POST GRADUATE CERTIFICATE IN INDUSTRIAL SAFETY/ P. G. DIPLOMA IN INDUSTRIAL SAFETY (PGCINDS/ PGDINDS)

Term-End Examination
December, 2024

MIS-024 : MECHANICAL AND ELECTRICAL SAFETY MANAGEMENT

Time: 3 Hours Maximum Marks: 70

Note: (i) Question No. 1 is compulsory.

- (ii) Attempt any **five** questions from the remaining questions (Q No. 2 to 8).
- 1. (A) Answer the following objective type questions: $5\times2=10$
 - (a) Hazard Identification mainly focuses on:
 - (i) Chemical source and concentration

- (ii) Chemical Exposure
- (iii) Chemical Analysis
- (iv) Chemical Pathway
- (b) The secondary coil of a current transformer must never be while energized.
 - (i) Grounded
 - (ii) Opened
 - (iii) Examined
 - (iv) Shortened
- (c) According to the IS code, the colour of earth wire is usually:
 - (i) Red
 - (ii) Green
 - (iii) Yellow
 - (iv) Black
- (d) The purpose of CPR is to:
 - (i) Stabilize body temperature to avoid hypothermia
 - (ii) Build upper body strength
 - (iii) Dislodge blood clots within the victim's lungs
 - (iv) Maintain oxygenated blood circulation

- (e) Specially designed PPE kit includes insulating gloves, matting, blankets and covers.
 - (i) Plastic
 - (ii) Steel
 - (iii) Rubber
 - (iv) Wood
- (B) Answer the short questions : $5\times2=10$
 - (i) Write down the importance of fuse and grounding in electrical equipments.
 - (ii) What are the risk factors associated with manual material handling?
 - (iii) Write down the various safety requirements in welding workshop.
 - (iv) Enlist the various Personal Protective Equipments (PPE) for flash workplace.
 - (v) Discuss the need of First Aid in Industry.
- Enlist and explain the various types of machine safeguarding devices used in Industry.
- 3. (a) Discuss various risk factors associated with manual handling activities. How can it be avoided?

- (b) Write down general safety precautions during handling of hazardous chemicals. 5
- 4. (a) Explain reliability and mean time between failures (MTBF) with suitable examples. 5
 - (b) Differentiate fixed path and variable path equipments. 5
- 5. (a) What are the main precautions carried out at the time of work at high voltage lines? 5
 - (b) Enlist do's and don'ts in manual lifting operations. 5
- 6. (a) What is CPR? What are the procedures of first aid to be followed for unconscious electric shock victims?
 - (b) Discuss various safety tips while working with circuit breakers. 5
- 7. Write short notes on any *two* of the following:

5+5

- (a) Earth leakage protective devices
- (b) Personal Protective Equipment (PPE)
- (c) Hazard Identification

