

- Q.16 LD<sub>50</sub>
- Q.17 Dispersion modeling
- Q.18 Hazards of ammonia
- Q.19 Explosive range of LPG
- Q.20 Eye wash fountain
- Q.21 Colour coding of pipe lines
- Q.22 Safety Data sheets in MSIHC Rules 1989

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x5=40)

- Q.23 Runaway reactions.
- Q.24 Unconfined vapour cloud explosion.
- Q.25 Safety features of floating roof tanks.
- Q.26 Safety features of fixed roof tanks for Flammable liquids.
- Q.27 Risk scenario on leakage of LPG from liquid phase.
- Q.28 Classification of dangerous materials.
- Q.29 Pressure vacuum valve.
- Q.30 Differentiate HAZOP and HAZID
- Q.31 Safety belt and life line.
- Q.32 Unconfined vapour cloud explosion.

### SECTION-D

**Note:** Long answer type questions. Attempt any three questions out of four questions. (3x10=30)

- Q.33 Explain Onsite Emergency Planning.
- Q.34 Explain chronic and systemic effects of hazardous chemicals on workers.
- Q.35 Elaborate on Preparation of Safety report.
- Q.36 Explain criteria for the plant to be MAH Units.

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Roll No. ....

## 1st Year / One Year Post Diploma in Industrial Safety Subject:- Safety in Chemical Industry

Time : 3Hrs.

M.M. : 100

### SECTION-A

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

- Q.1 The tendency of a flammable liquid to vaporize is indicated by its \_\_\_\_\_.  
a) Ignition temperature b) Flash point  
c) Flammable range d) Convection index
- Q.2 Which of the following can be performed with considerable certainty on time to initiate effective protective actions?  
a) Assessing the current and projected status of the core.  
b) Predicting the occurrence, type and timing of the release.  
c) Predicting the source term, including the radionuclide release fractions, the energy of the release and its duration.  
d) Predicting the atmospheric dispersion, ground contamination and resulting exposure pathways for individuals.
- Q.3 What is the main purpose of hazard assessment?  
a) To provide essential information for a probability estimation of accidents and their potential consequences.

- b) To describe design basis accidents and design extension conditions.
  - c) To identify where and for whom emergency response actions may be warranted and what actions are most effective in mitigating the consequences of an emergency.
  - d) None of the above
- Q.4 What is the harmful effect of sulfur in a fuel?
- a) It causes excessive smoking and soot at low firing rates.
  - b) It doesn't readily burn when combined with oxygen
  - c) It clogs fuel oil strainers more often.
  - d) It forms a corrosive acid when mixed with water or water vapor.
- Q.5 Which activities lead to inadvertent ingestion?
- a) Eating and drinking with contaminated hands.
  - b) Showering and washing face.
  - c) Outdoor activities, either for work or recreation
  - d) Smoking in contaminated environment
- Q.6 What is personal contamination?
- a) People getting dirty when carrying out protective actions.
  - b) A procedure to remove radioactive material on people's clothes and skin.
  - c) Depositing of radioactive material on people's clothes and skin.
  - d) None of the above
- Q.7 What is a triage?
- a) Management of response personnel at a scene

- b) Treatment of contaminated patients
  - c) Management of patients at the scene
  - d) Treatment of overexposed patients.
- Q.8 Which of the following statements describes the relationship between viscosity and specific gravity?
- a) Liquids with different viscosities will always have the same specific gravity.
  - b) Liquids with different viscosities will never have the same specific gravity.
  - c) Viscosity and specific gravity are directly proportional.
  - d) Viscosity and specific gravity are not related in that one does not define or limit the other.
- Q.9 Which of the following is not a chemical-related health hazard?
- a) Carcinogenicity      b) Reactivity
  - c) Corrosivity          d) Toxicity
- Q.10 The purpose of CPR is to:
- a) Maintain oxygenated blood circulation.
  - b) Stabilize body temperature to avoid hypothermia
  - c) Build upper body strength
  - d) Dislodge blood clots within the victims's lungs.

### SECTION-B

**Note:** Very short answer type questions. Attempt any ten questions out of twelve questions. (10x2=20)

- Q.11 Incompatible chemicals
- Q.12 UN Classification of hazardous materials
- Q.13 Explosive range
- Q.14 Flash & Fire Point
- Q.15 On Site emergency plan