

- Q.25 Safety features associated with design, construction and use of ramps, gangways and floors,  
 Q.26 Differentiate between hoist and EOT Crane.  
 Q.27 Discuss in detail about the precautions required to be observed for ensuring the safety of people working at height.  
 Q.28 Hazards in use of circular saw.  
 Q.29 Dangerous parts of machinery.  
 Q.30 Hazards associated with power presses.  
 Q.31 Safe storage of materials.  
 Q.32 Potential tripping and slipping hazards.

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any three questions out of four questions.  $(3 \times 10 = 30)$   
 Q.33 What are the various types of machines used in mechanical handling of material? Describe the statutory provisions in this regard.  
 Q.34 a) Discuss the safety codes for slingers of EOT cranes:-  
       b) State the safety features associated with design, construction and use of scaffolds of different types:-  
 Q.35 Discuss the safety code for slingers of E.O.T cranes.  
 Q.36 Describe the various types of portable power hand tools. Write in detail the hazards and necessary safety precautions in use of power hand tools.

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#### **1st Year / One Year Post Diploma in Industrial Safety Subject:- Safety Engineering - I**

Time : 3Hrs. M.M. : 100

#### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(10 \times 1 = 10)$

- Q.1 Which of these is NOT a power tool safety precaution?  
     a) Never carry a tool by the cord or hose.  
     b) Never yank the cord or the hose to disconnect it from the receptacle  
     c) Keep tools plugged in when not in use, before servicing, and when changing accessories such as blades, bits and cutters.  
     d) Keep cords and hoses away from heat, oil, and sharp edges  
 Q.2 Which of the following is NOT TRUE about powder-actuated tools?  
     a) If a powder-actuated tool misfires, you should try to fire it again immediately  
     b) They are so dangerous they can only be powered by specially trained employees.  
     c) They should never be loaded unless they are being used immediately  
     d) They require two separate motions for firing -- one to bring the tool into position and another to pull the trigger  
 Q.3 You should NOT use a wedge if it has:  
     a) Pointed head                   b) Triangular head  
     c) Mushroomed head             d) Flat head

- Q.4 How many points of contact should you maintain with a ladder at all times?  
a) At least two      b) At least three  
c) One      d) Four
- Q.5 While carrying a load downhill on a forklift, you should:  
a) Zig-Zag down the hill slowly  
b) Drive forward with the fork pointing downhill  
c) Drive in reverse with the fork pointing uphill  
d) None of the above
- Q.6 The main advantage of fixed guard is  
a) they are comparatively simpler in design, construction and use  
b) requires skilled maintenance  
c) adaptable to variation in stock  
d) none of the above
- Q.7 \_\_\_\_\_ are vertical members of the framework and they are either supported on the ground or embedded in to the ground.  
a) Ledger      b) Standards  
c) Putlog      d) Rakers
- Q.8 In cross or regular lay ropes  
a) wires in two adjacent strands are twisted in the opposite direction  
b) wires are not twisted  
c) the direction of twist of wires in strands is opposite to the direction of twist of strands  
d) direction of twist of wires and strands are same
- Q.9 Nip points are  
a) pinch points in moving machine parts  
b) stationary parts of machines  
c) not a source of hazard  
d) none of the above

- Q.10 Section 25 of the Factories Act, 1948 contains provisions on \_\_\_\_\_  
a) Employment of young person's on dangerous machines  
b) Striking gears and devices for cutting off power  
c) Self-acting machines  
d) Work on or near machinery in motion
- SECTION-B**
- Note:** Objective type questions. Attempt any ten questions out of twelve questions.  $(10 \times 2 = 20)$
- Q.11 What are the principle of machine safe guard.  
Q.12 What are the statutory provision of the safety guard of machine.  
Q.13 What is kick back in respect of circular saw?  
Q.14 Types of scaffolds  
Q.15 Bird caging  
Q.16 Natural fiber ropes  
Q.17 Write down the difference between lifting machine and lifting tackles.  
Q.18 What is the periodicity of testing of lifting machine and lifting tackles?  
Q.19 Toe boards  
Q.20 Fragile roof  
Q.21 Signaling in respect of the crane  
Q.22 Name two safety devices to be used for the belt conveyer
- SECTION-C**
- Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $(8 \times 5 = 40)$
- Q.23 The competent person under the Factories Act.  
Q.24 What do you mean by HAVS? Write in detail the causes for developing HAVS and Suggest remedial measures to prevent the same.