

# **Estimating & Costing -1**

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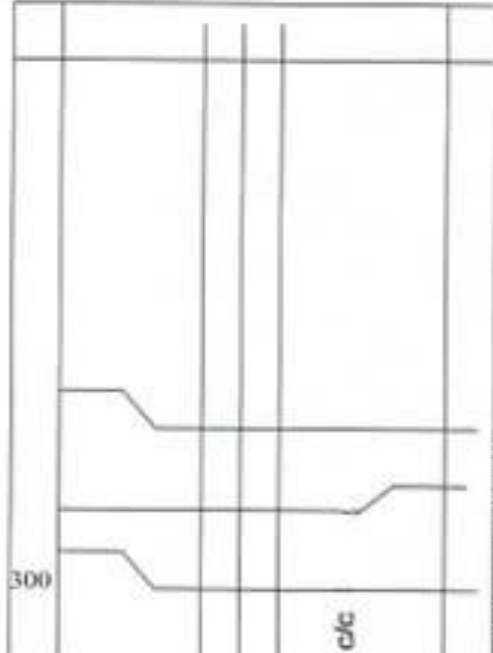
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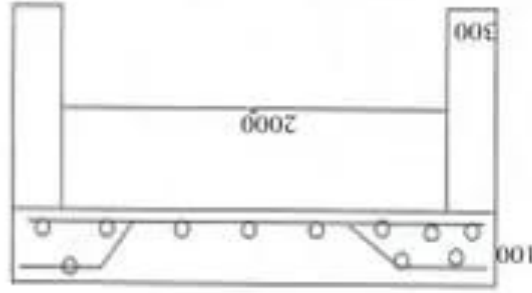
## Estimation of Quantities of Steel of R.C.C. Elements

Fig. 1 shows the reinforcement schedule of the given figure for R.C.C. Lintel

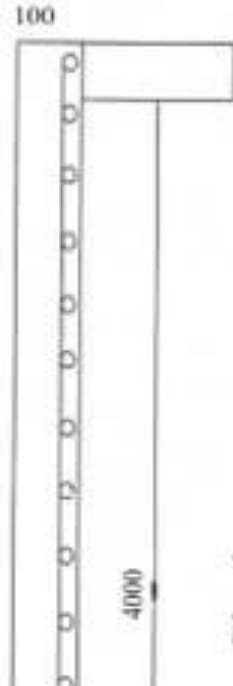


Dimension = 4000x 2000

R.C.C. Slab



Slab Thickness = 100mm



Slab Direction

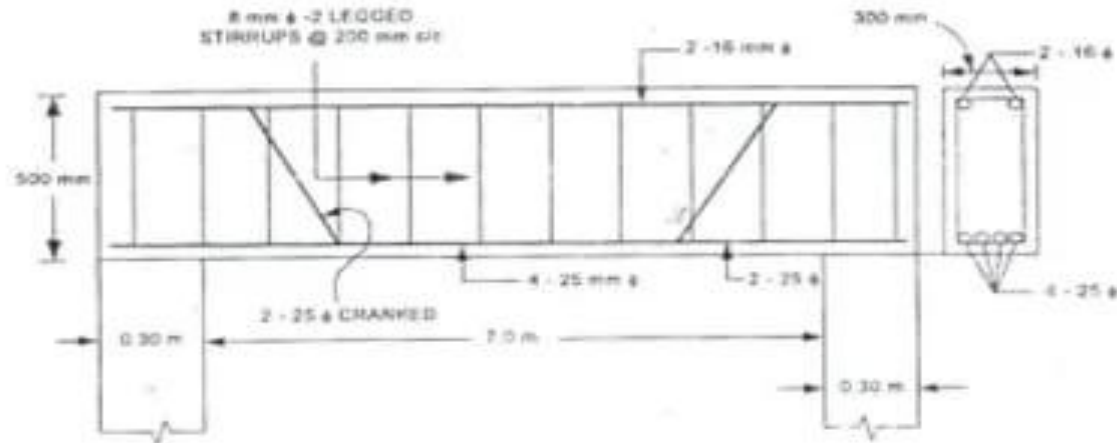
*Estimation and Costing*

Dia.	No.	Length in m	Total Length in mm	Self weight in kg/m	Total Weight in Kg
8	$\frac{4410}{170} + 1$ = 27	$2410 + 2 \times (9 \times 8) + (0.414 \times 66)$ = 2581.3 mm = 2.581 m Additional length for each crank = 0.414d	$2.581 \times 27$ = 69.7	$\frac{\pi}{4} \times \left(\frac{8}{1000}\right)^2 \times 7860$ = 0.39	$0.39 \times 69.7$ = 27.53
6	$\frac{2410}{180} + 1$ = 15	4.41 m	$4.41 \times 15$ = 66.15	$\frac{\pi}{4} \times \left(\frac{6}{1000}\right)^2 \times 7860$ = 0.22	$0.22 \times 66.15$ = 14.553

*Estimation of Quantities of Steel of R.C.C. Elements*

**EXERCISE**

1) Prepare the Bar bending schedule for the beam shown below.



2) Prepare the Bar bending schedule of a simply supported R.C.C. Lintels from the following specification:

Size of lintel 300mm wide x 200mm depth. Main bars in tension zone of Fe 250(grade I) 3 bars of 16mm dia., one bar is cranked through  $45^\circ$  at 170 mm from each end

2 No. anchor bars at top 8mm dia.

Two legged stirrups @ 150mm c/c of 6mm dia. through out.

Clear span of the lintel is 1150mm.

Bearing on either side is 150mm.