

Civil Engineering Interview Questions

7 Important Civil Engineering Interview Questions

In this section, find seven of the most frequently asked and critical civil engineering interview questions with their answers.

1) Explain the concreting process in a step-by-step way.

- **Batching**
Batching refers to the process of measurement of the different materials used in making concrete. There are two possible ways for this-Volume batching and weight batching
- **Mixing**
This step involves mixing the materials to create good concrete, first in dry condition and then wet. There are generally two ways of mixing- Hand Mixing and machine mixing.
- **Transportation and Placing of Concrete**
After the mixing, concrete is to be transported to its final location. The concrete is placed on form works and should be dropped in its final location as closely as possible
- **Compaction of Concrete**
The process compaction involves reducing the air bubbles entrapped in the concrete which can reduce its strength by about 30%. It is a crucial step.

2) Describe the various methods of Concrete Curing

The process of maintaining the moisture and temperature conditions for freshly deployed concrete is referred to as curing. It allows the hardening of concrete. The methods involved in this process are:

- Spraying of water
- Ponding
- Wet covering of surface
- Steam curing
- Application of curing compound

3) What do you understand by “preset” during the installation process of bridge bearings?

During the installation of bridge bearings, the process of reducing the size of the upper plates to save the materials cost is called preset.

4) Explain the reinforcements that are used in the process of prestressing

- **Spalling Reinforcements**

It is used to reduce the stress that forms behind the loaded areas of the anchor blocks. Thus reducing the chances of fracture of the concrete at the surface.

- **Bursting Reinforcements**

At times, the stress trajectories are concave in the line of action of load. This can lead to a fracture. To reduce this, Bursting Reinforcements are used.

- **Equilibrium Reinforcements**

It is used in those cases when several anchorages exist.

5) Explain why Steel Plates are inserted inside bearings in Elastomeric bearings

To make an elastomeric bearing function as a soft spring and to induce the tensile stresses of the bearings into the steel plates, it should necessarily be made to bulge laterally, and additionally, the stiffness compression can be expanded by increasing the limiting amount of the lateral bulging. Upon inserting the steel plates, the bulge movement gets restricted thereby reducing the deflection of the bearing.

6) How would you describe the soundness of cement?

Cement soundness is a property of cement which ensures that it doesn't go through substantial expansion or experience any change in volume once it has been set. This gets rid of any chances of the concrete or mortar getting disrupted.

7) Explain Fatigue

Fatigue is described as the gradual damage to a structure that is likely to occur when subjected to cyclic loading and unloading.

List of Other Interview Questions

Having mentioned some of the most popular Civil Engineering interview questions, now we move on to a list of other questions that will help you in preparing for your interview.

1. Can you describe what a projection line is?
2. Can you point out some structure that may be affected by fatigue?
3. Describe and explain different slump test indications.
4. Explain the concept of built up area and super built-up area.
5. Elucidate on some of the common roof types.
6. In case of Concrete Box Girder Bridges, how is the number of cells determined?
7. Explain briefly why pumping should not be used in case of concrete works

8. Why should curing not be done using polythene sheets?
9. Once the form work is removed, why is propping required for long structures?
10. What do you understand by “ Cavitation in Pipes”? Explain its mechanism.
11. What is the main objective of using bedding under storm water drain pipes?
12. Pull-out tests are performed for soil nails. Explain why.
13. Give some advantages as well as disadvantages of plastic and timber fenders.
14. Concrete barriers have curved surface profiles. Briefly explain the reasons for this.
15. Generally, in concrete carriageways, granular sub-bases are not preferred. Explain the reasons for this.
16. Generally, separation membranes are inserted between the concrete pavement slab and its sub-base. Explain the reasons for this.
17. When it comes to the pumping station, which components are used majorly in a waterproofing system.
18. During reclamation, occurrence of Mud Waves can be seen. How can it be rectified?
19. Expand on the importance of sand and geotextiles in reclamation work.
20. Shed light on the use of “Slip Joint” when it comes to the Block Work Seawalls.
21. Why is it necessary to have two gate valves in normal practice for a washout valve?
22. There are multiple approaches in designing the floors of the service reservoirs. Explain them.
23. How can you distinguish between Sorption, Absorption and Adsorption?
24. Highlight the key points which distinguish Engineering stress from True Stress.
25. Discuss some applications of modular elasticity.

Technical Interview Questions for Civil Site Engineer

- What is the process of covering concrete placed on the exposed top of an external wall?
- In your Training experience, have you performed any Site survey to analyze its constructional needs and possibilities?
- For the construction project what capital cost has to be taken into consideration?
- What field tests are required for quality check of cement?

- What are the major problems in using pumping for concreting works?
- Explain what are phases inspections are done by local authorities while construction?
- What Do You Understand By “preset” During The Installation Process Of Bridge Bearings?
- What are the major problems in using pumping for concreting works?
- What are the functions of columns in a building?
- What is the initial and final setting time of the ideal cement mix?

Civil Engineering Technical Interview Questions

- Identify the critical points along a buried pipe running down a hill.
- How would you approach a ground investigation for a building structure?
- Why did you choose your degree? Which modules/projects/topics did you find most enjoyable and most difficult or challenging?
- What considerations must be made when building on a site of special scientific interest (SSSI)?
- What is the best solution for replacing existing lights in order to improve the lighting efficiency of a highway?
- Tell me about your final-year project/dissertation.
- Tell me about a time when you solved a technical problem.
- What is your understanding of the role of BIM [for this division]?
- What do you know about the CDM regulations?
- What is sustainable development? How would you implement and champion it on a project team?
- Sketch a strip foundation and build up to how you'd construct a suspended slab.

How to Prepare for a Civil Engineer Interview?

Cracking an interview is smooth when you have tips to help you sail through it. Alongside preparing Civil Engineering interview questions, enlisted below are other key pointers that can help you in cracking your upcoming interview:

- Research well on the organization you are interviewing for and also the subjects that are likely to constitute your job profile.
- Thoroughly go through your job profile and the responsibilities it entails.
- Ensure that the career skills listed in your resume match the requirements of the job.
- Revise basic concepts related to Civil Engineering before appearing for the interview.
- Be aware of all the projects you have completed to ensure complete awareness during the interview.
- Finally, be confident and focus on your skills and answer the questions in detail without holding back so that your skill is reflected in your words.

Civil Engineering Interview Questions for Project Manager

- What methods do you use to monitor and track the progress of your construction project?
- What would you do if some of your workers were not using the necessary safety equipment?
- What is your experience managing complex budgets on a large building project?
- Do you have experience managing budgets on large construction projects?
- If a project becomes more extensive than originally planned, how do you reorganize the budget to ensure you have the resources to finish?
- As a construction project manager, do you have experience hiring subcontractors or dealing with vendors?
- What is your method for building a team for a project?
- What are the methods you use to keep a construction project on time and under budget?
- How do you keep your construction project teams motivated?

Civil Engineering Interview Questions for Assistant Professors

- What would you do if a client phoned you to say that a pump is not working? How would you solve the problem? What if that solution didn't work?
- What flow profile can you expect when water is released from behind a weir by opening the sluice gates?
- What are some of the factors affecting the flow capacity of a pipe?
- If you were presented with a beam element, how would you go about the design process?
- What crack width limit would you use to design a diaphragm wall?