ASSIGNMENT BOOKLET

Master of Science (Environmental Science) (MSCENV)

Assignments
January 2023 to July 2024 Sessions
Elective Courses

Tutor Marked Assignments (TMA) for
MEVE 011; MEVE 012; MEVE 13; MEVE 14; MEVE 15; MEVE 16; MEVE 17; MEVE 18; and MEVE 19

School of Inter-disciplinary and
Trans-disciplinary Studies
Indira Gandhi National Open University
MaidanGarhi, 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:

MEVE 011	**Global Climate Change**
MEVE 012	**Environmental Management**
MEVE 013	**Environmental Biotechnology**
MEVE 014	**Biodiversity Conservation and Management**
MEVE 015	**Disaster Management**
MEVE 016	**Urban Environment**
MEVE 017	**Environment and Society**
MEVE 018	**Instrumentation Techniques for Environmental Monitoring**
MEVE 019	**Environmental Issues**

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

Prof. Shachi Shah, sshah@ignou.ac.in
Dr. V. Venkat Ramanan, vvramanan@ignou.ac.in
Dr. Deeksha Dave, deekshadave@ignou.ac.in

School of Interdisciplinary and Transdisciplinary Studies
Indira Gandhi National Open University Maidan Garhi,
New Delhi-11006

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.
- **Organisation:** 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 **S**tudy Centre allotted to you. Please read the instructions given in your Programme Guide. These assignment questions are valid for the **January 2023 to July 2024 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!

MEVE- 011: GLOBAL CLIMATE CHANGE
TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-011
Course Title	: Global Climate Change
Assignment Code	: MEVE-011/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course. 5x20

Answer any five questions. All question carries equal marks.

Please write all answers in your own words.

1 Explain the Anthropogenic drivers of climate change.

2 Explain the Milankovitch Oscillations.

3 Explain the sources of palaeoclimatic data.

4 Explain the impacts of climate change on ocean ecosystem.

5 Explain the impacts of climate change on human health.

6 Explain the salient features of Paris Agreement on Climate Change.

7 Explain the National Action Plan on Climate change.

8 Explain the impacts of climate change on agriculture.

****

MEVE-012: ENVIRONMENTAL MANAGEMENT

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-012
Course Title	: Environmental Management
Assignment Code	: MEVE-012/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.
Answer any five questions. All question carries equal marks (5X20=100)
Please write all answers in your own words.

1. Enumerate various indicators of sustainability and explain how they contribute towards environmental management.
2. Differentiate between product stewardship and green business.
3. Explain the Environmental audit in detail.
4. What are ISO, ISO 14000, and ISO 14001? How are these standards developed?
5. What is a business charter? Discuss briefly the principles for business charter for achieving sustainable development.
6. List different components of environmental management. Giving suitable examples, discuss how cultural and social subsystems affect it.
7. Highlight the role of IT and digital interventions in Environmental Management.
8. Explain Life Cycle Assessment giving suitable example.

****

MEVE-013: ENVIRONMENTAL BIOTECHNOLOGY

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-013
Course Title	: Environmental Biotechnology
Assignment Code	: MEVE-013/TMA-01/2023-24
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks (5X20=100)

Please write all answers in your own words.

1. What is environmental Biotechnology? Give its application and scope in the filed of Environmental Science.
2. What is bio-energy? Give an overview of bio-energy technologies.
3. What is solid waste? Describe the role of environmental biotechnology in solid waste management.
4. Describe the aerobic and anaerobic treatment technologies for waste water treatment.
5. What are bio-fertilizers? Classify biofertilizers based on their types and application.
6. What is bioremediation? Explain various methods of *in-situ* bioremediation.
7. Describe phytoremediation techniques for environmental cleaning. Explain advantages and limitations of each technique.
8. What is biodegradation? Explain the process of degradation of organic compounds.

****

MEVE-014: BIODIVERSITY CONSERVATION AND MANAGEMENT

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-014
Course Title	: Biodiversity Conservation and Management
Assignment Code	: MEVE-014/TMA-01/2023-2024
Coverage	: All Blocks

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.

---

1. Define Biodiversity. Differentiate between genetic diversity, species diversity and ecosystem diversity with suitable examples.
2. Describe biodiversity values. Explain interlinkages between biodiversity and ecosystem services.
3. Explain human impacts on biodiversity with suitable examples/case studies.
4. Give type of extinction and IUCN threatened category. Explain how biodiversity loss can be prevented.
5. What is indigenous knowledge? Describe the role of traditional knowledge in biodiversity conservation.
6. What is conservation Biology? Explain the criteria for protection of habitats and species.
7. Describe various national laws and legislations for conservation and management of biodiversity.
8. What is Endemism? Give an account of status of Indian biodiversity as meagbiodiversity center.

****

MEVE-015: DISASTER MANAGEMENT

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-015
Course Title	: Disaster Management
Assignment Code	: MEVE-015/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks. (5x20=100)

Please write all answers in your own words.

---

1. Explain the basic concepts in disaster management. What are the challenges of disasters?
2. Discuss disaster preparedness with suitable examples.
3. Explain risk and vulnerability with reference to natural Disasters.
4. Explain disaster medical management with suitable examples.
5. Explain risk and vulnerability assessment for hydrological hazards.
6. Discuss environmental health, hygiene and sanitation issues during disasters.
7. Describe the roles and responsibilities of difference agencies in disaster preparedness.
8. Discuss public health response and relief measures in disaster management.

****

****

MEVE-016: URBAN ENVIRONMENT

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-016
Course Title	: Urban Environment
Assignment Code	: MEVE-016/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks. **(**5x20=100)

Please write all answers in your own words.

1 Define urbanization. What are the causes of urbanization?

2 What are urban wetlands? Suggest methods to conserve them.

3 Elucidate the importance and process of urban planning.

4 How does population growth affect the growth of a city?

5 Write short notes :

i) Green infrastructure

ii) Urban Climatology

6 Elucidate the importance of energy conservation in designing smart cities.

7 Throw light on the initiatives of Government in sustainable urban development.

8 What is the Green transportation? Describe the obstacles in achieving green transportation in urban areas.

****

MEVE-017: ENVIRONMENT AND SOCIETY

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-017
Course Title	: Environment and Society
Assignment Code	: MEVE-017/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks. (5x20=100)

Please write all answers in your own words.

1. Describe the types and characteristics of society.
2. Explain the importance of culture and environment.
3. Discuss some of the major concepts and theories in the sub-discipline of Environmental Sociology.
4. Define environmentalism. Discuss the ideology of environmentalism.
5. Establish the relationship between Environment and Society.
6. Explain the Relevance of Survival of the Fittest and The Struggle for Existence in the current scenario.
7. How does modernization lead to environmental degradation? Explain.
8. Write a detailed note on the eco social movements highlighting their role in environment conservation.

****

MEVE-018: INSTRUMENTATION TECHNIQUES FOR ENVIRONMENTAL MONITORING

TUTOR MARKED ASSIGNMENT

Course Code	: MEVE-018
Course Title	: Instrumentation Techniques for Environmental Monitoring
Assignment Code	: MEVE-018/TMA-01/2023-2024
Coverage	: All Blocks

Maximum Marks 100

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks. (5x20=100)

Please write all answers in your own words.

1. Describe various methods employed in air sampling? Explain.
2. How does the TLC work? Explain its applications.
3. What are immunoassay techniques? Explain the working of enzyme immunoassays.
4. What are microarrays? Explain their applications.
5. Describe briefly about hybrid nanopores. What advantages do they have over other nanopore sequencing methods?
6. Explain the working mechanism of Rapid immunoassay. List out any two uses.
7. What is biosensor? Explain its working procedure.
8. What are the applications of biochemical and molecular biology techniques in environmental monitoring.

****

MEVE-019: ENVIRONMENTAL ISSUES

TUTOR MARKED ASSIGNMENT

Course Code : MEVE-019
Course Title : Environmental Issues
Assignment Code : MEVE-019/TMA-01/2023-2024
Coverage : All Blocks

Maximum Marks 100
(5x20=100)

Note: This assignment is based on the entire course.

Answer any five questions. All question carries equal marks. The marks for each question are indicated against it within brackets on the right-hand side.

Please write all answers in your own words.

---

1. Explain the formation and dissociation of Stratospheric Ozone.
2. Discuss the causes of soil pollution.
3. Discuss the causes of global climate change.
4. Explain the causes and management of fluoride pollution in India.
5. Explain the effects of agricultural intensification.
6. Discuss the challenges to sustainable development.
7. Explain the causes of marine pollution.
8. Write short notes on the following:
   a. Sustainable Buildings
   b. Crop residue burning

****