
PGCINDS- 2023

ASSIGNMENT BOOKLET

**POST GRADUATE DIPLOMA IN INDUSTRIAL SAFETY
(PGCINDS)**

Last date for submission:

30th April for January 2023 Session

**School of Engineering and Technology
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068**

Dear Student,

We advise you to go through your course material carefully and read all the section pertaining to assignments. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation which would consist of **one tutor-marked assignment** for each of MIS021, MIS022, MIS023 & MIS024 (Semester-1) of this course. You have to score a minimum of 40 marks out of 100 marks in each of the assignments. **Submit your assignments at your respective Regional 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:

.....

.....

COURSECODE:

COURSE TITLE:

ASSIGNMENT NO.:

STUDY CENTRE: **DATE:**.....

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

- 2) Use only full 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) Only hand written assignments acceptable. No typed assignments
- 6) While solving problems, clearly indicate the question number along with the part being solved. Be precise. Recheck your work before submitting it.

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: MIS-021
Course Title: Safety Philosophy and Principles of Accident Prevention
Assignment Code: MIS-021/TMA/2023
Maximum Marks: 100
Last Date of Submission: April 30, 2023

Note:

1. Attempt all questions. All questions carry equal marks.

Q.1	a) Explain in detail the evolution of Modern safety concept.	5
	b) Discuss in brief Human factor analysis and classification system process.	5
Q.2	a) What is the importance of documents on safe work practices?	5
	b) Explain different events in the manner of their occurrence.	5
Q.3	a) Explain the concept of fire triangle.	5
	b) What is the significance of safety cell in an Industry?	5
Q.4	Discuss the important principles of material handling.	10
Q.5	Explain the benefits of 5 'S' in an industry.	10
Q.6	a) Describe the safety factors to be maintained in crane operation.	5
	b) Discuss the three ages in safety thinking.	5
Q.7	a) Describe the safety culture in brief.	5
	b) Explain the advantages and importance of policies and procedures.	5
Q.8	a) Discuss the methods of safety training with their relative advantages and limitations.	5
	b) What is the importance of safety campaigns. Are they really useful. Justify your answer with suitable example.	5
Q.9	Discuss the Indian standard for measurement of Industrial accident in detail.	10
Q.10	Write short notes on the following: a) STAMP b) HAZOP	10

Assignment -2
(To be done **after** studying the course material)

Course Code: MIS-022
Course Title: Industrial Safety: Rules and Acts
Assignment Code: MIS-022/TMA/2023
Maximum Marks: 100
Last Date of Submission: April 30, 2023

Note:

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

Q.1	a) What is Industrial Safety? Describe the various functions of safety.	5
	b) What are the four pillars of safety design? Describe briefly?	5
Q.2	a) Discuss the role of an occupier in case of health and safety, particularly in hazardous factories.	5
	b) Explain the provisions made under factories act toward the dangerous operations, accidents and diseases.	5
Q.3	a) What is safety audit? What is its significance? How is it differ from financial audit?	5
	b) How do you classify Audit Systems? Explain each of them.	5
Q.4	a) What do you understand the term 'Liability'? How do you approach liability with legal sense?	5
	b) Briefly explain terms and conditions of agreement between plaintiff and defendants?	5
Q.5	a) Briefly explain the provisions for safety workers under the Factory Act-1948.	5
	b) Discuss the provisions regarding the welfare of woman employees under the Factory Act-1948.	5
Q.6	a) Explain the provisions of holidays and leaves as prescribed under the Factory Act - 1948.	5
	b) Discuss the specific responsibilities of the occupier in relation to hazardous process.	5
Q.7	a) Describe the basic amenities provided to the company to the Canteen Container?	5
	b) Describe the general penalty for Offences under section 92 to 106A.	5
Q.8	a) Discuss the computer related Offences notified in the Factory Act-1948.	5
	b) Describe the provisions related to health in Factory Act-1948.	5

Q.9	Write short notes of the following: a) Judgement b) Training on safety	10
Q.10	a) What is EMS? How is it related to safety engineering?	5
	b) Describe how workers are to be trained about their roles in safety and health programmes.	5

Assignment -3
(To be done **after** studying the course material)

Course Code: MIS-023
Course Title: Safety in Construction Industry
Assignment Code: MIS-023/TMA/2023
Maximum Marks: 100
Last Date of Submission: April 30, 2023

Note:

3. Attempt all questions. All questions carry equal marks.

Q.1	Describe the salient features of various accident causation theories?	10
Q.2	a) Describe various Personal Protective Equipment (PPE) and their uses.	5
	b) What efforts are made in India to ensure construction safety?	5
Q.3	a) Give an account of the training required in underground construction safety.	5
	b) Explain various precautionary measures taken while performing underground activity.	5
Q.4	a) Discuss various special air monitoring requirements in underground works.	5
	b) Discuss the common causes of ladder accidents.	5
Q.5	What is scaffolding. Discuss various types of scaffolding and the safety issues related to them.	10
Q.6	a) What is crane? Discuss various safety measures to be taken while operating a crane.	5
	b) Describe in brief - various equipment used for material handling applications and their utility.	5
Q.7	a) Explain the ergonomics of material handling. What precautions should be taken by workers while moving materials manually?	5
	b) What are the potential sources of air pollution at a construction site. Discuss some effective measure to control the air pollution at a construction site.	5
Q.8	a) Discuss the approach of waste management at a construction site.	5
	b) Discuss common causes of injury during mechanical demolition.	5
Q.9	a) Discuss the measures to control risks in demolition work of hazardous materials.	5

	b) Discuss the need of safety training. Describe various types of training.	5
Q.10	<p>Discuss a case study on accident in construction. The case should be different from those given in the study material. Discuss the following aspects of the accident:</p> <ol style="list-style-type: none">i. Cause of accidentii. Description of losses / damages in accidentiii. Remedial measures takeniv. Preventive measures that could have avoided the accident	10

Assignment -4
(To be done **after** studying the course material)

Course Code: MIS-024
Course Title: Mechanical and Electrical Safety Management
Assignment Code: MIS-024/TMA/2023
Maximum Marks: 100
Last Date of Submission: April 30, 2023

Note:

4. Attempt all questions. All questions carry equal marks.

Q.1	a) What do you understand about Job Safety Analysis?	5
	b) Identify a Job and enlist the hazards associated with it.	5
Q.2	a) Discuss the various responsibilities of an employee in ensuring safe guarding of machines.	5
	b) Define and list some principles of material handling. What are the advantages of Material handling?	5
Q.3	What are the risk factors associated with manual material handling? List out some methods to prevent back injury in Manual Material Handling?	10
Q.4	What is Mechanical Material Handling? How do they classified? Explain different risk factors in Mechanical Material Handling.	10
Q.5	What is meant by Working Practices? What are the main areas of concern in operation of shop floor for safe practices?	10
Q.6	a) What is wood manufacturing plant? What are the main precautions worker should follow in a wood plant?	5
	b) What is Lifting Operation? Why safety is important in Lifting Operation? What are the Do's and Dont's in mechanical lifting operations?	5
Q.7	a) What is UCIL and which material was causing the health hazard in UCIL accident?	5
	b) What are the major causes of failures in Vizag Gas Leak?.	5
Q.8	a) What do you understand about Electrical hazards? List out some common electrical hazards and also explain, how these risks can be mitigated.	5
	b) Briefly describe Safety precautions and Electrical Safety procedures for different electrical equipments.	5
Q.9	a) What sections of Electricity Act, 2003 explains repealing of Indian Electricity Act, 1956.	5
	b) State the sequece of operations to be carried out for working at High Voltage.	5

Q.10	a) What is First Aid? What are the procedures of First Aid to be followed for unconscious electric shock victims?	5
	b) What is the purpose of First Aid in Education and Training? Explain various training methods.	5