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**MIS-024**

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

**Term-End Examination**

**December, 2021**

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

*Time : 3 Hours*

*Maximum Marks : 70*

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

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1. (A) Objective type questions : 2 each
- (i) The objective of earthing or grounding is :
- (a) to provide as low resistance possible to ground.
- (b) to provide as high resistance possible to ground.
- (c) to provide a flow of positive, negative and zero sequence currents.
- (d) All of the above

- (ii) Full form of OSHA :
- (a) Occupational Safety and Health Administration
- (b) Outcome Services and Health Administration
- (c) Occupational Safety and Hazards Administration
- (d) Occupational Safety and Health Analysis
- (iii) The very first thing you should do if you are the first to witness or discover an accident on the job site is to :
- (a) Go and first find at least one co-worker to help.
- (b) Go to the scene and help the injured person(s).
- (c) Activate the emergency response system.
- (d) Contact the supervisor to report the incident.
- (iv) The secondary of a current transformer must never be ..... while energized.
- (a) Grounded
- (b) Opened
- (c) Examined
- (d) Shortened

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- (v) Decibel (db) is a unit used to measure :
- (a) Sound
  - (b) Light
  - (c) Frequency
  - (d) None of the above
- (B) Short answer type questions : 2 each
- (i) Write down the various areas to be safeguard in grinding in relevant industry.
  - (ii) Write down the advantages of safe material handling in industry.
  - (iii) Explain MTTR and MTBF.
  - (iv) Why are Antikick-back systems required in timber industry ?
  - (v) What is the role of circuit protective devices in electrical safety ?
2. (a) What precautions are needed to be taken while doing electrical arc welding ? 5
- (b) Discuss the need of job safety analysis. 5
3. (a) Write down general safety precautions during handling of hazardous chemicals. 5
- (b) What are general electrical safety precautions to be observed in industry ? 5

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4. (a) Write down the different approaches to improve safety culture in chemical industry. 5
- (b) What are the main precautions to be taken at the time of work at height ? 5
5. (a) Make a checklist for safe operation in fireworks manufacturing factory. 5
- (b) What are the various aspects to be considered with respect to the 'Permit to Work' ? 5
6. (a) Discuss various safety tips while working with circuit breakers. 5
- (b) What precautions are needed to be followed at the time of testing generator ? 5
7. What are the attributes of first aid provider ? Explain Cardio Pulmonary Resuscitation (CPR) process in brief. 10
8. Write short notes on any *two* of the following : 5+5
- (a) Principle of material handling
  - (b) Earth leakage protective device
  - (c) Hazard identification

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