Basic Civil Engineering Questions and Answers

Q) Tell me the Construction Manager Responsibilities?

A) Construction Manager deals with many responsibilities there are:

I; Cost Estimation

ii; Chosen materials pre purchasing

iii; Bidding phase of bidders selection

iv; Proposal analysis

v; Monitoring and scheduling of construction

vi; Construction of COst control

v; Supervision and contract Negotiations construction.

Q) On the construction site, what are the risks which are faced by Workers?

A) There are some the risk factors on the construction site that will be faced by the workers such as:

i; Falls from heights

ii; Scaffold and collapse trench

iii; Blasting of arc and shocks

iv; INcorrectly using the personal protective Equipment

Q) Explain OSHA compliance?

A) Occupational Safety and Health Act is shortly called OSHA, The main motto of this act is to deals with health and security rules for their workers. So, it is a standard act that is followed by every construction company.

Q) Specify the composition of a landfill?

A) We can discuss few major critical factors such as:

i; Bottom liber

ii; Collection system of leachate

iii; Settings of hydrogeologic.

Q) Do you know about some of the software which was used for cost estimation and expenses of the monitor on the site?

A)

i; Tally and Maxwell system

ii; Partner/Member of construction

iii; Construction premier software

iv; Sage and eTakeoff

Q) Tell me reinforced concrete?

A) Reinforced concrete contains mesh and steel bars that support extreme strength to the construction.

Q) Do you know different types of foundations?

A) There are 3 major foundations such as:

i; Basement: Basement is prepared in initial stage on top of it building which is constructed.

ii; Crawl space: A crawl space is built on top of the ground, which allows sufficient space to crawl underneath

iii; Slab foundation: In this case, concrete is directly pouring into the ground pit mode.

Q) Do you know about Hybrid Foundation:

A) This foundation is mainly used for building a high rise, it consists of both soil supported piles and mat. The hybrid foundation is very useful in the reduction of the settlement of the amount.

Q) Explain Demolition common ways?

A)

i; Dismantling way

ii; Hydro way

iii; Pressure Bursting

Q) Explain about flashing?

Q) Flashing method deals with seals and which will secure joints in a building from penetration of the water. This will be placed on the walls roofs and parapets.

Q) Do you know about stell unit weight?

A) The steel unit weight is about 7850 kilograms. As per cubic root pounds, it is 489.8 pounds. It is completely based on the steel exact composition which is an alloy of iron and carbon.

Q) Explain segregation and bleeding?

A) Bleeding is a function of mixing water in the concrete, so that concrete rises up the surface of the material.

Q) What are the site manager's responsibilities?

A)

i: Complete project work plan.

ii: Decision making

iii: Preparing work list

iv: Consideration of safe and health regulations

v: attend for Client meetings on sites.

Q) Do you have an idea about grouting?

A) Grouting is considered a concrete fluid form that will help to fill up the voids.

Q) What is meant by segregation?

A) It will help to separate sand and cement from aggregate. Because of the water cement ratio, and 1.5m of concrete is poured.

Q) Explain seepage?

A) Seepage is well known for the slow seeping of water through the soil.

Q) Tell me any few concrete tests?

A) Slump test, Water permeability and absorption test, Compressive strength test.

Q) Do you have an idea about slump types?

A)

i: True slump

ii: Shear slump

iii: Collapse slump

Q) What are the types of building contracts?

A)

i: Fixed price contracts: It is also called lump sum contracts, here the buyer pays a fixed amount, and then the contractor agrees on that. There will be no changes in amount but some allowances will be provided to the buyer for some sort of certainty in it.

ii: Cost plus contracts: Along with the amount for building construction set percentage, construction cost is paid. Many ways are involved with this such as cost addition with a fixed fee.

iii: Material and time Contracts: In this contract, time is preferable and acts as the major factor. It will help to derive complete contracts and money decisions. Both time and material spent by the builder and subcontractors of the project.

Q) Which software is implemented in civil engineering?

A) The most trendy software that is implemented in civil engineering are 3D Max and Auto CAD. These help us to make many high tech ppts, reports. These two software helps to make all designs in modeling, architectural drawing, 2D auto desk, and 3D designs successful.

Q) How is the unit weight of concrete is calculated?

A) To know the concrete weight, first multiply the length, width area, and height where concrete to be placed. Now you will know the volume of the concrete which should be used. To obtain the weight of concrete (pounds), multiply with volume which is 143.38 pounds/cubic feet

Q) How is the unit weight of scale is defined?

A) It is defined per cubic meter, 7850kgs is the steel's unit weight. Whereas in pounds per cubic foot, be 489.8 pounds. As the alloy was a combination of carbon and iron, Depends totally on the complete formation of the steel.

Q) How do you build-up the weight of steel?

A) To calculate the weight of steel, the formula is

Ex: 95 x length(m) x width (m) x thickness(mm)

Q) What is Slab?

A)

The slab is a flexural element that allows the load one horizontally or in many directions to contain a single plane.

Whereas the resistance in bending slab is the same as the beam, vary from proportional beams continuous in both directions.

It is concrete pavement that is bent perpendicular and promotes torsion in the slab.

Q) What is a beam?

A)

It is the best example of the structural element which bends.

It gives the best solution to many structural problems of moving of gravity horizontal loads up to the load elements.

It gives the linear structural element towards the perpendicular loads gets the flex load which is applied within the axis.

Q) What is meant by one way slab?

A) The beams assist the one way slab on two opposite sides. Its main work is to carry the load within one direction.

The ratio of the span between longer and shorter is equal or more than 2

Example: Verandah

Q) What is Two way slab?

A) Beam helps the four sides of the concrete slab and loads within both directions.

The ratio between longer and shorter spans is below 2.

example: multi-storeyed buildings.

Q) What crank length in the slab defines?

A) 300mm is the minimum length of a crank

Crank length formula is = (d1+d2+5)*10mm

d1 = smaller bar diameter

d2= largest bar diameter

Crank slope is 1:10

Q) What is meant by the strength of cement?

A) The cement's strength is based on the Hardness of Cement sand mortar cubes, which are prepared from the cement consist of 53MPa strength. It is obtained from OPC Grade cement within 28 days of cement's compressive strength. This is one of the common questions asked in civil engineering interviews

Q) How to measure the strength of the cement?

A) After the completion of the curing process the measurement is taken for about 7 or 28 days. The load is slowly applied at 140kg/cm2 per minute up to the specimen's failure. we will get the concretes compressive strength or the cement at load failure divided by the area of specimens.

Q) What means segregation and bleeding?

A) In civil engineering, The process of mixing water in the concrete where the concrete increases beyond the material's surface are called bleeding.

Q) What responsibilities are assigned to the site manager?

A)

Planning all the work which is to be done according to the project

Decision making is required

Organization and preparing the list of the work to be done

Commitment to the safety and health regulations within other legislation

Traveling and connecting the sites for client meetings.

Q) What do types of slumps include?

A) Collapse slump, Shear Slump and True slump

Q) What are the different types of building contracts?

A)

Fixed amount or lump sum contracts:

Here the buyer accepts to pay a fixed amount and after that contractor agrees on the deal. No changes are made in amount or any allowances.

Cost plus contracts:

The Actual construction cost is to be paid for the contractor along with a fixed percentage of the amount to construct a building. Many ways are involved like the addition of cost which gives a fixed fee.

Material and time contracts:

In this contract, The main factor that drives all the contract and allots money. Material and time were spent by the builder and also with his subcontractors. And also the cost of material also changes.

Q) Explain the process to hide Autocad dimensions?

A) Hold right click on the dimension of the drawing sheet

Select the edit option from the menu

" <<>> represents the dimension value in the edit dimension located in the dialogue box.

Now click on the hide dimension check box and enter string dimension which is to be displayed

By clicking ok close the dialog box

The text which is entered in the string now changes the dimension value.

Q) What are the different types of roofing systems?

A)

Laminated asphalt shingles

Rubber Membrane roofing

Solar Tiles

Cedar Shingles or Shakes

Living Roofs

Asphalt Shingles

Asphalt Roll Roofing

Q) What is meant by the compressive strength of fly ash bricks?

A) 3.5N/mm2 is the strength and the fly ash brick wall is 3 times more than the normal brick which is made with clay, and the normal clay value is bricked compressive which is 10-12N/mm2.

Q) What would be the size of a standard room?

A) It is considered to be 10*10

Q) Explain the primary difference between adsorption and absorption?

A)

a) Absorption

It is a bulk occurrence

The process involved is endothermic

Absorption has a uniform state of the process

It is the combination of the molecular species at the liquid or solid form

b) Adsorption

It is the occurrence in surface

It is an exothermic process

Its extends equilibrium was increasing steadily and gradually

Surface accumulation of the molecular species, rather bulk of solid or liquid

Q) Explain the effect of a building collapse?

A)

Material wastage

Unhealthy environment

Loss of economy

Homeless with the deprivation of countless property

Q) What are the applications involved in the modulus of elasticity?

A)

Construction of pillars, bridges, and beams Etc

Used to test the distortion property of the new materials

Calculates and measures the contortion response between the materials among working loads and weight

It measures the relationship of the stress-strain

Q) What is the most important tower in World?

A) Burj Khalifa stood as the tallest in the world, consisting of 828m in length. It has 163 floors.