**Estation and specification question bank**

**By Staff**

**Estimation for Building Works**

The quantities of various items such as [earthwork in excavation](https://civiljungle.com/rate-analysis-of-excavation/), [foundation concrete](https://civiljungle.com/grillage-foundation/), [brickwork in foundation](https://civiljungle.com/brick-masonry/) and plinth, brickwork in the superstructure, etc. can be estimated by following method

**For One Room Building**



First, we need to calculate the total center line length of the building.

**Total center line length** = 2 x 5.3 + 2 x 4.3 = 19.2 m.

**1. Earthwork in excavation** = Total center line length x breadth x depth

= 19.2 x 0.9 x (0.3+0.3+0.3)

= 19.2 x 0.9 x 0.9

= 15.52 m3

**2. Concrete in foundation** = 19.2 x 0.9 x 0.3 = 5.18 m3

**3. a) Brickwork in foundation for 1st footing** = 19.2 x 0.6 x 0.3 m3

**b) Brickwork in foundation for 2nd footing** = 19.2 x 0.5 x 0.3 = 2.88 m3

**4. Brickwork in superstructure** = 19.2 x 3.5 x 0.3 = 20.16 m3

**For Two Room Building:**



**Total center line length** = 2 x (5.3+5.3) + 3 x 4.3 = 34.1 m.

**1. Earthwork in excavation** = Total center line length x breadth x depth

= 34.1 x 0.9 x (0.3+0.3+0.3)

= 34.1 x 0.9 x 0.9

= 27.62 m3

**2. Concrete in foundation** = 34.1 x 0.9 x 0.3 = 9.20 m3

**3. a) Brickwork in foundation for 1st footing** = 34.1 x 0.6 x 0.3 = 6.13 m3

**b)** **Brickwork in foundation for 2nd footing** = 34.1 x 0.5 x 0.3 = 5.11 m3

**4. Brickwork in superstructure** = 34.1 x 3.5 x 0.3 = 35.8 m3

Thus you can estimate the quantity of different items such as

**Quantity of D.P.C** = Total Centre line length x Breadth of foundation x Thickness of D.P.C

**Quantity of plinth beam** = Total Centre line length x Breadth of the beam x Depth of beam.

**Quantity of wall plaster for 2 sides** = Total center line length x Height of wall x Thickness of plaster.

**Quantity of Paint for 2 sides of wall** = Total center line length x Height of wall  x 2  = Area of paint in**sq.ft**