

Section -A**Note: Multiple Choice questions. All questions are compulsory.****10x1=10**

Q.1 What is the quantitative definition of Risk due to a Hazard

- a) Probability / Severity
- b) Probability + Severity
- c) Probability X Severity
- d) Probability - Severity

Q.2 The zone of demolition while dismantling of a building of height H is

- a) $1.5 \times H$
- b) $0.5 \times H$
- c) $2.5 \times H$
- d) $3.5 \times H$

Q.3 While climbing the ladder by workers, how many point-contacts will be required?

- a) No Point Required
- b) Three Point Required
- c) Two Point Required
- d) Four Point Required

Q.4 The IS Standard for "Demolition of buildings-Code of Safety" is

- a) IS 4130
- b) IS 3764
- c) IS 3696
- d) IS 4153

Q.5 The gas responsible for decompression sickness is:

- a) Nitrogen
- b) Oxygen
- c) Helium
- d) Argon

Q.6 Which one of the following is not a part of scaffold?

- a) Ledger
- b) Bracings
- c) Lifeline
- d) Standards

Q.7 The following pictogram represents



- a) Oxidative Hazard
- b) Fire Hazard
- c) Radioactive Hazard
- d) High Noise Hazard

Q.8 Working at height permit is required for works at heights greater than ____ as per IS 17893

- a) 1.5 m
- b) 1.8 m
- c) 2 m
- d) 2.5 m

Q.9 Name the PPE shown below used during Working at heights.



- a) Safety Belt
- b) Vertical Lifeline
- c) Full Body Harness
- d) Horizontal Lifeline

Q.10 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 lamps 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

Section-B

Note: Objective type questions. All questions are compulsory.

10x1=10

- Q.11 List down the hazards linked to open excavation at a construction sites.
- Q.12 List down safety precaution to be taken while carrying out asphalting works.
- Q.13 What is the function of an outrigger in case of a telescopic crane?
- Q.14 What do you mean by pneumatic caisson?
- Q.15 What should be the composition of Safety Committee as per provisions of BOCW (RE&CS) Act, 1996 and rules framed there under?
- Q.16 What do you mean by a Flame proof equipment?
- Q.17 What do you mean by shoring and strutting in case of excavation works?
- Q.18 What do you mean by "Zone of Demolition" defined as per BOCW Central Rules, 1998?
- Q.19 List down various methods used in demolition works.
- Q.20 What is meant by decompression sickness?

Section -C

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

12x5=60

- Q.21 Describe the procedure of HIRA in case of a construction site with the help of a example.
- Q.22 Describe the stepwise procedure for carrying out an accident investigation at a construction site.
- Q.23 Differentiate between Caissons and Cofferdams.
- Q.24 Write a short note on salient features of Health & Safety policy stipulated under BOCW Act, 1996 and BOCW Central Rules, 1998?
- Q.25 Describe the various protection methods with sketches used in excavation works?
- Q.26 Write a note on safety provisions to be followed while storage and handling of explosives.
- Q.27 Write a note on safety provisions to be followed while carrying out piling works at a construction sites.
- Q.28 Why do we require shoring?
- Q.29 What do you understand by ERDMP (Emergency Response and Disaster Management Plan)? Differentiate between onsite and offsite emergencies.
- Q.30 What is meant by Hierocracy of controls? List down the various PPEs and their uses frequently used in construction activities.

- Q.31 List and explain the various methods of demolition of RCC structures?
- Q.32 Describe the applicability and procedure to be followed for issue of an excavation permit as per IS 17893.
- Q.33 Describe the safety provision to be taken while carrying out works related to pneumatic caisson.
- Q.34 What do you mean by ELCB and RCCB? Elaborate on the working principle with sketches for both of these devices.
- Q.35 List various types of portable fire extinguishers and their uses.

Section-D

Note: Long answer questions. Attempt any two questions out of three questions. 2x10=20

- Q.36 Briefly narrate the major safety provisions related to tunneling works as per the Building and other Construction Workers (Regulation of Employment and Conditions of service) Act, 1996 and rules framed there under?
- Q.37 Sketch a diagram for a typical scaffolding and label its various components. Prepare a safety checklist for a scaffolding erected for carrying out painting works of a G+1 building at a construction site.
- Q.38 Describe the safety measures to be taken while carrying out drilling and blasting works at construction sites.