

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

Term-End Examination

June, 2022

**MIS-024 : MECHANICAL AND ELECTRICAL SAFETY
MANAGEMENT**

Time : 3 hours

Maximum Marks : 70

Note : Attempt *six* questions in all. Question no. 1 is *compulsory*.

1. (A) Objective Type Questions *5×2=10*

(a) Industrial safety management is the branch of management which is concerned with _____ hazards from the industries.

(i) Reducing

(ii) Controlling

(iii) Eliminating

(iv) All of the above

- (b) Overturning in Forklift Trucks may occur due to _____ .
- (i) Driving at very high speed
 - (ii) Driving down the ramp with load in forward direction
 - (iii) Sudden braking
 - (iv) All of the above
- (c) What are the reasons for accidents in plants ?
- (i) Working without proper PPE
 - (ii) Overconfidence
 - (iii) Improper mental and physical condition of the worker
 - (iv) All of the above
- (d) Specially designed PPE for electrical work includes _____ insulating gloves, matting, blankets and covers.
- (i) Plastic
 - (ii) Steel
 - (iii) Rubber
 - (iv) Wood

- (e) The purpose of Cardiopulmonary Resuscitation (CPR) is to _____.
 - (i) Maintain oxygenated blood circulation
 - (ii) Stabilize body temperature to avoid hypothermia
 - (iii) Dislodge blood clots within the victim's lungs
 - (iv) Prevent infection resulting from open wounds

(B) Short Answer Type Questions *5×2=10*

- (a) What are the risk factors associated with manual material handling ?
- (b) Define safety in design.
- (c) Why is work permit system important in industrial safety norms ?
- (d) Write down the safety tips for working with circuit breakers.
- (e) Explain ABC of First Aid.

2. Enlist and explain the various types of machine safeguarding devices used in industry. *10*

3. (a) Explain different categories of risks associated with Mechanical Material Handling Equipment (MMHE). *5*

(b) What is meant by team lifting in material handling ? *5*

4. (a) List down the various Personal Protective Equipment (PPE) required at the time of welding process. Explain any one of them. 5
- (b) Discuss the main causes of accidents in any hazardous chemical manufacturing industry. 5
5. Discuss the primary causes of electrical hazards and how it can be avoided. 10
6. (a) What are the first aid treatment measures that need to be adopted in case of chemical poisoning? 5
- (b) What are the main precautions carried out at the time of work at high voltage lines? 5
7. Explain the role of earth leakage protective device and earthing in electrical safety concern. Explain with a schematic diagram. 10
8. Write short notes on any **two** of the following : $2 \times 5 = 10$
- (a) Personal Protective Equipment (PPE)
- (b) Safety Data Sheets (SDS)
- (c) Safety Measures while doing Megger Test
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