

**POST GRADUATE CERTIFICATE IN
INDUSTRIAL SAFETY/POST
GRADUATE DIPLOMA IN
INDUSTRIAL SAFETY (PGCINDS)
(PGCINDS/PGDINDS)
Term-End Examination
June, 2023**

**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 : 2 each
 - (i) For household wiring and small units, the following should be used for safety measures :
 - (a) MCB
 - (b) ACB
 - (c) OCB
 - (d) MCCB

- (ii) Which of the following colours is used for radiation hazards ?
- (a) Red
 - (b) Orange
 - (c) Green
 - (d) Purple
- (iii) MTBF stands for :
- (a) Maximum Time Between Failures
 - (b) Mean Time Between Failures
 - (c) Minimum Time Between Failures
 - (d) More Time Between Failures
- (iv) One of the main purposes of personal protective ground is to provide a impedance path for the short circuit.
- (a) High
 - (b) Low
 - (c) Smooth
 - (d) Adequate

- (v) Arc blast is caused by :
- (a) Poor contact within electrical wire splices
 - (b) Radio frequency emissions from high-power transmitters
 - (c) Discharge of high electrical current through open air
 - (d) Ionization of gases near high-voltage electrical conductors

(B) Short answer type questions : 2 each

- (i) What is Musculoskeletal disorders ?
 - (ii) Define Electrical hazards.
 - (iii) Write down the importance of fuse and grounding in electrical equipments.
 - (iv) What is the role of speed in use of Abrasive wheel ?
 - (v) Explain the reason of AC leakage current in electrical equipments.
2. (a) Enumerate the various criterias for safeguarding. 5

- (b) Write down the importance of proper training for workers before joining job works. 5
3. (a) Describe different actions that can be considered hazardous during job work in industries. 5
- (b) Discuss various risk factors associated with mechanical material handling activities and how it can be avoided. 5
4. (a) Write down basic safety measures guidelines while handling with the electrical equipments. 5
- (b) Differentiate fixed path and variable path equipments. 5
5. (a) What are safety laws ? Discuss the role of supervisor and training in industrial safety. 5
- (b) Enlist Do's and Don'ts in manual lifting operations. 5
6. (a) Discuss various electrical hazards at the workplace and how it can be avoided ? 5

- (b) What are the safety measures while measuring current, voltage and resistance ? 5
7. (a) Write down the various safety points while working with circuit breakers. 5
- (b) What is CPR ? What are the procedures of first aid to be followed for unconscious electric shock victims ? 5
8. Write down short notes on any *two* of the following : 5+5
- (a) Importance of Indian Electricity Rules
- (b) Earth leakage protective devices
- (c) Mechanical Material Handling Equipments (MMHE).