

# **ASSIGNMENT BOOKLET**

**Master of Science (Environmental Science)  
(MSCENV)**

**Assignments  
January 2021 and July 2021 Sessions  
First Semester**

**Tutor Marked Assignments (TMA) for  
MEV 011; MEV 012; MEV 013**



**School of Inter-disciplinary and  
Trans-disciplinary Studies  
Indira Gandhi National Open University Maidan  
Garhi, New Delhi-110068**

Dear Learner,

Welcome to the Programme M.Sc. (Environmental Science)!

You are required to do one assignment for each Course of the M.Sc. (Environmental Science). Each assignment is a Tutor Marked Assignment (TMA) and carries 100 marks. Each assignment covers the entire course. Answer any five questions in each assignment. All questions carry equal marks. This TMA is concerned mainly with assessing your application and understanding of the course material. Please ensure that you read all the units of the course. It is important that you should write the answers to all the questions in your own words. You should remember that writing answers to assignment questions will improve your writing skills and prepare you for the term-end examination.

This booklet includes assignments for the following courses:

**MEV 011: Fundamentals of Environmental Science and Ecology**

**MEV 012: Earth Processes**

**MEV 013: Environmental Chemistry**

It is compulsory to submit the assignments within the stipulated time to be eligible for appearing the term-end examination. The assignments constitute the continuous component of the evaluation process and have 30% weightage in the final grading. Before you write the assignments, first go through the course material and then prepare the assignments carefully by following the instructions pertaining to assignments. Your responses should not be a verbatim reproduction of the textual materials provided for self-learning purposes but it should be in your own words.

If you have any doubt or problem pertaining to the course material and assignments, contact the Programme Coordinator or concerned programme in-charge or Academic Counsellor at your Study Centre for clarification. Once you are able to do the assignment satisfactorily, you will be ready to take the Term-end exam with confidence.

If you still have problems, do feel free to contact us at School of Interdisciplinary and Transdisciplinary Studies.

Wishing you all the best to complete the programme successfully.

### **Programme Coordinators**

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## INSTRUCTIONS

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

1. Read the detailed instructions about the assignment given in the Programme Guide.
2. Write your Enrolment Number, Name, Full Address and Date on the top right corner of the first page of your response sheet(s).
3. Write the Course Title, Assignment Number and the Name of the Study Centre you are attached to, in the centre of the first page of your response sheet(s).
4. Read the instructions related to assignments given in the programme guide.
5. Please note that unless you submit the assignments contained in this booklet within the stipulated time, you would not be permitted to appear for the term-end examination.
6. The top of the first page of your response sheet should be like the following:

NAME: .....

ENROLLMENT NO.: .....

CYCLE OF ADMISSION: .....

PROGRAMME CODE: .....

ASSIGNMENT CODE: .....

COURSE CODE: .....

COURSE TITLE: .....

ADDRESS: .....

CONTACT NUMBER: .....

DATE OF SUBMISSION: .....

## GUIDELINES FOR TMAs

You will find it useful to keep the following points in mind:

- **Planning:** Read the questions carefully. Go through the points on which they are based. Make some points regarding each question and then rearrange these in a logical order. And please write the answers in your own words. Do not reproduce passages from the units.
- **Oganisation:** Be a little more selective and analytic before drawing up a rough outline of your answer. In an essay-type question, give adequate attention to your introduction and conclusion. The introduction must offer your brief interpretation of the question and how you propose to develop it. The conclusion must summarize your response to the question. In the course of your answer, you may like to make references to other texts or books as this will add some depth to your analysis.

**Note the following points before you start writing the assignments:**

1. Use only A4 paper size for your assignment and tag all the pages carefully.
2. Write the relevant question number with each answer.
3. You should write the answer in your own handwriting.

**Make sure that your answer:**

- (a) is logical and coherent;
- (b) has clear connections between sentences and paragraphs;
- (c) is written correctly giving adequate consideration to your expression, style and presentation;
- (d) Does not exceed the number of words indicated in the question.

**Submission:** The completed assignment should be sent to the Coordinator of the Study Centre allotted to you. Please read the instructions given in your Programme Guide. These assignment questions are valid for the January 2021 session and July 2021 session.

- Keep a copy of the assignment answer sheets with you before submission for future reference.
- Answer each assignment on separate sheet.
- It is preferred to write all assignments neatly in your own handwriting. Write your name, course code, enrolment No. and cycle of admission on all the assignments in bold letters.

- Express your response in your own words. You are advised to restrict your response based on the marks assigned to it. This will also help you to distribute your time in writing or completing your assignments on time.

**Remember that you must submit your assignments before you can appear for the Term End Exams. Please remember to keep a copy of your completed assignment, just in case the one you submitted is lost in transit.**

**Good luck with your work!**

# MEV-011: FUNDAMENTALS OF ENVIRONMENTAL SCIENCE AND ECOLOGY

## TUTOR MARKED ASSIGNMENT

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**Course Code** : MEV-011  
**Course Title** : Fundamentals of Environmental Science and Ecology  
**Assignment Code** : MEV-011/TMA-01/January & July session 2021

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Maximum Marks 100

**5x20=100**

**Note:** This assignment is based on the entire course.

Answer any five questions. All question carries equal marks.

Please write all answers in your own words.

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1. Discuss the principles and scope of environmental science.
  2. Describe various environmental issues at global, regional and local levels.
  3. Define ecology and describe various environmental factors with suitable examples.
  4. Write short notes on any two of the following:
    - a. Ecological Succession
    - b. Population Growth
    - c. Major Biomes
    - d. Carrying Capacity
  5. Explain the structure and function of ecosystem with suitable examples.
  6. Explain the need, purpose and approaches to restoration ecology.
  7. Write short notes on any two of the following:
    - a. Environmental management standards
    - b. Foundation and Scope of Environmental Economics
    - c. Sustainable solutions to environmental problems
  8. Discuss the concept and milestones in education for environment and sustainable development.

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# MEV-012: EARTH PROCESSES

## TUTOR MARKED ASSIGNMENT

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**Course Code** : MEV-012  
**Course Title** : Earth Processes  
**Assignment Code** : MEV-012/TMA-01/January & July session 2021

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Maximum Marks 100

**5x20=100**

**Note:** This assignment is based on the entire course.

Answer any five questions. All question carries equal marks.

Please write all answers in your own words.

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1. Describe weathering and its types with suitable examples.
2. Explain the distribution of water in the earth's crust and the hydrological cycle.
3. Write short notes on the following.
  - (a) Formation of continents and ocean basins.
  - (b) Sedimentary rocks.
4. Explain the terms hazard and disaster. Describe the types of hazards with examples.
5. Describe the various types man-made hazards and their impacts on humans.
6. Write short notes on the following.
  - (a) Earthquakes
  - (b) Earth's radiation balance
7. Give a detailed account on the physical, chemical and biological aspects of sea water.

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## MEV-013: Environmental Chemistry TUTOR MARKED ASSIGNMENT

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Course Code : MEV-013  
Course Title : Environmental Chemistry  
Assignment Code : MEV-013/TMA-01/January & July session 2021

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Maximum Marks 100

**5x20=100**

**Note:** This assignment is based on the entire course.

Answer any five questions. All question carries equal marks.

Please write all answers in your own words.

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1. Explain modern methods of separation and electrical methods of analysis with suitable examples?
2. Differentiate between the following
  - a. Accuracy and Precision
  - b. Determinate and Indeterminate Errors
3. What are the applications of chromatography technique in environmental monitoring?
4. Explain the following with suitable examples
  - a. Chemical equilibrium & Dynamic equilibrium
  - b. Aromatic hydrocarbons as environmental pollutants
  - c. Biochemical effects of Arsenic & Mercury
  - d. Mechanism of adsorption
5. Give a note on scintillation process and working mechanism of scintillation counter?
6. Explain the reasons for the following?
  - a. HF stored in copper bottles and not glass bottles
  - b. Sodium hypochlorite used as a disinfectant
  - c. Graphite acts as a lubricant
  - d. Lead components are added to gasoline and why was it removed with the advent of catalytic convertors
  - e. TEL was banned as a gasoline additive
7. Explain basic instrumentation for IR Spectrometry and its environmental applications?

8. a) What is global warming? How is it different from greenhouse effect? What are the environmental outcomes of global warming?
- b) Describe the mechanism of ozone formation in the lower troposphere?

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