



**Bhaskars Engineering Design and IT Service Center**

(Placement Consultancy & Engineering Service Organization)



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## **CIVIL ENGINEERING**

# **INTERVIEW QUESTIONS & ANSWERS**

**Basic – Advance Level**

## **Syllabus Content - 1**

✓ **Quantity Survey**

**Note: Dear Students**  
**PURCHASE FULL LENGTH E-book of TECHNICAL**  
**INTERVIEW QUESTIONS AND ANSWERS**

**For Just @ 99/- Rs**

Prepared by:  
Caddesk Faculty  
Ms. Akshata Dhanyal



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**We Believe Strong Fundamentals Lead To Perform Things in Quality & Right Approach**

## 1. What is Quantity Survey

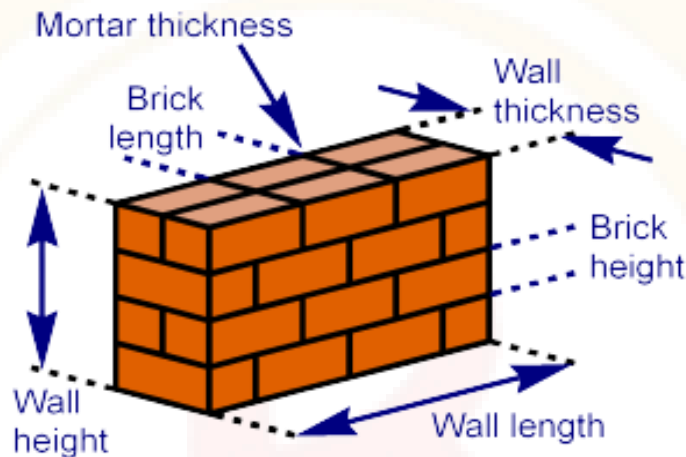
Quantity Surveying is used to calculate the quantity, estimate and to control the costs for large construction projects. Quantity Surveyors make sure that structures meet legal and quality standards.

## 2. Which IS code and method is used for measurements?

IS-1200 is the Indian Standard method of measurement of building and Civil engineering works

## 3. How many numbers of bricks are used to construct 1m<sup>3</sup> of area?

Five hundred (500) number of bricks.



## 4. Which are the regular grades of cement?

M15 and M20

## 5. What is the Density of cement?

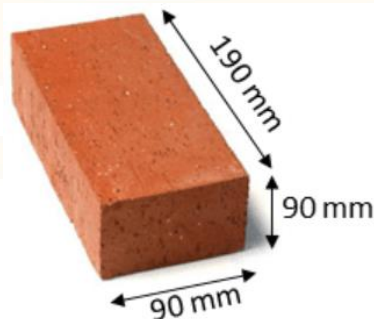
1440kg/m<sup>3</sup>

## 6. What is the Density of common Sand?

1450kg/m<sup>3</sup> to 1680kg/m<sup>3</sup>

## 7. What is the standard size of Brick?

190mmX90mmX90mm



# Interview Questions & Answers

8. What is the Nominal size of Brick?

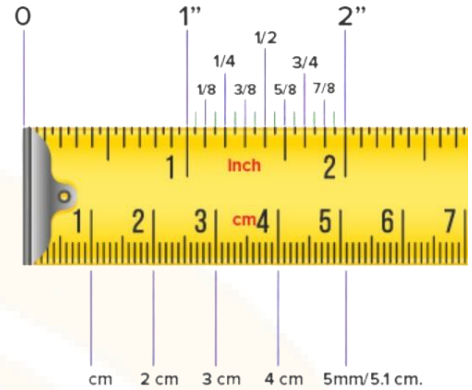
20cmX10cmX10cm

9. One foot (1') is equal to how many inches?

One inch is how many cm?

1 feet is equal to 12 inches &

1 inch is equal to 2.54cm



10. One meter (1m) is equals to how many feet and inches?

1m = 39.37" (39.37 inches)

1m = 3.28' (3.28 feet)

11. Which grades of cement is used for block work and plastering work?

43 Grade Cement



12. Which grade of cement is used for concrete work?

53 Grade Cement



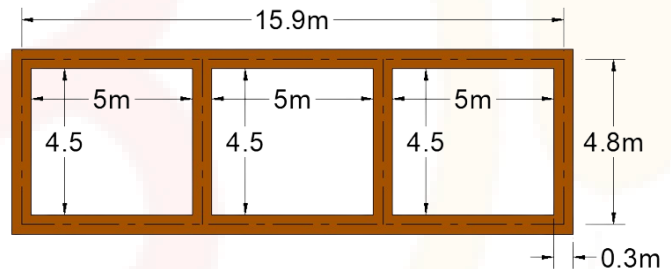
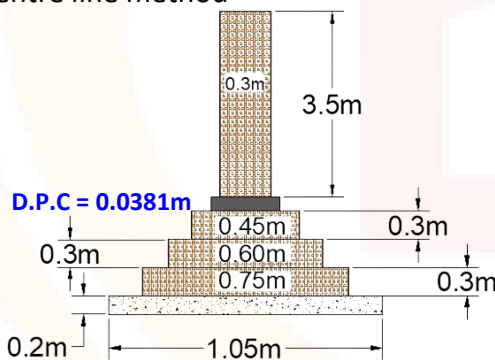
### 13. Name and explain any five grades of concrete?

Grades of concrete

Designation	Mix Proportion	Characteristic Compressive Strength, Mpa	Group
M5	1:5:10	5	Lean Concrete
M7.5	1:4:8	7.5	
M10	1:3:6	10	Ordinary Concrete
M15	1:2:4	15	
M20	1:1.5:3	20	
M25	1:1:2  Mix Design	25	Standard Concrete
M30		30	
M40		40	
M50		50	
M55		55	
M60	Mix Design	60	High Strength Concrete
M80		80	

### 14. Types of Estimation?

- Long wall short wall Method
- Centre line method



Long wall =  $15.9 \times 2 = 31.9\text{m}$   
 Short wall =  $4.8 \times 2 = 9.6\text{m}$   
 Total wall =  $31.9 + 9.6 = 41.5\text{m}$

SL.No	Description	No	Length, m	Breadth, m	Height, m	Quantity, cum
1	Earth Work	1	51.1	1.05	1.2	64.38
2	P.C.C	1	51.1	1.05	0.2	10.73
3	Brick Work/F					
	Step No 1	1	51.1	0.75	0.30	11.49
	Step No 2	1	51.1	0.60	0.30	9.19
	Step No 3	1	51.1	0.45	0.30	6.89
4	D.P.C	1	51.1	0.30	0.0381	0.58
5	B/W Above/DPC	1	51.1	0.30	3.50	53.65

## 15. Which building code is used for labour calculation?

NBC: National Building Code

## 16. Methods of Valuation?

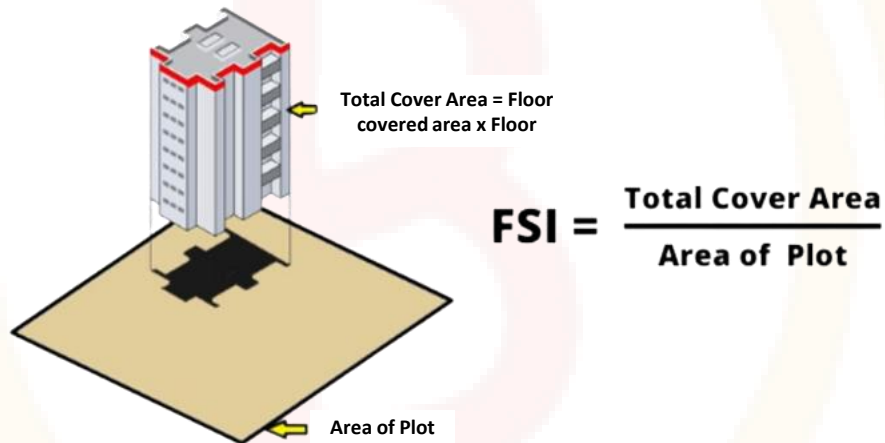
- Rental Method of Valuation
- Direct Comparison of Capital Value.
- Valuation Based On Cost.
- Valuation Based on Profit.
- Development Method of Valuation.
- Depreciation Method of Method of Valuation.

## 17. What is Float Area and full form of FAR ?

The area, which is surrounded by a boundary line, is called float area. FAR = Floor Area Ratio

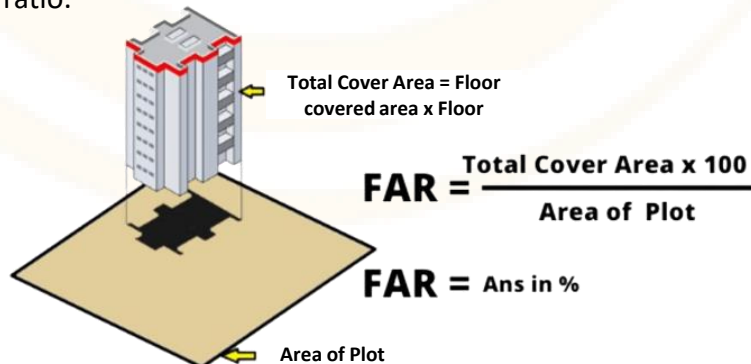
## 18. What is FSI ?

**FSI (Floor Space Index)** the ratio of the built-up space on a plot into the Area of the plot is a regulation followed at the development control norms of many cities.



## 19. What is FAR ?

Floor area ratio (FAR) is the ratio of a building's total floor area (gross floor area) to the size of the piece of land upon which it is built. It is often used as one of the regulations in city planning along with the building-to-land ratio.



## 20. What is Built Up Area?

The total Building Area in Float Area is referred as Built-Up Area.

## 21. What is Set Back Area?

The empty space around the building is called Set Back Area.

## 22. What is carpet Area?

Area excluding walls in the build-up area is called as carpet area.

## 23. What is formula used to calculate the quantity of sand in 1m<sup>3</sup>?

Quantity of sand in 1m<sup>3</sup> =  $\frac{\text{Dry Volume of mortar} \times \text{Ratio of Sand}}{\text{Ratio of (Cement + Sand)}}$

## 24. What is the formula to calculate the quantity of cement in 1m<sup>3</sup>?

Quantity of Cement in 1m<sup>3</sup> =  $\frac{\text{Dry volume of mortar} \times \text{Ratio of Cement}}{\text{Ratio of (Cement + Sand)}}$

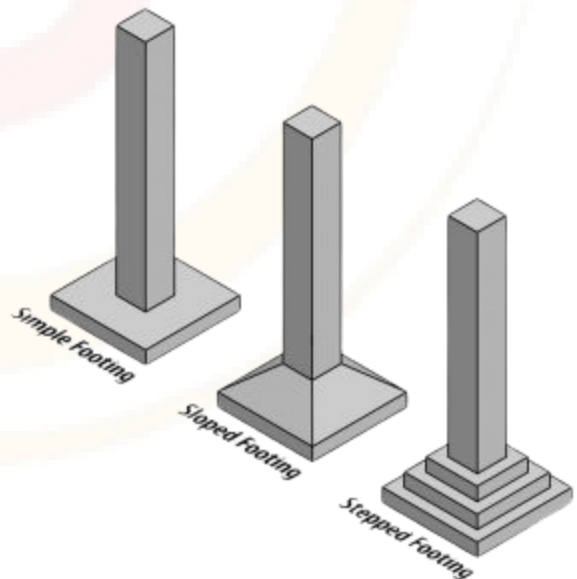
## 25. Explain about the types of footings?

### Types of footings

- a. Isolated/Individual footing
- b. Combined footing
- c. Strapped footing
- d. Raft/Mat footing
- e. Pile footing

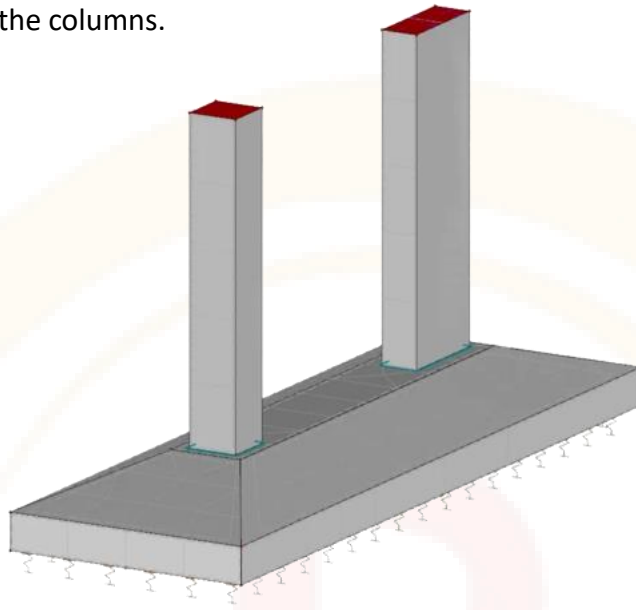
### a. Isolated/Individual footing

It is the most common type of foundation used for building construction. This foundation is constructed for a single column and called a pad foundation. The shape of individual footing is square or rectangle and is used when loads from the structure is carried by the columns. Size is calculated based on the load on the column and the safe bearing capacity of soil. Rectangular isolated footing is selected when the foundation experiences moments due to the eccentricity of loads or due to horizontal forces.



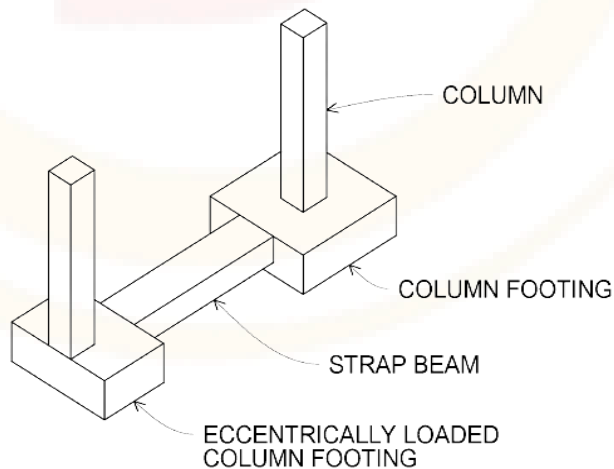
## b. Combined footing

It is constructed when two or more columns are close enough and their isolated footings overlap each other. It is a combination of isolated footings, but their structural design differs. The shape of this footing is a rectangle and is used when loads from the structure is carried by the columns.



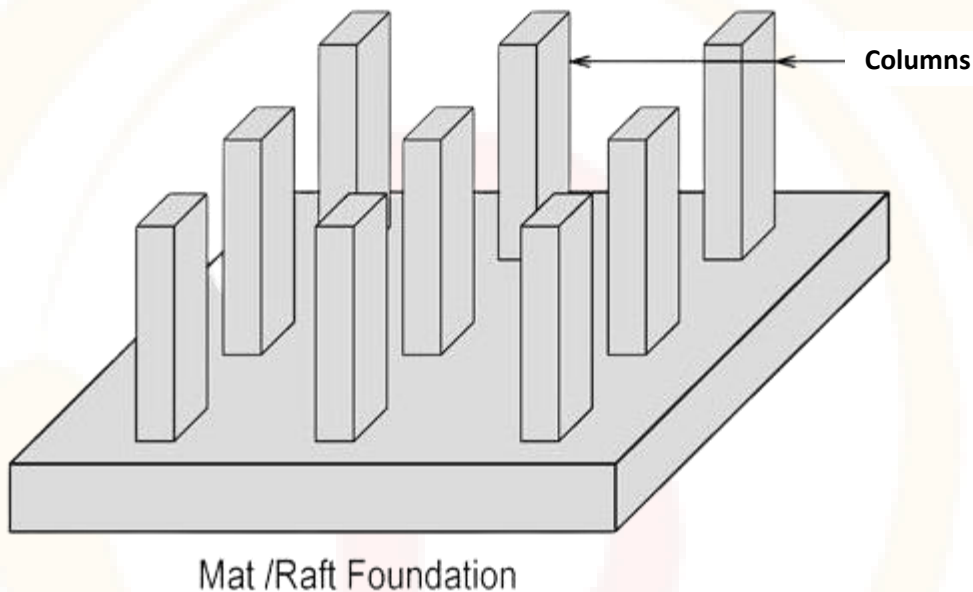
## C. Strap footing

Strap footing is the type of footing constructed to connect the eccentrically loaded footing to interior column footing. Further, these types of footings can be identified as a combined footing as it connects two or more columns. Strap footing is more common in building construction, as we have to construct the building up to the boundary wall. We cannot place our foundation in someone else land. Therefore, the column has to be placed at the edge of the footing. It creates load eccentricity. To overcome this issue, a strap footing foundation is constructed and the induce bending moment and shear forces due to the eccentric load will be transferred to the interior column through the strap beam.



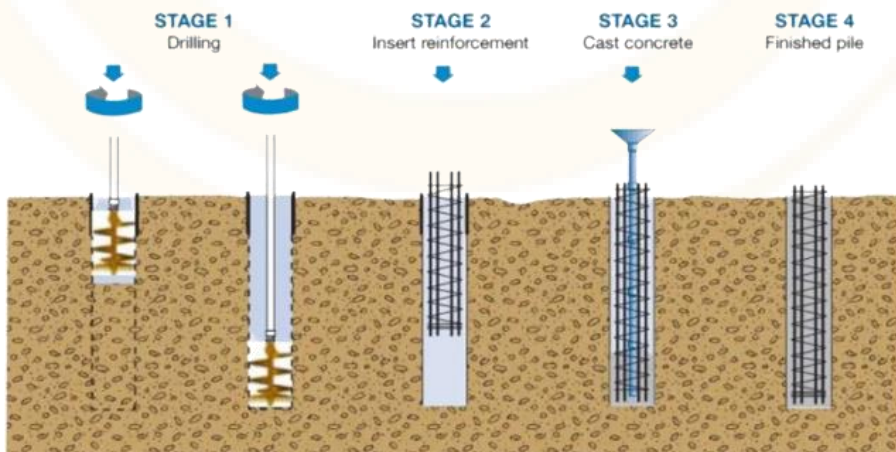
#### d. Raft/Mat footing

Raft or mat foundations are the types of foundation which are spread across the entire area of the building to support heavy structural loads from columns and walls. The use of mat foundation is for columns and walls foundations where the loads from the structure on columns and walls are very high. This is used to prevent differential settlement of individual footings, thus designed as a single mat (or combined footing) of all the load-bearing elements of the structure. It is suitable for expansive soils whose bearing capacity is less for the suitability of spread footings and wall footings. Raft foundation is economical when one-half area of the structure is covered with individual footings and wall footings are provided. These foundations should not be used where the groundwater table is above the bearing surface of the soil. The use of foundation in such conditions may lead to scour and liquefaction.



#### e. Pile footing

Pile foundation is a type of deep foundation, which is used to transfer heavy loads from the structure to hard rock strata, much deep below the ground level.





Pile foundations are used to transfer heavy loads of structures through columns to hard soil strata which is much below ground level where shallow foundations such as spread footings and mat footings cannot be used. This is also used to prevent uplift of the structure due to lateral loads such as earthquake and wind forces. Pile foundations are generally used for soils where soil conditions near the ground surface is not suitable for heavy loads. The depth of hard rock strata may be 5m to 50m (15 feet to 150 feet) deep from the ground surface. Pile foundation resists the loads from the structure by skin friction and by end bearing. The use of pile foundations also prevents differential settlement of foundations.

## 26. Differentiate the footings, which comes under shallow and deep foundation?

### **Shallow Foundation:**

- Individual footing or isolated footing
- Combined footing
- Strip foundation
- Raft or mat foundation

### **Deep Foundation:**

- Pile foundation
- Drilled Shafts or caissons





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**We Believe Strong Fundamentals Lead To Perform Things in Quality & Right approach**