

**One Year Post Diploma in Industrial Safety****Branch: Industrial Safety****Subject: Safety in Construction Industry****Time : 3 Hrs.****MM: 100****Section -A****Note: Multiple Choice questions. All questions are compulsory.****10x1=10**

Q.1 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.2 A hazard is:

- a. The likelihood of a substance, event, activity or process to cause harm
- b. The probability of a substance, event, activity or process to cause harm
- c. The potential of a substance, event, activity or process to cause harm
- d. The prospect of a substance, event, activity or process to cause harm

Q.3 What is important in an accident investigation?

- a. Only to interview the victim
- b. To clear up the site of the accident as quickly as possible in order to prevent new accidents
- c. To collect all facts and information at the location of the accident
- d. None of the above

Q.4 A fall arrestor system ..... the fall and fall restraint system ..... the fall.

- a. Limit, prevent
- b. Allows, prevent
- c. Prevent, allows
- d. Hold, limit

Q.5 The list of notifiable diseases as per BOCW Central Rules, 1998 is given in

- a. Schedule-I
- b. Schedule-II
- c. Schedule-III
- d. Schedule-IV

Q.6 Emergency preparedness and planning includes:

- a. Escape routes
- b. Assembly points
- c. Evacuation procedures
- d. All of the above

Q.7 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.8 The IS Standard for "Excavation Works-Code of Safety" is

- a. IS 3576
- b. IS 3764
- c. IS 3765
- d. IS 3776

Q.9 The gas responsible for decompression sickness is:

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

Q.10 Which of the following is not one of major component of personal fall arrest system?

- a. Anchorage
- b. Net
- c. Body harness
- d. Connectors

## **Section-B**

**Note: Objective type questions. All questions are compulsory.       $10 \times 1 = 10$**

- Q.11 List down the hazards commonly present on a construction sites.
- Q.12 What are the safety provisions related to entry and exit into an excavated pit with depth greater than 1.5 m?
- Q.13 Differentiate between a Hot Work and Cold Work Permit.
- Q.14 What do you mean by pneumatic caisson?
- Q.15 What do you mean by PDCA cycle ?
- Q.16 What do you mean by a Flame proof equipment?
- Q.17 What do you mean by benching in case of excavation works?
- Q.18 What do you mean by "Zone of Demolition" defined as per BOCW Central Rules, 1998 ?
- Q.19 What do you mean by thorough check of lifting equipment/ loose gears stipulated in BOCW Act, 1996 ? Also mention the periodicity for the same.
- Q.20 What is the function of an outrigger in case of a telescopic crane?

## **Section -C**

**Note: Short answer type Questions. Attempt any twelve questions out of fifteen questions.       $12 \times 5 = 60$**

- Q.21 Differentiate between Caissons and Cofferdams.
- Q.22 Describe the stepwise procedure for carrying out an accident investigation at a construction site.
- Q.23 What do you mean by "Hierarchy of Controls" in context of risk management? Describe each type of control with examples and comment on the relative effectiveness of these controls.
- 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 What do you understand by notifiable diseases? Write a short note on Asbestosis covering its causes and preventive measures.
- Q.26 Write a note on safety provisions to be followed while storage and handling of paints & varnishes.
- 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 List and explain the various methods of demolition of RCC structures?
- Q.30 What are the various types of hazards linked with excavation? Describe the various protection methods with sketches used in excavation works?
- Q.31 What do you mean by "Fall Protection System"? Give the classification of types of Fall protection systems.
- Q.32 List down the types of work permits used in construction industry. Describe the applicability and procedure to be followed for issue of an excavation permit.
- Q.33 List down the various types of Fire Extinguishers and their uses.
- Q.34 What do you mean by ELCB and RCCB? Elaborate on the working principle with sketches for both of these devices.
- Q.35 What do you understand by ERDMP (Emergency Response and Disaster Management Plan) ? Differentiate between onsite and offsite emergencies.

## **Section-D**

**Note: Long answer questions. Attempt any two questions out of three questions.**

**$2 \times 10 = 20$**

- Q.36 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+2 building at a construction site.
- Q.37 Briefly narrate the major provisions of the Building and other Construction Workers (Regulation of Employment and Conditions of service) Act, 1996?
- Q.38 Write a note covering various safety provision to be considered for preparation of SOP for demolition of a RCC overhead water tank with height around 15 m having existing buildings in its vicinity at construction site.