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MIS-023

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

Term-End Examination

December, 2024

MIS-023 : SAFETY IN CONSTRUCTION INDUSTRY

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) Choose the most appropriate answer from the given options : $5 \times 2 = 10$
- (a) According to Domino's theory, 88% of the accidents are caused by :
- (i) acts of God
 - (ii) unsafe conditions
 - (iii) unsafe acts of people
 - (iv) natural forces

- (b) A safety harness is an equipment which is generally used when a worker is :
- (i) Working in tunnel
 - (ii) Doing plastering work on a ground floor
 - (iii) Painting on outside wall of a building at height of 20 m
 - (iv) Excavating the foundation of a residential building.
- (c) NSC stands for :
- (i) National Safety Committee
 - (ii) National Safety Council
 - (iii) National Safety Commission
 - (iv) National Safety Code
- (d) While monitoring air at underground works, which gas is tested first ?
- (i) Oxygen
 - (ii) Methane
 - (iii) Hydrogen Sulphide
 - (iv) Chlorine
- (e) Which class of respiratory equipment is able to provide protection against bacteria and virus ?
- (i) Particle filter class P₁ only

(ii) Particle filter class P_2 only

(iii) Particle filter class P_3 only

(iv) All of the above

(B) Explain the following in brief : $2 \times 5 = 10$

(a) Stock ladder

(b) Safety net

(c) *Three* principal ways of demolition of structure

(d) Scaffolding

(e) Induced collapse

2. (a) Describe the secondary causes of accidents.

5

(b) Enlist the *seven* basic principles to prevent accidents. Explain any *two* of them.

5

3. (a) Describe the safe practices to be followed during the use of ladders.

5

(b) Describe various safety measures to be taken while using pulleys.

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4. (a) What is ventilation ? Discuss different types of ventilation.

5

(b) Describe accident prevention techniques in brief.

5

5. (a) Describe the essential features of a good training programme. 5
- (b) What are cranes ? Describe different types of crane in brief. 5
6. (a) Describe the waste management process at a construction site. 5
- (b) What is demolition ? What are the various methods of demolition and risks associated with them ? 5
7. (a) Explain the ergonomics of material handling. What precautions should be taken by workers while moving materials manually ? 5
- (b) Enlist various Personal Protective Equipment (PPE) and discuss the uses of any *five* of them in detail. 5
8. Write short notes on any *two* of the following : 2×5=10
- (a) Fire protection in underground works
- (b) Multiple causation theory
- (c) Roof work safety
- (d) Types of ladder

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