

One Year Post Diploma in Industrial Safety**Branch: Industrial Safety****Subject: Appraisal Analysis Inspection and Control Procedures****Time : 3 Hrs.****MM: 100****Section – A****Note: Multiple Choice questions. All questions are compulsory.****(10x1=10)**

Q1. The index used for comparing safety performance to two similar industries is:

- a) Frequency rate
- b) Safe-T score
- c) Frequency severity indicator
- d) Severity rate

Q2. Process layout is used for:

- a) Repetitive processing
- b) Intermittent processing
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q3. Permit to work system is an _____

- a) Administrative control
- b) Engineering control
- c) Both (a) and (b)
- d) None of the above

Q4. Product layout is preferably used for:

- a) Repetitive processing
- b) Continuous processing
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q5. Which is not a guide word for HAZOP?

- a) Reverse
- b) No
- c) More
- d) Which

Q6. Which of the following is not a hazard identification technique?

- a) HAZOP
- b) JSA
- c) Event Tree Analysis
- d) Safety audit

Q7. An accident investigation should attempt to locate _____ of accident

- a) Direct cause
- b) Root cause
- c) None of the above
- d) Both (a) and (b)

Q8. The Indian standard available if measuring safety performance is

- a) IS 4569
- b) IS 4253
- c) IS 14489
- d) IS 3786

Q9. As per the Factories Act, 1948, an accident is reportable if the worker is unfit for work for a period of _____ hours or more

- a) 24 hours
- b) 72 hours
- c) 48 hours
- d) 50 hours

10. As per the scheduled charges for disabilities the equivalent man days lost in case of death is _____ MDL.

- a) 3000
- b) 6000
- c) 5000
- d) 4000

Section – B**Note: Objective type questions. All questions are compulsory.****(10x2=20)**

Q11 Frequency rate and severity rate are defined under IS _____

- Q12 Risk is probability of exposure to hazard. (True/ False)
- Q13 As per Factories Act, 1948, an accident is reportable in case the worker is unfit for 24 hours. (True/ False)
- Q14 In job safety analysis the job is broken down into various steps sequentially and hazards identified in each step. (True/ False)
- Q15 Event Tree Analysis ends at _____
- Q16 In partial total disablement the person is partially incapacitated from carrying out any gainful occupation. (True/ False)
- Q17 Full form of BLEVE is _____
- Q18 Colour code of pipelines helps in identification of the fluids being carried inside the pipe. (True/ False)
- Q19 "As well as" is a HAZOP guide word. (True/ False)
- Q20 The time duration during which the safety equipment cannot respond is known as fractional dead time. (True/ False)

Section – C

Note: Short Answer type questions. Attempt any twelve questions out of fifteen questions.

(12x5=60)

- Q21 Explain Time charges scheduled in employees' compensation Act.
- Q22 Explain safety tag system.
- Q23 Explain in brief the critical incidence technique.
- Q24 Write a short note on Bhopal disaster.
- Q25 Explain the concept of system safety.
- Q26 Write a short note on measurement of safety performance.
- Q27 Enumerate the task of a competent person for confined space permit.
- Q28 What is the system of accident reporting under the Factories Act, 1948?
- Q29 What is the manufacturer's responsibility for products and substances for use in factories registered under the Factories Act, 1948?
- Q30 Prepare a work permit for arc welding operation.
- Q31 What is individual risk?
- Q32 What is Safe-T score?
- Q33 Define frequency rate and write down its formula.
- Q34 What are the four steps of JSA?
- Q35 Write a brief note on frequency severity indicator.

Section – D

Note: Long Answer type questions. Attempt any two questions out of three questions.

(2x10=20)

- Q36 Draw up a check list for storage and handling of bulk ammonia.
- Q37 Define the hierarchy of controls. Illustrate and justify the position of use of personal protective equipment in the hierarchy.
- Q38 Enumerate the conditions which demand for a need for permit to work system. Explain different types of permits. Design a permit format for confined space working.