

## 5 REINFORCED CEMENT CONCRETE

SL NO	DESCRIPTION	UNIT	RATE (Rs p)
5.01	Providing and laying in position reinforced cement concrete excluding cost of centering and shuttering , finishing and reinforcement in - All work upto plinth level :		
(a)	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal	cum	7832.30
(b)	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal	cum	7101.00
5.02	Extra Rate for RCC using 12.50mm size well graded stone aggregates instead of 20mm size in RCC 1:2:4 .	cum	0.00
5.03	Reinforced cement concrete work in walls including attached pillasters, columns, pillars, posts, piers, abutments, return walls, retaining walls, struts, buttresses, string or lacing courses, fillets etc. upto floor five level excluding cost of centering shuttering etc complete		
(a)	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size)	cum	7847.20
(b)	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal	cum	7116.40
5.04	Reinforce cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, window sills, stair cases, spiral stair cases, cantilevers upto floor five level excluding cost of centering shuttering etc complete. with 1:2:4(1cement : 2 coarse sand :4 stone aggregate 20mm)		
	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	cum	7387.20

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SL NO	DESCRIPTION	UNIT	RATE (Rs p)
5.05	Reinforced cement concrete work in arches, archribs, domes, vaults, shells, folded plates, roofs having slope more than 15 degree upto floor five level or floor two below from the ground floor (as indicated in the drawing).excluding the cost of centering shuttering etc complete.	<i>cum</i>	7394.40
5.06	Reinforced cement concrete work in chimney & shafts upto floor five level excluding the cost of centering shuttering and reinforcement with 1:2:4 (1cement :2coarse sand :4stone aggregate).	<i>cum</i>	7191.90
5.07	Reinforced cement concrete work in well-steining excluding the cost of centering shuttering and reinforcement with 1:2:4 (1cement :2coarse sand :4stone aggregate).	<i>cum</i>	6912.80
5.08	Reinforced cement concrete work in Vertical and horizontal fins, individually or forming box louvres, facias and eaves boards upto floor five level excluding centering shuttering and reinforcement with 1 :1.5: 3 (1cement :1.5coarse sand :3stone aggregate 20mm).	<i>cum</i>	8284.70
5.09	Extra for providing and mixing water proofing material in plain and reinforced cement concrete work in the proportion recommended by the manufacturers.	<i>cum</i>	122.50
<b>MISCELLANEOUS</b>			
5.10	Extra for plain and reinforced cement concrete works in superstructure above or below floor two level for every floor or part thereof.	<i>bag</i>	435.60
5.11	Centering and shuttering including strutting,propping etd. And removal of form for:		
(a)	Foundations, footings, bases of columns etc. for mass concrete.	<i>sqm</i>	299.70
(b)	Walls including attached pillasters, buttresses, string courses, etc.	<i>sqm</i>	422.10

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	(c) Columns, pillars, piers, abutments, posts and struts.	sqm	506.30
	(d) Lintels, beams, plinth beams, girders, bressumers and cantilevers, etc.	sqm	400.10
	(e) Suspended floors, roofs, landings, shelves and their support, balconies and chajjaj, etc.	sqm	536.30
	(f) Staircases ( <i>except spiral staircase</i> ) excluding landings.	sqm	442.30
	(g) Spiral staircases including landings.	sqm	587.30
	(h) Arches, domes, vaults upto 6m span.	sqm	1161.10
	(i) Chimneys and shafts	sqm	422.10
	(j) Well steining	sqm	326.30
	(k) Vertical and horizontal fins individually or forming box, louvres and bends, eaves boards. <i>(Basis : CPWD Analysis of Rates, 1997 Vol-II)</i>	sqm	662.20
<b>5.12</b>	Smooth finishing of the exposed surface of RCC work with 6mm thick cement mortar 1:3 (1cement : 3fine sand)	sqm	152.2
<b>5.13</b>	Applying cement slurry on RCC slabs or on cement concrete work using 2.75 kg/sqm for receiving cement concrete floor including roughening, clearing etc. complete.	sqm	43.90
<b>5.14</b>	Providing and filling in position blown bitumen in expansion joints.	100m	720.30
<b>5.15</b>	Providing and filling in position bitumen mix filler of		
<b>5.16</b>	Providing and fixing MS fan clamp 12mm dia HYSD bar bent to shape with hooked end in RCC slabs during laying including painting the exposed portion of loop complete.	No	89.90

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SL NO	DESCRIPTION	UNIT	RATE (Rs p)
5.17	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like including the cost of required centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size).	cum	7035.30
5.18	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete in small lintels not exceeding 1.5m clear span upto floor five level including the cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	11939.10
5.19	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete in mouldings as in cornices, windows sills etc. including setting in cement mortar 1:3 (1 cement : 3 coarse sand) cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	13604.70
5.20	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring and shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	12817.30
5.21	Steel reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete.		
	(a) Mild steel and Medium Tensile steel bars.	kg	61.80
	(b) Hard drawn steel wire	kg	129.80
	(c) Cold twisted bars	kg	83.7

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SL NO	DESCRIPTION	UNIT	RATE (Rs p)
	(d) Hot rolled deformed bars	kg	82.20
	(e) Hard drawn steel wire fabric	kg	52.90
	(f) Thermo-Mechanically Treated bars.	kg	83.70
5.22	Extra for rendering smooth the top of suspended floors, landings and staircases (treads and risers) with cement mortar 1:2 (1 cement : 2 coarse sand) including a floating coat of neat cement and protecting the surface with a layer of 7.5 cm of earth laid over 15 mm of fine sand in case of suspended floor and bricks laid in mud mortar in case of landings and steps including subsequent removal and cleaning of the same.	sqm	130.20
5.23	Providing and fixing in position copper plate as per design for expansion joints.	kg	223.40
5.23	Providing and filling in position bitumen mix filler of proportion 80 kg. of hot bitumen, 1 kg. of cement and 0.25 cubicmetre of coarse sand for expansion joints.	100m	221.80
5.24	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing sand for expansion joints. compound in expansion joints.	100m	540.10
5.25	Providing and fixing sheet covering over eapansion joints with iron screws as per design <b>Asbestos sheet 6 mm thick.</b>		
	(a) 150mm wide.	m	201.60
	(b) 200mm wide.	m	270.10
	( c) <b>Aluminium fluted strips 3.15mm thick.</b> 150 mm wide.	m	285.30
	(d) 200 mm wide.	m	373.00
5.26	Add for plaster drip course / groove in plastered surface or moulding to RCC projections.	m	32.90
5.27	Extra for laying reinforced cement concrete in or under water and/ or liquid mud including cost of pumping or bailing out water and removing slush etc., complete.	m	413.40

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SL NO	DESCRIPTION	UNIT	RATE (Rs p)
5.28	Extra for laying reinforced cement concrete in or under foul positions.	m	134.00
	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centring, shuttering, finishing and reinforcement. including		
5.29	Admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete improve workability without impairing strength and durability as per direction of Engineer-in-charge - M-20 grade reinforced cement concrete. Cement content considered in this item is @ 320 kg/cum		
	(a) All works upto plinth level.	m	8736.60
	(b) All work from plinth level upto floor V level.	m	9282.50
5.30	Extra for R.C.C. work above floor V level for each four floors or part thereof.	m	435.60
5.31	Extra for providing richer or leaner mixes respectively at all floor levels .	m	111.00
	(a) Providing M-25 grade R.C.C. instead of M-20 grade R.C.C.		
	(b) Providing M-30 grade R.C.C. instead of M-20 grade R.C.C.	m	222.00
	(c) Providing M-35 grade R.C.C. instead of M-20 grade R.C.C.	m	333.00
5.32	Providing and fixing 15cm dia at top and 20cm at bottom 90cm high precast RCC 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm size) boundary stone as per standard design including smooth finishing with cement mortar 1:3 (1cement : 3 fine sand), curing etc. complete. (excluding cost of excavation, refilling and concreting).	m	557.70
	Providing and fixing precast RCC standard post 1.8m long concrete 1:2:4 (1 cement : 2 coarse sand : 4 well graded stone aggregates 12.50mm size) standard posts with wooden plugs or 6mm bar nibs including smooth finishing with cement mortar 1:3 (1cement : 3 fine sand), curing etc. complete. (excluding cost of excavation, refilling and concreting).	No	841.40

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SL NO	DESCRIPTION	UNIT	RATE (Rs p)
<b>Design Mix Concrete</b>			
<b>5.33</b>	Providing and laying in position machine batched, machine mixed and machine vibrated design mix M-20 grade reinforced cement concrete excluding cost of centering and shuttering and reinforcement in -		
	(a) All work upto plinth level.	m	8847.30
	(b) All work above plinth level upto floor V level.	m	9393.30
<b>5.34</b>	Providing and laying in position machine batched, machine mixed and machine vibrated design mix M-25 grade reinforced cement concrete excluding cost of centering and shuttering and reinforcement in -		
	(a) All work upto plinth level.	cum	8952.26
	(b) All work upto plinth level.	cum	9498.26
<b>5.35</b>	Providing and laying in position machine batched, machine mixed and machine vibrated design mix M-30 grade reinforced cement concrete excluding cost of centering and shuttering and reinforcement in -		
	(a) All work upto plinth level.	cum	9057.24
	(b) All work upto plinth level.	cum	9603.24
<b>5.36</b>	Providing and laying in position machine batched, machine mixed and machine vibrated design mix M-35 grade reinforced cement concrete excluding cost of centering and shuttering and reinforcement in -		
	(a) All work upto plinth level.	cum	9162.20
	(b) All work upto plinth level.	cum	9708.20
<b>5.37</b>	Providing and applying high range water reducing plasticiser for concrete, to produce very high early strength concrete in floor slabs, foundations, slender components with dense reinforcement as in walls, columns, cantilevers etc, .	cum	676.41