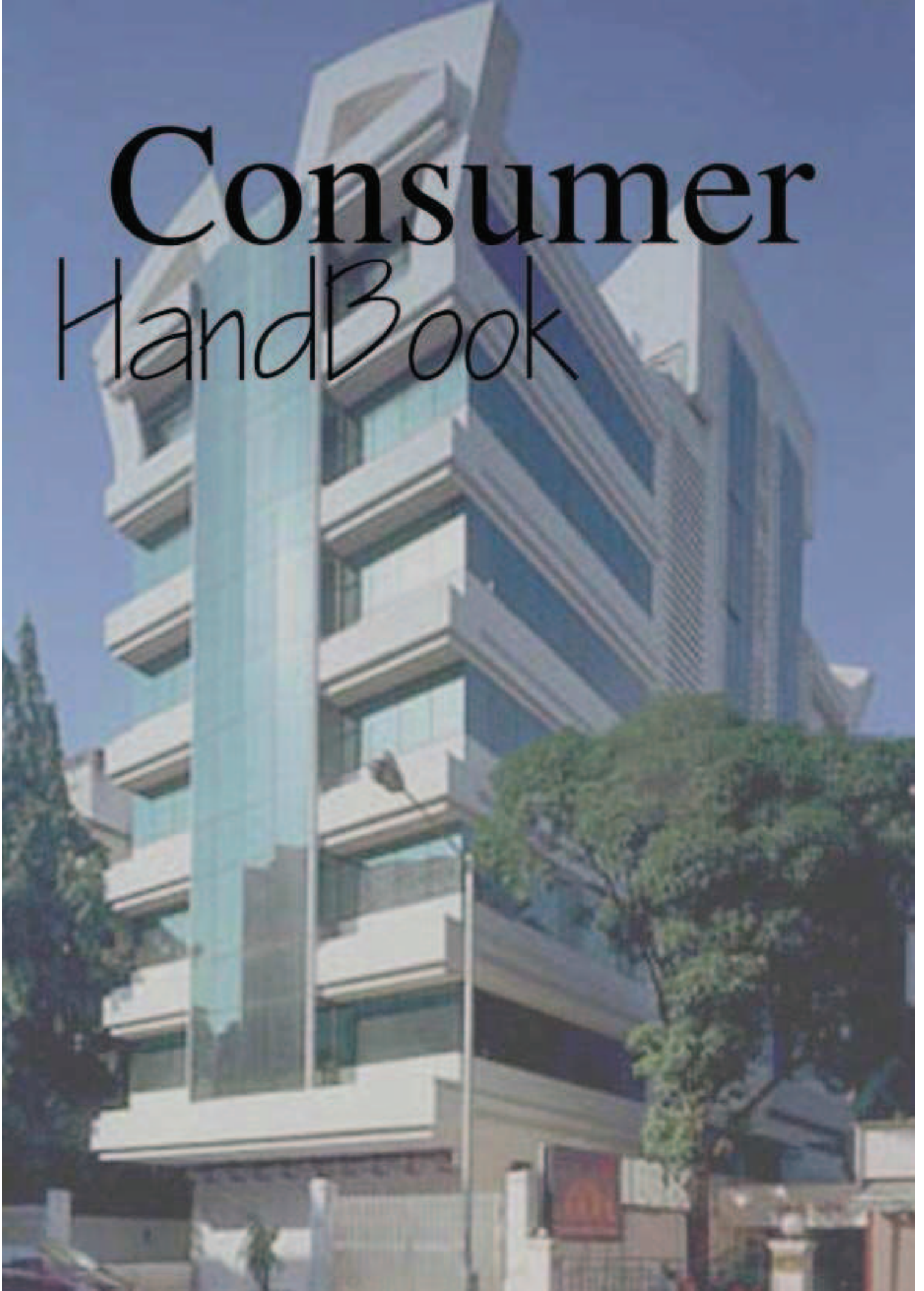


Consumer HandBook



PREFACE

Cement plays a crucial role in the development of social, industrial and commercial infrastructure which are considered prime index of economic development. The performance of the cement industries in the last two plan periods has been satisfactory from the point of view of growth. The production technology has improved radically the result being world class standard being achieved in productivity, quality, low energy consumption and environment friendliness. However the end users especially the consumers do not always get the benefits of the same, since packing, storage, distribution and usage are still way below the world standards particularly the lack of common knowledge about the type and grade required for various applications are still not very clear in the end users mind set.

This hand book is an honest endeavor to educate the end users in a user friendly manner. The various recommendations for proper usage of the various inputs required in construction. The Vaastu Guidelines mentioned in the last chapter is an interesting addendum for those who still follow the traditional prescription for construction.

CONTENTS

Sl. No.	Chapters	Page Nos.
1	Special Features	1
2	Comparison of Shiva Cement with BIS Requirement	2
3	Recommended Grade of Cement	2
4	Tips for proper storage of Cement	3
5	Tips for good Masonry work	4
6	Tips for good Concrete work	5
7	How to prepare good concrete	6
8	Recommended volumetric mixes	7
9	Proportion of Sand / Stone Chips	8
10	Removal of Forms	9
11	Estimated materials for concreting Roof slab	10
12	Estimated quantity for One Cu.Mtr. of compacted concrete	11
13	Steel Rods dimension	12
14	BIS Specifications (Physical)	13
15	BIS Specifications (Chemical)	14
16	Vaastu Guidelines	15

Chapter - 1

SPECIAL FEATURES

1. Cement with higher fineness (Blaine's) which provides
 - ⇒ Higher surface area coverage
 - ⇒ Water tightness
2. Higher ultimate strength
 - ⇒ 28 days strength exceeding 53 MPA
3. Customer service is our motto
 - ⇒ Selection of type of cement
 - ⇒ Selection of concrete mix
 - ⇒ Structural design at nominal charge
4. We provide test certificate of individual consignment based upon
 - ⇒ Packing date as printed on the bag
 - ⇒ Factory challan date
5. Company believes in philosophy of continuous growth and development
6. Unique combination of two technology based plants
 - ⇒ Modern Dry process Rotary kiln technology 300 TPD
 - ⇒ CRI VSK Kiln technology basis 140 IPD
7. Our PSC cement is most ideal for
 - ⇒ Coastal belt construction
 - ⇒ Water storage tanks
 - ⇒ Roof slabs
 - ⇒ Underground foundation
 - ⇒ Mass concreting

A CHOICE OF QUALITY AND ECONOMY

Chapter - 2

COMPARISON OF SHIVA CEMENT WITH BIS REQUIREMENT				
	IS:269-1989 For OPC	IS:455-1989 For PSC	Typical Test Data	
			Shiva Sumangal Brand OPC	Shiva Sumangal Brand PSC
Physical Requirement				
Fineness by Blaine (Sq.Cm./Gm. Minimum)	2250	2250	3800	4000
Setting Time - Minutes				
Initial - Not less than	30	30	100	100
Final - Not more than	600	600	250	250
Compressive Strength (Kg./Sq.Cm.)				
3 days Minimum	160	160	240	230
7 days Minimum	220	220	340	340
28 days Minimum	330	330	550	560

Chapter - 3

RECOMMENDED GRADE OF CONCRETE		
Types of Construction		Grade of Concrete
a)	Beams, Slabs etc	M15
b)	Basement Walls, Silos	M20
c)	Columns	M20
d)	Concrete roads/Industrial floors	M35
e)	Storage Tanks, Cisterns, Sewers, Well Kerbs	M35
f)	Prestressed Concrete	M35

Note : M refers to 'Mix' and 15, 20 etc. represent cube compressive strengths at 28 days in N/mm² as per IS:516. For all important works mix shall be pre designed for specified strength and batched by weight.

Chapter - 4

TIPS FOR PROPER STORAGE OF CEMENT	
1	Please ensure that the interior of new warehouse should be thoroughly dried & then store cement bags.
2	Please ensure before storing cement bags that the walls, roof & floor of the building must be completely water proof.
3	The doors & windows should be kept shut. It is the moist air which damages cement.
4	Preferably stock cement bags on the wooden planks inside the room.
5	Please do not stack more than 15 bags in height.
6	Please stack cement bags in such a way that the material can be delivered in 'first come first go' basis.
7	Please do not stack Cement bags on the ground for temporary storage at work. Pile up on a raised, dry platform and cover with tarpaulin or polythene sheets.
	If these few simple precautions are taken in the storage of cement, you will find that it will stay as fresh when taken out for use as when it arrived from the works. However, prolonged storage of cement should be avoided.
CAUTION	
1	Cement is a perishable product and loses its hydraulic property with long storage, while coming in contact with moist air. Hence, avoid long storage.
2	If due to unavoidable reasons the cement has been stored for more than 90 days, it is advisable to use in general work such as plastering, brick masonry etc.

Chapter - 5

TIPS FOR GOOD MASONRY WORK							
1	Please use only Tap Water or Potable water.						
2	Please use clean and dry sand only, preferably after proper sieving.						
3	Please ensure perfect blending of sand and cement in dry stage. Extra care is to be taken for proper blending of moist sand.						
4	Please use burnt clay bricks after soaking in water. Bricks when struck with trowel should give ringing sound.						
5	For thinner sections use rich mortar, for thick section use lean mortar.						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Section Thickness</th> <th style="width: 50%; text-align: center;">Mortar</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">4.5 inch</td> <td style="text-align: center;">1:4</td> </tr> <tr> <td style="text-align: center;">9.0 inch</td> <td style="text-align: center;">1:6</td> </tr> </tbody> </table>	Section Thickness	Mortar	4.5 inch	1:4	9.0 inch	1:6
Section Thickness	Mortar						
4.5 inch	1:4						
9.0 inch	1:6						
6	Brick masonry / Brick plastering should be water cured for atleast 7 days.						
7	Please consume Mortar or Concrete within 30 minutes of preparation.						
8	Do not allow thicker joints (Max. 15mm)						
9	Do not allow to build more than 1.5 mtr high brick work on any single day.						
10	Do not permit addition of water in mortar during brick laying as commonly done by masons.						
11	Do not use Bricks without FROGS (Key Way)						
12	Water curing should start after initial hardening of Plaster.						

Chapter - 6

TIPS FOR GOOD CONCRETE WORK	
1	Please use water washed, graded and cleans coarse aggregates only.
2	Please use minimum amount of potable water so that it does not drip while transporting concrete and also check each batch of mix by making a ball of concrete mix in hand.
3	Please use mechanical mixer for blending of cement, sand, coarse aggregate and water for large jobs.
4	Please use vibrator for concreting columns. Lintels, beams, roof slab etc. for compaction. Avoid over vibration. Leave proper spacing between two spots for inserting the needles.
5	Please use proper shape & size of shuttering or form work material to hold concrete rigid with proper cover (as per design of covering) over the steel reinforcement bar.
6	Form work should be greased and oiled properly to make it easier to remove from concrete after hardening, thus avoiding shocks / damage to the concrete.
7	Please protect with moist gunny bags over the exposed surface of the concrete member within 0-8 hours of concrete placement.
8	Please do the water curing by sprinkling of water on the vertical surface of concrete (after wrapping by gunny bags) and water flooding to an extent of 25mm depth on the horizontal surface of concrete. This curing should be carried out for atleast 15 days.
CAUTION	
1	A point to note in concreting is the ambient temperature of the area. If the temperature is lower than 30 deg. centigrade the setting of concrete takes longer time and the form removal has to be delayed till the concrete is set.
2	Please check reinforcement laying by an Engineer before concreting. Concrete takes compressive force but tensile force is taken by Steel bars only. Hence, proper design and laying of steel bars is very important.
3	The placement of steel bars in simply supported Beams & slab is to be done in lower portion, while as in cantilever beams/slabs it is in upper portion. Any reversal of placement shall cause failure of structure.
4	The depth of beams/slab depends upon span. Hence, proper design for beams/slab thickness is important.

Chapter - 7

HOW TO PREPARE GOOD CONCRETE	
Do's	
1	Ascertain how much cement, sand and coarse aggregate will be required.
2	Wash the sand and coarse aggregate, if necessary
3	Measure the quantities
4	Mix your materials thoroughly
5	Shuttering should be oiled before concrete is placed on it
6	Place the concrete in position within 30 minutes of addition of water.
7	The concrete should be properly compacted with Vibrator
8	Round the edges with an edging tool.
9	Protect the finished concrete from sun and wind by keeping it continuously wet for atleast 10 days, preferably 14 days.
10	Exposed surfaces should be carefully protected from drying winds and from the sun during the maturing period as too rapid drying reduces strength by atleast one-third.
Don't	
1	Don't use too much or little water for mixing
2	Don't leave the mixing material for more than 30 minutes
3	Don't mix too large batch at one time
4	Don't place concrete on dry foundations without previously wetting them with water.
5	Don't use dirty aggregates or water containing earthy matters
6	Don't leave finished concrete exposed to sun and wind during first 10 days without taking proper precaution to protect it.
7	Don't remove the forms until the concrete is hardened. (Particularly in Winter)

Chapter - 8

RECOMMENDED VOLUMETRIC MIXES (FOR ONE CEMENT BAG BATCH)						
Sl. No.	Application	Cement/ Sand/ Chips Ratio	Stone Chips Max. Size (in mm)	Water in Litres		Best Consistency
				Dry Aggregate s	For Moist/ Wet aggregates	
1	Small pre-cast work ⇒ Fence post ⇒ Any work of thin sec.	1:2:2	16	20	15 to 16	Soft
2	Water high works ⇒ Storage tank ⇒ Well Kerlas	1:2:3	20	25	19 to 22	Medium
2A	Strl. of high stores ⇒ Column ⇒ Complicated structures	1:2:3	20	25	19 to 22	Medium
3	General RCC ⇒ Roof ⇒ Beam ⇒ Column	1:2½ :5:3½	20	32	23 to 27	Stiff
4	Ordinary Floors ⇒ Footpath/Pavements ⇒ Drive ways/Roads ⇒ Steps	1:2½ :3½	20	32	23 to 27	Stiff Or Medium
5	Misc. Works ⇒ Basement wall ⇒ Silos ⇒ M/C. foundation ⇒ Bridges/Dams/Piers ⇒ Frost foundation	1:2:4	40	30	26 to 30	Stiff Or Medium
6	Heavy concrete ⇒ Culverts ⇒ Retaining wall ⇒ Ord. M/c. foundation	1:3:5	40	34	26 to 30	Stiff Or Medium
7	Mass concrete ⇒ Heavy walls ⇒ Lean concrete ⇒ Levelling RCC foundation	1:3:6	63	36	30 to 32	Medium

Chapter - 9

PROPORTION OF SAND / STONE CHIPS	
When both coarse and fine aggregates are properly graded the following general rules regarding suitable proportioning of these will be found helpful.	
1	For maximum size of coarse aggregate as 40mm and over, sand should be half as much as coarse aggregate.
2	For maximum size of coarse aggregates as 20mm, sand should be two-thirds of the coarse aggregate.
3	For maximum size of coarse aggregates as 16mm, sand and coarse aggregate should be in equal parts.
4	In general, a slightly over-sanded mix helps to obtain a dense and water tight concrete.

Chapter - 10

REMOVAL OF FORMS		
In normal circumstances and where Ordinary Portland Cement is used, forms may generally be removed after the expiry of the following periods :		
1	Walls, columns and vertical faces of all structural members	24 to 48 hours (as may be decided by the Engineer-in-Charge)
2	Slab (props left under)	3 days
3	Beams soffits (props left under)	7 days
4	Removal of props under slab :	
	i) Spanning upto 4.5 m	7 days
	ii) Spanning over 4.5 m	14 days
5	Removal of props under beams and arches :	
	i) Spanning upto 6 m	14 days
	ii) Spanning over 6 m	21 days
For other cements, the stripping time recommended for Ordinary Portland Cement may be suitably modified. PSC requires slightly longer periods than those specified above.		
Patching		
While utmost care in removing forms should be used, frequently imperfections are unavoidable. Patching should be done with cement and sand mortar mixed in the same proportion as used for the original concrete and applied immediately after the forms are removed. A creamy wash of cement and water is often applied to the entire surface, particularly in the case of structures which are to be water tight. A wash of this kind fills smaller bubble holes also.		
CAUTION		
1	The shuttering contractor has a tendency to remove forms of column before 24/48 hours. Please avoid it.	
2	The number of props left under their sizes and disposition shall be such as to be able to safely carry the full dead load of the slab, beam or arch as the case may be together with any live load likely to occur during curing or further construction.	

Chapter - 11

ESTIMATED MATERIALS FOR CONCRETING ROOF SLAB (ONE SQ. MTR.)											
Nominal Mix.	Material	Quantity for Concrete thickness of									
		10CM	20CM	30CM	40CM	50CM	60CM	70CM	80CM	90CM	100CM
1:1:2	Cement (Kg)	56	112	168	224	280	338	392	448	504	560
	Sand (Ltr)	39	78	117	157	196	214	274	314	353	392
	Chips (Ltr)	78	157	236	314	392	470	549	626	715	784
1:1:5:3	Cement (Kg)	39	79	118	158	197	237	277	316	356	395
	Sand (Ltr)	41	82	124	165	207	248	289	331	372	414
	Chips (Ltr)	83	166	249	332	414	497	580	662	745	828
1:1:5:3.5	Cement (Kg)	36	73	109	146	182	219	256	292	328	363
	Sand (Ltr)	42	84	126	168	209	251	293	335	377	419
	Chips (Ltr)	84	168	251	335	419	503	586	670	754	838
1:2:4	Cement (Kg)	31	62	938	124	155	186	217	248	279	310
	Sand (Ltr)	43	87	130	174	217	260	304	347	390	434
	Chips (Ltr)	87	74	260	347	434	521	608	695	782	868
1:2.5:5	Cement (Kg)	26	51	77	102	128	153	179	204	230	255
	Sand (Ltr)	45	89	134	179	223	268	312	357	402	446
	Chips (Ltr)	89	178	268	357	446	535	625	714	803	892
1:3:5	Cement (Kg)	24	48	72	96	120	144	168	192	216	240
	Sand (Ltr)	50	101	151	202	252	302	353	403	454	504
	Chips (Ltr)	84	168	252	336	420	504	588	672	756	840
1:3:6	Cement (Kg)	22	43	64	86	108	129	151	172	194	215
	Sand (Ltr)	45	90	136	181	226	272	317	362	407	452
	Chips (Ltr)	90	181	271	362	454	542	633	723	813	904
1:4:8	Cement (Kg)	17	33	49	66	82	99	106	132	149	165
	Sand (Ltr)	46	92	139	185	231	278	324	370	416	462
	Chips (Ltr)	92	195	277	370	462	554	646	739	831	924

Notes :

- 1) For gravel aggregates decrease cement by 5 percent, increase fine aggregates by 2 percent and coarse aggregates in proportion to coarse aggregate given in the mix.
- 2) No allowance has been made in the table for bulking of sand and wastage.

Chapter - 12

ESTIMATED QTY. FOR ONE CU.MTR. OF COMPACTED CONCRETE/MORTAR								
Normal Mix.			Water		Cement			
Cement	Fine Aggre.	Coarse Aggre.	Water Cement ratio	Qty. (in Ltrs) Per bag	By Weight Kg.	By Bags Nos.	Sand In Ltrs	Broken Stone in Ltrs
1	1.0	-	0.25	12.50	1015	20.30	710	-
1	1.5	-	0.28	14.00	815	16.30	855	-
1	2.0	-	0.35	15.00	585	13.75	963	-
1	2.5	-	0.35	17.50	585	11.70	1023	-
1	3.0	-	0.40	20.00	505	10.10	1060	-
1	4.0	-	0.53	26.50	395	7.90	1106	-
1	6.0	-	0.70	35.00	285	5.70	1197	-
1	8.0	-	0.90	45.00	220	4.40	1232	-
1	1.0	2.0	0.30	15.00	560	11.20	392	784
1	2.0	2.0	0.42	21.00	430	8.60	602	602
1	1.5	3.0	0.42	21.00	395	7.90	414	828
1	1.5	3.5	0.42	24.00	363	7.25	419	838
1	2.0	3.5	0.53	26.50	330	6.60	462	808
1	2.0	4.0	0.55	27.50	310	6.20	434	868
1	2.5	3.5	0.75	28.50	305	6.10	534	748
1	2.5	4.0	0.60	30.00	285	5.70	499	798
1	3.0	4.0	0.65	32.50	265	5.30	556	742
1	2.5	5.0	0.65	32.50	255	5.10	446	892
1	3.0	5.0	0.69	34.50	240	4.80	504	840
1	3.0	6.0	0.75	37.50	215	4.30	452	904
1	4.0	8.0	0.95	47.50	165	4.30	462	924

1 Cum = 1000 Ltrs.

- Notes: i) The table is based on the assumptions that the voids in sand and broken stones are 40%, 45% respectively.
- ii) For gravel aggregate, decrease Cement by 5%, increase sand by 2% and coarse aggregate in proportion in mix.
- iii) No allowance has been made in the table for bulking of sand and wastage.

Chapter - 13

STEEL RODS (WEIGHT / AREA / PERIMETER)														
Bar Dia mm	Wgt. Per mtr Kg.	Per Meter Cm.	Area Sq. Cm. for various numbers of Bars											
			1	2	3	4	5	6	7	8	9	10	11	12
			5	0.154	1.57	0.20	0.39	0.59	0.78	0.96	1.18	1.37	1.57	1.77
6	0.222	1.89	0.28	0.56	0.85	1.13	1.41	1.70	1.98	2.26	2.40	2.83	3.11	3.40
8	0.395	2.51	0.50	1.00	1.51	2.01	2.51	3.01	3.52	4.02	4.52	5.03	5.53	6.04
10	0.617	3.14	0.79	1.57	2.36	3.14	3.93	4.71	5.50	6.28	7.07	7.85	8.64	9.42
12	0.888	3.77	1.13	2.26	3.39	4.52	5.65	6.78	7.91	9.05	10.18	11.31	12.44	13.57
14	1.210	4.40	1.50	3.08	4.62	6.16	7.70	9.24	10.77	12.32	13.86	15.39	16.94	18.48
16	1.580	5.03	2.01	4.02	6.03	8.04	10.05	12.06	14.07	16.08	18.09	20.11	22.12	24.13
18	2.000	5.65	2.54	5.09	7.63	10.18	12.72	15.26	17.81	20.36	22.90	25.45	27.99	30.54
20	2.470	6.28	3.14	6.28	9.42	12.57	15.71	18.84	21.99	25.14	28.28	31.42	34.56	37.10
22	2.980	6.91	3.80	7.60	11.40	15.21	19.01	22.81	26.61	30.41	34.21	38.01	41.81	45.62
25	3.850	7.85	4.91	9.82	14.73	19.63	24.54	29.40	34.36	39.27	44.18	49.09	54.00	58.91
28	4.830	8.80	6.16	12.31	18.47	24.63	30.79	36.94	43.10	49.26	55.42	61.58	67.73	73.89
32	6.310	10.05	8.04	16.08	24.13	32.17	40.21	48.26	56.30	64.36	72.38	80.42	88.47	96.51
36	7.990	11.31	10.18	20.36	30.54	40.72	50.90	61.07	71.26	81.43	91.61	101.79	111.97	122.15
40	9.860	12.57	12.57	25.13	37.70	50.26	62.83	75.40	87.96	100.53	113.09	125.66	138.23	150.80
45	12.500	14.14	15.90	31.81	47.71	63.62	79.52	95.42	111.33	127.32	143.14	159.04	174.94	190.85
50	15.400	15.71	19.63	39.27	58.91	78.54	98.18	117.81	137.45	157.08	176.72	196.35	215.99	235.62

Chapter - 14

BIS SPECIFICATIONS (PHYSICAL)											
Sl No	Type of Cement	Indian Standards	Fine ness	Sound ness	Maxi- mum	Setting Time (Mins)		Minimum Compressive Strength (MPa)			
			Min. Sp. Surf Sq.m/Kg	Le.Chart expan. In mm	Auto Clave Expansion In %	Initi al Min.	Final Max.	1 Day	3 Day	7 Day	28 Day
1	33 Grade O.P.C.	269/1989	225	10	0.8	30	600	-	16.0	22.0	33.0
2	Portland Pozzolana cement	1489/1991	300	10	0.8	30	600	-	16.0	22.0	33.0
3	Portland Slag cement	455/1989	225	10	0.8	30	600	-	16.0	22.0	33.0
4	43 Grade O.P.C.	5112/1989	225	10	0.8	30	600	-	23.0	33.0	43.0
5	53 Grade O.P.C.	12269/1987	225	10	0.8	30	600	-	27.0	37.0	53.0
6	Rapid Hardening Portland	8041/1990	325	10	0.8	30	600	16.0	27.0	-	-
7	Low heat Portland	269/1989	320	10	0.8	60	600	-	10.0	16.0	35.0
8	Hydrophobic Portland	8043/1991	350	10	0.8	30	600	-	16.0	22.0	33.0
9	White Portland**	8042/1989	225	10	0.8	30	600	-	14.4	19.8	29.7
10	Sulphate Resisting OPC	12330/1988	225	10	0.8	30	600	-	10.0	16.0	33.0
12	Masonry	3466/1988	15***	10	1.0	90	1440	-	-	2.5	5.0

* Average drying shrinkage of mortar bar not greater than 0.15 percent.

** Degree of whiteness not less than 70 percent of standard magnesium oxide (MgO) block.

*** For fineness, maximum residue on 45-micron is sieve not greater than 15 percent.
Minimum air content of 1.3 cement sand mortar not less than 6 percent. Minimum flow after suction of 1.3 cement sand mortar less than 60.

Chapter - 15

BIS SPECIFICATIONS (CHEMICAL)										
Sl No	Type of Cement	Indian Standards	Max. Inso-luble Residue (IR)%	Max. Magnesia (MgO) %	Maximum Sulphur Percent		Sulphide Sulphur	Max. Loss On Ignition (LOI)	Lime Factor (Min)	Saturation (LSF) (Max)
					As Sulphuric Anhydride (SO ₃)					
					C3A <5%	C3A >5%				
1	Ordinary Portland	269/1989	4.0 (if PI is added then max 5%)	6.0	2.75	3.0	-	5.0	0.66	1.02
2	Portland Pozzolana	1489/1991	$X+2.0 \frac{(100-X)}{100}$	6.0	3.00	3.0	-	5.0	-	-
3	Portland Slag Cement	455/1989	4.0	6.0	3.00	3.0	1.5	5.0	-	-
4	43 Grade O.P.C.	8112/1989	2.0	6.0	2.75	3.0	-	5.0	0.66	1.02
5	53 Grade O.P.C.	12269/1987	2.0	6.0	2.50	3.0	-	4.0	0.80	1.02
6	Rapid Hardening Portland	8041/1990	4.0	6.0	2.50	3.0	-	5.0	0.66	1.02
7	Low heat Portland	269/1989	4.0	6.0	2.75	3.0	-	5.0	0.66	1.02
8	Hydrophobic Portland	8043/1991	4.0	6.0	2.75	3.0	-	5.0	0.66	1.02
9	White Portland**	8042/1989	4.0	6.0	2.75	3.0	-	5.0	0.66	1.02
10	Sulphate Resisting OPC	12330/1988	4.0	6.0	2.50	-	-	5.0	C3A<5	(C4AF+2C3A)<25
12	Masonry	3466/1988	-	-	-	-	-	-	-	-

* $\frac{X+2.0(100-x)}{100}$ where X = %age of pozallana added

** Ferrous oxide Fe₂O₃ or (F) < 1.0 percent.

*** The percentage of lime after deduction of that necessary to combine with the sulphuric anhydride percent shall be :
Not less than 2.6 (SiO₂)+(Al₂O₃+0.65 (Fe₂O₃), and
Not less than 1.9 (SiO₂)+1.2 (Al₂O₃)+ 0.65 (Fe₂O₃)

Chapter - 16

VAASTU GUIDELINES	
<p>Vaastu Shastra is an ancient science which outlines the method of constructing houses and other structures. It has been the belief of Indians over generations that the location, direction and disposition of various rooms in a house have a bearing on the health, happiness and prosperity of its inmates.</p> <p>Vaastu can be applied not only to individual residential houses but also to multi-story apartments, colony layout, industrial layouts, commercial complexes, hospitals, temples etc.</p>	
PRINCIPLES OF VAASTU FOR PLOT / BUILDINGS	
Plot / Site Selection	
1	Ideally the plot should be a square one. A rectangular plot where the length does not exceed twice the width is also good. All other odd shapes such as polygons, triangles, circles etc. are not desirable. Plots which are not as per Vaastu need to be corrected.
2	East and North facing sites should be preferred to those facing West and South.
3	Plots where the North-East angle is less than 90, South-West corner is 90, North-West and South-East corners are 90 or more are preferable. North-East corner should have a projection.
4	It is always preferable to have Roads on the northern and eastern side of the plot. Plots having roadson South and West are good for businessmen. Whereas the plots with South and East roads are good for women and women's organizations.
5	While sitting a building, more space should be left in the North and East compared to South and West. Keep the North-East open in any construction.
6	Land adjoining the plot towards South and West should preferable be elevated.
7	In the plot, level should be such that water flows from West to East and from South to North.
Water Tank / Well	
1	Overhead water tank to be placed in the South West preferably. Under no circumstances should an overhead tank be placed in the North-East.
2	Wells or Water pumps should be placed in the North-East part of the plot - a few feet away from the corner.
Room Location	
1	Pooja room should preferably be in the North-East and Kitchen should be in the South-East or in the North-West as the second best alternative.
2	Master Bedroom should be in the South-West.
3	Bathrooms are normally sited in the East. Next best is South-East or North-East.
4	Store Room should be in the South, West or South-West corner.

Utilities	
1	Toilets to be avoided in the North-East corner of the House.
2	Septic Tanks should be sited in the South-East or North-West.
3	S. Tank to be placed in the North-West.
Office / Factory	
1	In offices, executives, officers and staff to be seated such that they face the East or North preferably.
2	In factory buildings or sheds, heavy machinery should be placed in the South-West and Boilers/Furnaces in the South-East.
General	
1	Garages should be located in the North, West or North-West.
2	Varandahs can be in the North & East.
3	Extensions towards North and East are permitted.
4	Roof slope has to be towards North, East or North-East.
5	The height of the building should be more on the South and West and it should be less in the North and East.
6	Staircase may be provided in any corner other than North-East. It should preferably be in South-West because of its height and weight.
7	Entrance to the building should preferably be from the North or East.
8	Cellars in the North, East and North-East portions or the ground floor are good.
9	Balconies should be towards East and North.
<p>It is pertinent however to mention here that some may or may not believe in VAASTU. Only those who believe and have faith in VAASTU may consider implementing the VAASTU principles wherever practicable in the constructions.</p> <p>An attempt has been made to give an inside into the basic principles of VAASTU. For detailed requirements experts on VAASTU may be consulted.</p>	