

- Q.29 Describe the various protection methods with sketches used in excavation works?
- Q.30 Differentiate between Fall Arrest Systems and Fall Restraint Systems along with suitable examples.
- Q.31 What do you mean by full body harness (FBH)? Explain with the help of diagram the minimum height required for arresting a fall effectively using FBH (Height of the worker, lifeline height above working platform etc. may be assumed and mentioned clearly)
- Full Body Harness with shock absorber
 - Full Body Harness without shock absorber
- Q.32 Explain various safety devices used in telescopic cranes used for lifting operations.
- Q.33 What do you mean by electrical safety devices? What is the advantage of using RCCB over ELCB?
- Q.34 Describe the major considerations made during preparation of onsite emergency plan for a construction site.
- Q.35 Write a note on handling and storage of explosives at construction site.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain the various types of Scaffolding (with diagram) used at construction sites. List the safety provisions to be considered during erection of scaffolding at construction site.
- Q.37 What are the occupational diseases? Explain the cause, symptoms, and preventions for any two of the following:
a) Silicosis b) Asbestosis c) Dermatitis
- Q.38 Explain the welfare provisions for workers prescribed under BOCW Central Rules, 1998 framed under BOCW (RE&CS), 1996.

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Roll No.

**1st year / Branch : One Year Post
Diploma Course in Industrial Safety
Subject:- Safety in Construction Industries**

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Safe working load of any cranes depends on _____.
a) Boom Length
b) Condition of ground
c) Inclination of boom to the vertical.
d) All above
- Q.2 What is flash point?
a) Lowest temperature of flammable liquid at which it gives off enough vapour to form an ignitable mixture with air
b) Lowest temperature at which a vapour above a liquid will continue to burn once ignited
c) Both (a) and (b)
d) None of the above
- Q.3 What is the permissible limit of exposure-time weighted exposure (TWA 8hrs) for hydrogen sulphide?
a) 10 PPM b) 5 PPM
c) 15 PPM d) None of the above
- Q.4 The type of water retaining structures to facilitate underground construction, which are temporary in nature and do not become part of final structure is called
a) Cofferdams b) Caisson
c) Piling d) Pedestal
- Q.5 Electrical Protection Device used to prevent overloading in electrical circuit is.

- a) MCCB b) ELCB
c) RCCB d) None of the above
- Q.6 Which one of the following is a part of scaffold:
a) Ledger b) Bracings
c) Lifeline d) Standards
- Q.7 The Height to Base Width ratio for ensuring independent scaffold stability is recommended as per IS code is.
a) 4:1 b) 3:1
c) 5:1 d) 6:1
- Q.8 As per BOCW central Rules 1998 the employer shall ensure at a construction site of a building or other construction work that all portable electrical hand tools and inspection lamp used underground or in a confined space at an excavation or tunnelling work are operated at a voltage not exceeding _____ volts.
a) 30 b) 20
c) 24 d) 35
- Q.9 The use of pneumatic tools and chain saw cause:
a) Whole body vibration
b) Hand-arm vibration
c) Both (a) and (b)
d) None of the above
- Q.10 While providing ladder for exit from trench the ladder should project at least _____ m from top level of excavated trench as per IS 3674?
a) 2 b) 1.25
c) 0.75 d) 1

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What do you mean by loss time injury (LTI)?
Q.12 What do you mean by strutting in case of excavation works?
Q.13 What do you mean by confined space work?
Q.14 What do you mean by well sinking?

- Q.15 What do you mean by horizontal and vertical lifelines in case of working at height jobs?
Q.16 Give full form of RCCB?
Q.17 What do you mean by LOTO procedure in context of electrical works?
Q.18 What do you mean Amputation?
Q.19 What do you mean by root cause analysis in accident investigation?
Q.20 What is the function of an anemometer in case of a crane operation?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write a short note on safety provisions to be taken during drilling and blasting operations at a construction site.
Q.22 List various types of excavation equipment used at construction sites with their use case. Describe the safety provisions to be considered while using these excavation equipment.
Q.23 What do you mean by PPES? List and describe various PPES used during Working at Height Jobs.
Q.24 Write a short note on salient features of Safety Committee stipulated under BOCW Act, 1996 and BOCW Central Rules, 1998?
Q.25 What are the various type of ladders used in construction works? Describe the various safety precautions to be followed while using portable ladder.
Q.26 Write a note on safety provisions to be followed while handling and storage of explosives at construction sites
Q.27 Write a note on safety provisions to be followed while carrying out scaffolding works at a construction sites.
Q.28 Explain the safety precautions to be followed during dismantling of existing double story RCC building at a construction site.