

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

**Term-End Examination**

**December, 2013**

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

*Time : 3 hours*

*Maximum Marks : 70*

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- Note :** (i) Attempt *five* questions in *all*.  
(ii) Question No.1 and 2 are *compulsory*.  
(iii) *All* questions carry *equal* marks.
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1. Define **any four** of the following : 4x3½=14
- (a) Revolving Machinery
  - (b) Safety of job
  - (c) Ventilation
  - (d) Ripping and cross cutting
  - (e) Machine guarding
2. Write short notes on **any four** of the following : 4x3½=14
- (a) Safety of the workers
  - (b) Quality of safety management
  - (c) Material handling
  - (d) Accident on unguarded machines
  - (e) Occupational diseases

3. Explain the causes of accident in a large manufacturing industry. 14
  4. Describe safety in lifting machines with specific mentioning of cranes. 14
  5. What are the different considerations made in the design of equipment and machine to reduce accidents ? 14
  6. (a) What are the selection criteria of fork lift truck operator ? 14  
(b) Explain the training needs and contents of module for training the fork lift truck operator.
  7. List down the various protective equipments for workers to avoid accidents. Describe in brief any five of them. 14
  8. Describe how robot can cause hazards to workers. Discuss precautions to be taken by workers while lifting loads in a place where robots are moving around. 14
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