# Assignment

## Industrial Safety Engineering

1. Elaborately explain fire, types of fire and extinguishing agent for each type.
2. Explain the term “Fire extinguisher”? Discuss in brief its working principle and safety signs.
3. Elaborately explain the PPE used and the safety instructions followed while working with a lathe Machine.
4. Report the safety instructions followed while working in a welding shop, considering fire, mechanical and personal safety.
5. Define “unsafe act” and “unsafe condition” with one example each.
6. State the principle of fire prevention through elimination of ignition sources
7. Mention two major mechanical safety guards used in workshop equipment
8. State two basic precautions to avoid electrical shock hazards.
9. Indicate two preventive measures for safe handling of acids and alkalis.
10. Define hazard and explain its difference from risk.
11. State the principle of a fire triangle and mention any two methods to break it.
12. List any four safety precautions to follow while operating mechanical tools.
13. Mention two electrical PPE used to prevent shock and burns.
14. State the importance of chemical labeling under safety norms.
15. Classify industrial fires according to their sources and provide suitable extinguishing agents.
16. Explain the working and maintenance of portable fire extinguishers.
17. Analyze the steps involved in fire prevention and loss control in industrial plants.
18. Explain the safety precautions required while performing welding and forging operations.
19. Illustrate safety procedures for handling compressed gas cylinders and corrosive materials.
20. Discuss the importance of Personal Protective Equipment (PPE) and safety guards in machine workshops.
21. Describe various types of electrical hazards encountered in industry and the protection techniques to minimize them.
22. Define the following terms as related to Industrial safety: Slip, Trip and Fall& how it can be prevented.
23. Explain safety precautions for handling portable electrical tools in industrial environments.
24. Discuss standard procedures for domestic and industrial electrical safety management.
25. Describe the process of hazardous waste disposal and its significance in chemical industries.
26. Summarize the essential safety checklist for LPG installation and use of CNG.
27. Discuss the importance and steps involved in conducting a safety audit.
28. Describe the role of eye washers and showers in chemical safety management.
29. Explain the major causes of ladder and scaffolding accidents in industries.
30. Discuss methods for safe material handling and storage in workshops.
31. Define the significance of signage in safety and discuss the meaning of different color code for safety signage.

32. Explain the safety precautions required while performing the works in lathe and grinding.
33. Compare different classes of fire with their specific extinguishing agents.
34. Explain the operating mechanism of dry chemical powder and $CO_2$ extinguishers.
35. Explain the safe working procedures while using power saws and drilling machines.
36. Discuss the use and limitations of personal protective equipment in machining operations.
37. Discuss common electrical accidents and outline the steps to prevent them
38. Explain the protective role of circuit breakers and earthing systems
39. What is the function of fuse and how it is related to electrical safety?
40. Briefly describe about the common electrical hazard
41. Discuss the need for labeling and segregation of chemicals in industrial plants.
42. Explain the purpose and procedure for using emergency showers and eyewash stations.
43. What are the safety precaution are followed in casting?
44. Briefly discuss the safety climbing guidelines while using ladders.
45. Explain the various risks involved in working at height using Scaffolds.
46. What is meant by industrial accident?
47. What are the objectives of industrial safety?
48. What are the different sources of fuel?
49. Classify the different classes of fire.
50. Report the safety instructions followed while working in a welding shop, considering fire, mechanical and personal safety.

**Note: Submit it on or before 24/11/2025**