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10 m^3 = 5000 Nos.
100 cft. = 1350 Nos.
100 sqft.= 550 Nos. (4 ½" thick wall)
100 sqft. = 350 Nos. (3" thick wall)
230 mm = 9"
115 mm = 4 ½"
75mm =3"
1ton = 1000 kg
1quintal=100kg

Brick work
Dry cement mortar = 30% of volume
Plaster
Dry cement mortar = 50% more volume

First class brick work in cement sand mortar 1:4
Multi storey buildings, Heavy weight /load bearing walls, In earth quake zones, Brick pillars, Where there is more vibration due to heavy traffic or factory., Boundary wall, courtyard wall parapet wall and other free end walls, Partition or 4.5 inch thick walls, Brick works used for drainage .
First Class Brick Work in cement sand mortar 1:6
Three storey buildings
Load bearing walls
Heavy and frequent rainy zones
Foundation of multi storey buildings
First Class Brick Work 1:7
Toe walls
Single storey buildings
Temporary structures
Light weight walls having no load of beams etc.
Note: Mortar richer than 1:3 are not used in masonry because of high shrinkage and no appreciable gain in strength of masonry although mortar strength itself may increase.

e.g.
10 m^3 ration 1:6 brick masonary
Bricks = **5000**
Dry mortar = 30% = 30*10/100 = 3 m^3
Cement = 3/7= 0.43 m^3 = .43*30 = **13 bags**
Sand = .43*7 = 3.01 m^3 = **3 m^3**

Plaster (1:4, 1:6)
For dry mortar 50% more volume
12mm
100 sqmt = 2 m3 dry mortar
20 mm
100 sqmt = 3 m3 dry mortar

8.4 m3 brick work 1:6 mortar
(1 truck = 5.87 m3 =210 cuft.)
Bricks = 8.4*500=4200 bricks

Dry mortar = 8.4*.3=2.52 m3
Cement = 2.52/7=.36 m3 = 10.8 bags = 11 bags
Sand = .36*6 = 2.16 m3= .36 truck
Plaster
100 m2 , 1:5, 12 mm
Dry Mortar = 2 m3
Cement = .3333 m3 = 10 bag
Sand = .3333*5 = 1.67 m3 =.28 truck **(in plaster ,dry mortar 50% more volume due to loses)**

Pcc
10 m3 = 15..5 m3
Rcc
Beam 2% slab 1%, column 2.5%
we have thumb rule In column 125 kg/m3, slab 65 kg/m3 footing 75 kg/m3 beam 120 kg/m3

Steel quantity in a conventional **slab** (excluding its beams) will be around **60 to 65 Kg per Cubic meter.**

In **beam**s it will be around **200 to 220 kg per cubic meter**.

In **columns** it'll be around **200 to 250 kg per cubic meter.**

For **raft footings** it'll be around **100 to 120 kg per cubic meter.**

cover
slab 25mm
beam 50mm
column 75mm
footing 75 mm

Calculation of Materials:-
For 1 m3 of concrete Mix 1:2:4 (M15)
Add 50% for wet concrete = 1.50 m3
= 1.50/(1+2+4) = 0.214 m3
For 1 m3 = 30 bags of cement required (1440/50) say 30 bags
Cement = 0.214 x 30 = 6.42 bags
Sand = 0.214 x 2 = 0.428 m3
Aggregate = 0.214 x 4 = 0.856 m3

Wall plastering in CM 1:4 of 12 mm thick for 100 m2:-

Volume = 100 x (12/1000) = 1.20 m3
Add 30 to 35% as bulking of sand = 0.36 m3
Add 20 as wastage of sand = 0.312 m3
Total = 1.872 m3
= (1.872/1+4) = 0.374 m3
Cement = 0.374 x 30 = 10.77 bags
Sand = 0.374 x 4 =
1.496 m3 ----------