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**MIS-023**

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**M.SC. (INDUSTRIAL SAFETY (MSCIDS)/  
P.G. DIPLOMA IN INDUSTRIAL SAFETY  
(PGDINDS)/P.G. CERTIFICATE IN  
INDUSTRIAL SAFETY (PGCINDS)**

**Term-End Examination**

**June, 2024**

**MIS-023 : SAFETY IN CONSTRUCTION  
INDUSTRY**

*Time : 3 Hours*

*Maximum Marks : 70*

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**Note :** Question No. 1 is compulsory. Attempt any five more questions from the remaining questions no. 2 to 9.

1. (A) Choose the most appropriate answer from the given options.  $5 \times 2 = 10$
- (a) According to Domino accident causation theory.
- (i) 10% accidents are caused by unsafe acts of people.

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- (ii) 10% accidents are caused by unsafe action of people.
- (iii) 10% accidents are caused by acts of GOD.
- (iv) None of the above.
- (b) According to published result of OHSAS, fatalities in construction were caused by electrocution.
- (i) 39.9%
- (ii) 18.4%
- (iii) 1.4%
- (iv) 8.5%
- (c) It should be ensured that no combustible structure should be built or any flammable material stored within ..... of a shaft, tunnel mouth, hoisting-engine house or ventilation fan house.
- (i) 30 m
- (ii) 5 m
- (iii) 20 m
- (iv) 10 m

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- (d) Before lifting heavy loads, the following aspect has to be kept in mind.
- (i) Danger zone
  - (ii) Emergency zone
  - (iii) Power zone
  - (iv) Exclusion zone
- (e) Vibrating hand tools used in demolition can cause :
- (i) Hand-Arm Vibration (HAVs)
  - (ii) Whole Body Vibration (WBVs)
  - (iii) Leg-Foot Vibration (LFVs)
  - (iv) None of the above
- (B) Define following terms : 5×2=10
- (a) Risk Management
  - (b) Water Pollution
  - (c) Ergonomics
  - (d) Ventilation
  - (e) Shoring

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2. (a) Discuss in detail the project factors, which affected the safety in a project site. 7
- (b) Enlist the acts and regulations prevailing in India related to safety at work place 3.
3. (a) Describe emergency procedure for underground construction activities. 5
- (b) Discuss the hazards and risks which are involved in the excavation work. 5
4. (a) What is an scaffold ? Discuss different types of scaffold in brief. 5
- (b) Discuss in brief hazard prevention and safety measures during installation and operation of the hoist. 5
5. (a) Enlist equipments commonly used for material handling applications. 4
- (b) Write the precautions to be taken by workers while moving materials mechanically and manually. 6

6. (a) What is aim of environmental risk assessment ?  
Write the components of risk assessment. 5
- (b) Write the measures should be taken to minimise erosion. 5
7. (a) What factors to be considered prior to commencing roof demolition or dismantling ? 4
- (b) Write the hazards included in demolition works.  
Explain in detail. 6
8. (a) What is the need of safety training ? Write the purpose of identification of training needs. 5
- (b) What are the basic principles of learning by adults which are directly applicable to safety and health training programs ? 10
9. Describe any case study in an accident investigation during cement plant construction project, dismantling of Heavy Duty (HD) tower.