud Networking

   3. Public Intra cloud Networking

   4. Private Intra cloud Networking

Q.3     What is Edge computing? Discuss the working of Edge computing. Also, describe the relation between Edge computing, Fog computing and Cloud Computing, with the help of a suitable block diagram?      20

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

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

   1. Consumer IoT (CIoT)

   2. Industrial IoT(IIoT)

   3. Infrastructure IoT

   4. Internet of Military Things (IoMT)