

### 1. Concrete Compressive Strength (Test Table)

Nominal Mix	Minimum cube strength required (in psi)			
	Laboratory Tests		Work Tests	
	7 days	28 days	7 days	28 days
1:1:2	4000	6000	3000	4500
1:1½:3	3350	5000	25000	3750
1:2:4	2700	4000	2000	3000
1:3:6	---	2500	---	2000
1:4:8	---	2000	---	1500

Ref. AJK Technical & General Specifications Chapter No.05 (Plan & reinforced concrete )Page No.5-10

### 2. Bricks Compressive Strength (Test Table)

Designation	Average Compressive strength (lbs/Sq.inch)	Max. Water Absorption
		% by weight
First Class	2000	1/6 <sup>th</sup> of its weight (average weight of ten bricks shall not less than 5.5lb (2.5kg)
Second Class	1500	1/4 <sup>th</sup> of its weight
Third Class	1000	-----
Fourth Class	725	-----

Ref. AJK Technical & General Specifications Chapter No.11 (Brick Work) Page No.11-2

### 3. Uniaxial Compressive Strength of Stones (Test Table)

Type of Stone	Weight (lbs/cft) Average	Maximum Water Absorption Percentage by weight	Minimum Compressive Strength kg./sq.cm.
Granite	165	0.5	1000
Basalt	225	0.5	400
Lime Stone (Slab & Tiles)	160	0.15	200
Sand Stone (Slab & Tiles)	140	2.5	300
Marble	170	0.4	500
Quartzite	225	0.4	800
Laterite (Block)		12	35

Ref. AJK Technical & General Specifications Chapter No.12 (Stone Masonry) Page No.12-1

## Properties of Steel

### A. Dimension Properties:-

Bar Designation	Weight (K.G/Foot)	Diameter	Tolerance on Mass
3	0.170	0.375	±12
4	0.303	0.500	
5	0.477	0.625	
6	0.680	0.750	±9
7	0.930	0.875	
8	1.213	1.000	±6.5
9	1.530	1.128	±6.5
10	1.960	1.270	±6.5
11	2.415	1.410	±4.5
14	3.477	1.693	±4.5
18	6.182	2.257	±4.5

### B. Physical Properties (ASTM A-615/ A 615M)

Grade	Yield		Ultimate Tehsile Strength		Elongation Min. %age
	MPa	Psi	MPa	Psi	
40	280	40,000	420	60,000	12
60	420	60,000	620	90,000	9
75	520	74,500	700	1,00,000	6

### C. Chemical Properties

Grade	Min	Chemical Composition % age					
		Carbon	Si		Potashium		Sulpher
			I	II	I	II	
Fe Mn 74C	70-77	7.0	2.0	3.0	0.25	0.38	0.03
Fe Mn 68C	65-72	7.0	2.5	4.5	0.25	0.40	0.03