
PGCINDS- 2024

ASSIGNMENT BOOKLET

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

Last date for submission:

30th April for January 2024 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 a 4 cm margin on the left, top and bottom of your answer sheet.
- 4) Your answers should be precise.
- 5) Only hand written assignments are 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 situations 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/2024
Maximum Marks: 100
Last Date of Submission: April 30, 2024

Note:

- 1. Attempt all questions. All questions carry equal marks.**
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Q.1	Describe in detail the procedure of developing safety policy.	10
Q.2	How is safety audit conducted? Explain in detail.	10
Q.3	Describe the procedure for maintenance in confined space.	10
Q.4	Explain about maintenance and inspection of fire extinguishers in detail.	10
Q.5	What are the roles and responsibilities of safety officers, managers and line supervisors in the industries?	10
Q.6	Define loss control. How losses are categorized? Describe the various elements of loss control.	10
Q.7	Discuss the common practices to prevent accident in the work place.	10
Q.8	Explain the activity based approach for accident cost analysis.	10
Q.9	Explain the key risk areas in mechanical operations.	10
Q.10	Discuss the leading causes of fire in the industries.	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/2024
Maximum Marks: 100
Last Date of Submission: April 30, 2024

Note:

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

Q.1	a) Describe the various functions of safety in Industry.	5
	b) What is EMS? How is it related to safety Engineering?	5
Q.2	a) Describe a safety training model and explain its features.	5
	b) What are the general responsibilities of an occupier according to factories Act, 1948? Discuss.	5
Q.3	a) Describe a brief history of establishment of factories Act, 1948 in India.	5
	b) How do you classify audit system? Explain briefly?	5
Q.4	a) Discuss the provisions regarding the welfare of women employees under the factories Act 1948.	5
	b) Explain the provisions made under Factories Act toward the dangerous operations, accidents and diseases.	5
Q.5	a) What is Safety Audit? What is its significance? How is it different from financial audit.	5
	b) Briefly explain the terms and conditions of agreement between plaintiff and defendants.	5
Q.6	a) Discuss the role of an occupier in case of health and safety, particularly in hazardous factories.	5
	b) Explain about providing facility of first aid as a welfare measure in factory. List out the important items to be kept in the First Aid Box.	5
Q.7	a) What do you understand by the term Liability? How do you approach with legal sense?	5
	b) Describe the Power Presses Regulation 1965 of the factories.	5
Q.8	a) What are the contra version of offences under Factories Act 1948?	5
	b) Explain the provisions of holidays and leaves prescribed under the Factories Act, 1948.	5

Q.9	a) Explain various steps of risk assessment in brief.	5
	b) Write short notes of the following: i. Personal Protective Equipment ii. Land and Soil Protection	5
Q.10	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: i. Cause of accident ii. Description of losses / damages in accident iii. Remedial measures taken iv. Preventive measures that could have avoided the accident	10

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/2024
Maximum Marks: 100
Last Date of Submission: April 30, 2024

Note:

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

Q.1	a) Discuss the need for safety in the construction.	5
	b) Enlist the basic principles to prevent the accidents. Explain any two of these.	5
Q.2	a) What are the different types of training? Describe the essentials of a good training.	5
	b) Discuss the various factors to be considered prior to commencing roof demolition.	5
Q.3	a) Describe the waste management process at construction site.	5
	b) What is tunneling? What are different methods of tunneling?	5
Q.4	a) What precautions should be taken to mitigate the tunneling process hazards?	5
	b) What are the responsibilities of the employer regarding safety at the work site?	5
Q.5	a) What are cranes? Describe the different types of cranes in brief.	5
	b) What is ventilation? Discuss different types of ventilation.	5
Q.6	a) Enlist various accident causation theories and explain any one theory.	5
	b) Discuss the basic safety measures to be taken in excavation and underground works.	5
Q.7	a) Describe the safe practices to be followed during the use of ladders and pulleys.	5
	b) What measures may be taken to minimize soil erosion?	5
Q.8	a) Enlist the commonly used equipment for material handling applications? Describe any two in brief.	5
	b) Describe air monitoring requirements in underground works.	5

Q.9	a) Explain various steps of risk assessment in brief.	5
	b) Write short notes of the following: i. Personal Protective Equipment ii. Land and Soil Protection	5
Q.10	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: i. Cause of accident ii. Description of losses / damages in accident iii. Remedial measures taken iv. Preventive measures that could have avoid 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/2024
Maximum Marks: 100
Last Date of Submission: April 30, 2024

Note:

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

Q.1	a) Discuss the various responsibilities of an employee in ensuring safeguarding of machines.	5
	b) What are the different categories of hazardous action? Explain.	5
Q.2	Explain the principle of material handling in detail.	10
Q.3	Classified Mechanical Material Handling Equipment (MMHE) in detail.	10
Q.4	a) What is Safety Laws and role of Supervisor and training in the industrial safety?	5
	b) Explain the importance of safety in lifting equipment.	5
Q.5	a) Explain the rules to maintain the safety of workers working in the foundry	5
	b) What are the different factors causing accidents? Explain	5
Q.6	a) Explain the different electrical hazards in detail.	5
	b) How the electrical accidents can be avoided? Explain.	5
Q.7	a) Explain the Twenty One (21) Golden Safety Rules for safety of electrical equipment	5
	b) Explain the safety measure while working on megger and transformer.	5
Q.8	a) What precautions should be taken for working at height?	5
	b) What is the importance of earthing for any electrical equipment? Explain with example.	5
Q.9	a) What is electric shock? What are the different parameter on which electroshock depend?	5
	b) Explain Cardio-pulmonary Resuscitation (CPR) in detail.	5

Q.10	Discuss a case study on accident in any industry in terms of cause of accident, preventive measures, damages in accident and steps taken to avoid such cases.	10
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