

## Civil Engineer Interview Questions and Answers

Q) What is pile foundation? When we choose pile foundation?

A) Pile Foundation is implemented when the soil bearing capacity is smaller than 24KN/Sqm.

Q) How to calculate the weight of the steel?

A) The unit weight of steel is 7850Kg/m.cube.

Here D is considered as the Diameter of Bar in MM and the weight of the bar in Kilogram/m= $d^2/162.2$

Q) Tell the PCC and RCC unit weight?

A) The weight of the RCC and PCC are:

RCC – 25KN/m<sup>3</sup>

PCC – 24KN/m<sup>3</sup>

Q) What should be the range of the Staircase slope?

A) The slope of the staircase range is between 25 to 40.

Q) What is meant by segregation?

A) Segregation divides the cement sand from aggregate. The main reason behind this is due to improper W/c ratio and also concrete is poured above 1.5m height.

Q) How much temperature rises at various ingredients of cement are burnt?

A) At 1400

Q) What are compass and theodolite least count?

A) Compass least count is 30" (which is 30 minutes), Theodolite least count is 20" (20 seconds).

Q) What is the least cover values for footing, slab, beam, and column?

A) Following are the least cover values:

Footing – 50mm

Column – 40mm

Beam – 25mm

Slab 20mm

Q) What the name of the machine we used for the compressive strength test?

A) UTM stands for Universal testing machine which is used for the compressive strength tests.

Q) From the manufacturing date, how many days we can use cement?

A) Till 3 months we can use the cement from the manufacturing date.

Q) Tell me the ratio of M25 and M20 mix?

A) M25 – 1:1:2 and M20 – 1:1.5:3

Q) DPR stands for?

A) Detailed Project Report.

Q) How many grades of concrete are used for RCC structure?

A) For the RCC structure we use the minimum grade of the concrete is M20.

Q) How many types of Concrete tests?

A) There are 4 types of concrete tests, they are:

Water absorption test

Slump test

Compressive strength test

Water permeability test

Q) What are the brick's compressive strengths?

A) Fire bricks – 125kg/cm sq

First class bricks – 105 kg/cm

Second class bricks – 70 kg/cm

Q) What is the Initial and last setting time of the cement?

A) The last setting time of the cement is 10 hours and the initial setting time of cement is 30 minutes.

Q) How many types of curing methods are present?

A) Sprinkling method, a spraying method, Steam curing, curing chemicals, wet covering of a surface, ponding method.

Q) Define bleeding?

A) Bleeding is also known as segregation where water comes from concrete surface.

Q) Where is the compression and tension zone in cantilever beam?

A) The location of tension zone is in top most and the compression zone is in bottom place.

Q) What is the functioning of beam stirrups?

A) The beam stirrups resist shear forces.

Q) What is meant by guniting?

A) Guniting is defined as a combination of cement and sand in 1:3 proportion which is shot on a concrete surface under the gun pressure of 2-3 kilograms/cm.

Q) What is the shuttering removal time?

A) Sides of the wall, column, and beam side is 24:48 hours

The slab is up to 3 days, Beam soffits 7 days.

The removal of props of the slab is span is greater than 6m up to 21days, span is less than 6m up to 14 days.

Q) In one gallon how many liters present?

A) 3.78 liters.

Q) Explain Column vs strut?

A) The length of the strut is shorter; it can be horizontal and the column is a frame structure of vertical members.

Q) On steel or wood, how many plastic coats are required?

A) At least 3 coats of plastic.

Q) What is the main thing of pedestal column isolated footing?

A) The main purpose of pedestal column isolated footing is to resist the shear punching.

Q) What is the maximum absorption of 1st class bricks?

A) The dry weight of 15 percentage.

Q) Define buildings flashing?

A) In a building any portion where water can penetrate and supplying safe covering or surface of it.

Q) In which phase we use circular shape steel?

A) The circular shape steel is considered as best load distribution property which is easy to connect in any company.

Q) What is the brickwork thumb rule?

A) The thumb rule for the brickwork of 9" is 26 cement bags for 1mcube and 6.5 bags for 1mcube quantity for 4.5" wall.

Q) What is the marble work thumb rule?

A) Marble flooring thumb rule is 0.3 bag/m.sq and thumb rule for skirting is 0.025/m.sq

Q) For how many hours we should soak the CBR sample in water?

A) Minimum 96 hours we should soak.

Q) What is meant by coping?

A) Coping is defined as a protective layer on a structure to protect it from water is known as coping. For example, We can consider a concrete layer on the outer wall.

Q) How many types of slumps?

A) There is a total of 3types of slumps:

1. Collapse slump

2. Shear slump

3. True slump

Q) What is the lap length for beam and column?

A) Here are the values of beam and column lap length:

- Beam – 24d for compression and Tension zone – 45d
- Slab – 60d
- For Column – 45d.

Q) What is the Rcc structures steel percentage?

A) Generally, The volume of steel percentage as:

- Footing – 0.8 percentage
- Slab – 0.8 percentage
- Column – 2 percentage
- Bsam – 1 percentage

Q) What is the curing time of the concrete?

A) The curing time for concrete is 7days in normal temp and 14 days in hot temp

Q) What are the Rcc structure slump values?

A)

- Bridges – 30-75mm
- Pavements – 20 – 30mm
- Beams and slabs – 50-100mm
- Columns – 75-150mm

Q) What is the concrete vibrator time?

A) Less than 15 seconds.

Q) Define hybrid foundation?

A) The hybrid foundation is used for the buildings which are high rise. Hybrid foundations have mats and piles which is better for less settlement.

Q) How many common ways of demolition are there?

A) Total 3 common ways of Demolition, they are:

- Dismantling
- Pressure bursting
- Hydro demolition.

