

**POST GRADUATE DIPLOMA IN  
INDUSTRIAL SAFETY, HEALTH AND  
ENVIRONMENT MANAGEMENT  
PGDM (ISHE)**

**Term-End Examination**

**December, 2010**

**MIS-003 : MACHINES AND MACHINE GUARDS**

*Time : 3 hours*

*Maximum Marks : 70*

*Note : (i) Attempt five questions in all. Question Nos. 1 & 2 are compulsory.*

*(ii) All questions carry equal marks.*

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1. Define *any four* of the following : 4x3½=14
- (a) Revolving Machinery.
  - (b) Trip Guards.
  - (c) Safety of Job.
  - (d) Sound.
  - (e) Ventilation.
2. Write short Notes on *any four* of the following : 4x3½=14
- (a) Fencing of Machines.
  - (b) Safety of the workers.
  - (c) Quality of safety management.
  - (d) Material handling.
  - (e) Accident on unguarded machines.

3. Explain the causes of accidents in a large manufacturing industry. 14
  4. Identify the sources of dangers in a welding shop and explain briefly the steps you would take for protection against such dangers. 14
  5. What are the general principles of machine guards for reducing the risk of injuries from work, involving machineries ? 14
  6. What are the different considerations made in the design of equipment and machines to reduce accidents ? 14
  7. Describe safety in lifting machines with specific mention of cranes. 14
  8. Explain the training needs and contents of modules for training the operator of Fork lift truck. 14
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