

ID: 0523

Branch: Chemical Engineering

Semester: 2nd

Subject Name: Safety and Chemical Hazards

Time Allowed: 3Hrs

M.M.: 100

Section-A

Note: Multi-type choice questions. All questions are compulsory.

10X1=10

- Q.1 Which gas is leaked in Bhopal gas tragedy?
a) Mustard gas b) Methyl Isocyanide
c) Chlorine d) Hydrogen

Q.2 Which of the following injury is common for cutter operator?
a) Electric Shock b) Burns due to flame
c) Bleeding due to cut d) None of these

Q.3 Which extinguisher is used on liquid fire?
a) Class A b) Class B
c) Class C d) Class D

Q.4 Which is a cause of electric fire?
a) Loose connections b) Short circuits
c) Over loading on wires d) All of these

Q.5 What type of maintenance is most important?
a) Shutdown maintenance b) Corrective maintenance
c) Breakdown maintenance d) Preventive maintenance

Q.6 What type of lubricant is grease?
a) Solid b) Liquid
c) gaseous d) Semi solid

Q.7 What is the role of Class B extinguisher?
a) Used on flammable liquid b) Used on electric fire
c) Used on ordinary combustion such as paper and wood
d) None of these

Q.8 The color coding of CO₂ gas cylinder is
a) Black and yellow b) Black and white
c) Brown d) Black and grey

Q.9 While transporting hazardous wastes, you should?
a) Carry a uniform hazardous waste manifest
b) No paper required c) It is open to transport
d) None of these

Q.10 Which is not a type of maintenance?
a) Timely maintenance b) Corrective maintenance
c) Breakdown maintenance d) Preventive maintenance

Section-B

Note: Objective type questions. All questions are compulsory.

10X1=10

- Q.11 Define Hazards.
- Q.12 Write a short note on fire fighting.
- Q.13 Name any two inflammable liquids.
- Q.14 Define the term combustion.
- Q.15 Expand PPM
- Q.16 Name any two toxic gases.
- Q.17 What is the importance of Helmets in industry?
- Q.18 Define Threshold limits value.
- Q.19 Write any one effect of LEAD on human body.
- Q.20 Write any one safety measure while operating a conveyor.

Section-C

Note: Short Answer type questions. Attempt any twelve questions out of fifteen questions. **12X5=60**

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- Q.21 What do you mean by industrial safety discuss its importance?

- Q.22 Write about the cause of accidents due to lack of safety in industry.
- Q.23 How do you classify hazardous substances?
- Q.24 What are breathing apparatus discuss anyone in detail?
- Q.25 Write about the control measures of hazardous substances in industry.
- Q.26 What are the major objectives of industrial safety acts?
- Q.27 Explain the working of fire extinguisher suitable for class A fire.
- Q.28 Differentiate between dry powder fire extinguisher and carbon dioxide fire extinguisher.
- Q.29 Explain the statutory benefits applicable for labour in industry.
- Q.30 Discuss in brief about the factors which influence the effect of toxic substances on human body.
- Q.31 Write a short note on 'measurement of accidents' in industries.
- Q.32 Explain the cause and effect of noise and vibration hazards.
- Q.33 What is plant layout explain some of the safety considerations in plant layout.
- Q.34 Explain the principles of safe working and designing in an industry.
- Q.35 Write a short note on any two of the following:
- i) Inflammable liquids
 - ii) Frequency rate
 - iii) Hazardous Gases

Section-D

Note: Long Answer type questions. Attempt any two questions out of three questions.
10X2=20

- Q.36 Explain the term "Fire Triangle" with the help of need diagram.
- Q.37 Explain the working of fire extinguisher with the help of labeled diagram.
- Q.38 Write in detail about:
- i) Protective suits
 - ii) Boots