

undesirable effect of high noise on workers employed in high noise areas.

- Q.28 Write a short note explaining Heat Stroke and its preventive measures.
- Q.29 Explain the engineering control measure to mitigate and control high vibration.
- Q.30 Give the classification of Fire and explain each type with suitable examples.
- Q.31 Describe the importance of good ventilation in an industrial building. Explain with the help of diagram local exhaust ventilation system.
- Q.32 Elaborate on Heat Balance Equation and its significance.
- Q.33 Explain the various types of lighting with suitable examples and sketches.
- Q.34 Define the following:
- a) Smoke
  - b) Fumes
  - c) Mist
  - d) Vapour
  - e) Gas

- Q.35 Explain in short the first Aid Measure to be given in case of electrical shock

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Write a note explaining the working and application of various electrical safety devices used in electrical circuits to ensure electrical safety.
- Q.37 Enlist the important factors to be considered during Plant Layout as per the relevant IS code of safe practice to ensure Industrial Safety.
- Q.38 Explain the important factors to be accounted while plant layout.

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Roll No. ....

RLI-095403

**1st Year / Branch: One Year Post Diploma Course  
in Industrial Safety  
Subject:- Safety Engineering - II**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The successful hearing conservation programme must include the coordination and integration of:
- a) Physical evaluation of the noise exposure (noise measurement) and noise reduction
  - b) Control of noise exposure (provision of personal ear protection)
  - c) Medical evaluation of hearing of exposed personnel (audiometric test)
  - d) All of the above
- Q.2 Black globe thermometer measures:
- a) Air temperature
  - b) Radiant heat
  - c) Humidity
  - d) Light
- Q.3 The unit of illumination is:
- a) Lux
  - b) Tesla
  - c) dBA
  - d) Hz
- Q.4 White finger is caused due to exposure of:
- a) Segmental/hand-arm vibration
  - b) Whole body vibration
  - c) Bleaching chemicals exposure
  - d) Metals smelting

- Q.5** Noise induced hearing loss (NIHL) is due to:  
 a) Blockage in the outer ear  
 b) Rupture of the tympanic membrane  
 c) Ossicle fixation and breakage  
 d) Hair cell damage in cochlea of inner ear
- Q.6** What is class 'E' fire?  
 a) When fire in flammable liquid like petrol and diesel  
 b) When fire in ordinary combustible materials such as wood and paper  
 c) When fire involving electrical equipment  
 d) When fire Involving metals
- Q.7** Severity of electric shock depends on all except:  
 a) Type of electrical current and its voltage  
 b) Path through which it is passing through the body  
 c) Duration of exposure  
 d) Resistance at the point of exit
- Q.8** All are engineering measures to prevent occupational hazards except:  
 a) Local exhaust ventilation  
 b) Personal protection devices  
 c) Pre-placement medical examination  
 d) Dust control
- Q.9** Code of practice on occupational safety and health audit is:  
 a) IS-14489                          b) IS-3696  
 c) IS-3786                            d) All of the above
- Q.10** Two machines are making a sound level of 86 dB and 88 dB, Simultaneously. The cumulative noise level would be:  
 a) 89 dB                              b) 90 dB  
 c) 87 dB                              d) 96 dB

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 What do you mean by Hierarchy of Controls in risk management?
- Q.12 Enlist typical accidents which may be caused due to poor housekeeping.
- Q.13 Give Full form of WBGT index.
- Q.14 Explain the body temperature regulation mechanism in humans.
- Q.15 What is the difference between Sound and Noise?
- Q.16 Give full form of HIRA.
- Q.17 Draw a sketch along with labelling to explain "Fire Tetrahedron"
- Q.18 Define Stroboscopic effect.
- Q.19 Specify the importance of Earthing while using electrical power.
- Q.20 Write a note on ill-effect of excessive vibration on worker.

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain Engineering Control and its application in controlling physical hazards like illumination, noise, and heat stress.
- Q.22 Elaborate the concept of 5-S for good housekeeping to ensure safety at workplace.
- Q.23 What is Glare? Explain the undesirable effect of glare and its control measures.
- Q.24 Differentiate between On-site and Off-site Emergency Plan.
- Q.25 Explain the Raynaud's Syndrome along with preventive measures to avoid it.
- Q.26 Explain the working of a "Electro-Static Precipitator" and its applications.
- Q.27 Write a short note on hearing conservation program to avoid