

Estimating & Costing -1

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MEASUREMENT OF MATERIALS AND WORKS

2.1 UNITS OF MEASUREMENTS:

The units of measurements are mainly categorised for their nature, shape and size and for making payments to the contractor and also. The principle of units of measurements normally consists the following:

- a) Single units work like doors, windows, trusses etc., are expressed in numbers.
- b) Works consists linear measurements involve length like cornice, fencing, hand rail, bands of specified width etc., are expressed in running metres (RM)
- c) Works consists areal surface measurements involve area like plastering, white washing, partitions of specified thickness etc., are expressed in square meters (m^2)
- d) Works consists cubical contents which involve volume like earth work, cement concrete, Masonry etc are expressed in Cubic metres.

[BASED ON IS 1200 REVISED]

Sl. No.	Particulars of item	Units of Measurement	Units of payment
1	Earth work: 1. Earth work in Excavation	cum	Per ^o /cum

Estimation and Costing


	6. Cement concrete bed	cum	per cum
	7. R.C. Sunshade (Specified Width & Hight)	cum	1m
III	Damp Proof Course (D.P.C) (Thickness should be mentioned)	sqm	persqm
IV	Brick work:		
	1. Brickwork in foundation	cum	percum
	2. Brick work in plinth	cum	percum
	3. Brick work in super structure	cum	percum
	4. Thin partition walls	sqm	percum
	5. Brick work in arches	cum	percum
	6. Reinforced brick work (R.B.Work)	cum	percum
V	Stone Work: Stone masonry	cum	percum
VI	Wood work:		
	1. Door sand windows frames or chowkhats, rafters beams	cum	percum
	2. Shutters of doors and windows (thickness specified)	sqm	persqm
	3. Doors and windows fittings (like hinges, tower bolts, sliding bolts, handles)	Number	per number
VII	Steel work		
	1. Steel reinforcement bars	Quintal	per quintal

Measurement of Materials and Works

VIII	Roofing		
	1. R.C.C. and R.B.Slab roof (excluding steel)	cum	per cum
	2. L.C. roof over and inclusive of tiles or brick or stone slab etc (thickness specified)	sqm	per sqm
	3. Centering and shuttering form work	sqm	per sqm
	4. A.C.Sheet roofing	sqm	per sqm
IX	Plastering, points&finishing		
	1. Plastering-Cement or Lime Mortar (thickness and proportion specified)	sqm	per sqm
	2. Pointing	sqm	per sqm
	3. White washing, colour washing, cement wash (number of coats specified)	sqm	per sqm
	4. Distempering (number of coats specified)	sqm	per sqm
	5. Painting, varnishing (number of coats specified)	sqm	per sqm
X	Flooring		
	1. 25mm cement concrete over 75mm lime concrete floor (including L.C.)	sqm	per sqm
	2. 25mm or 40mm C.C. floor	sqm	per sqm
	3. Doors and window sills (C.C. or cement mortar plain)	sqm	per sqm
XI	Rain water pipe /Plain pipe	1RM	per RM
XII	Steel wooden trusses	1No	per 1No
XIII	Glass pannels(supply)	sqm	per sqm
XIV	Fixing of glass panels or cleaning	No	per no.

Estimation and Costing

Centre Line Method

S.No.	Particulars of Items	No	L	B	H	Q	Explanation
1.	Earth Work excavation for foundation 53  43	1	19.2	0.9	1.4	24.192	m³ $L=2(5.3+4.3)=19.2$
2.	C.C.(1:4:8) bed for foundation	1	19.2	0.9	0.3	5.184	m³
3.	R.R.Masonry in CM (1:6) for a) Footings b) Basement	1 1	19.2 19.2	0.6 0.45	0.5 0.6	5.76 5.184	m³
					Total	10.944	m³
4.	Brick masonry with CM(1:6) for super structure	1	19.2	0.3	0.3	17.28	m³