

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.

No. of Printed Pages : 4

RLI-095403

Roll No. ....

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

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