

## Bill of Quantity

### Water proofing treatment & allied Civil works at Staff Quarters (Karmi Abas) at Kasba, Kolkata.

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
1.0	Repairing of crack in wall, roof etc. by cement grouting (1:2) including widening the crack on the surface (into V-section) cleaning and packing the same with cement mortar (1:2) and finishing off to match with adjacent surface. (Cement-69 Kg/100 m).	300	Mtr.	13.92	4,176.00
2.0	Dismantling all types of masonry excepting cement concrete plain or reinforced, stacking serviceable materials at site and removing rubbish as directed within a lead of 150m. At any floor including roof.	2	Cum	447.00	894.00
3.0	Dismantling all types of plain cement concrete works, stacking serviceable materials at site and removing rubbish as directed with a lead of 150m at any level.	2	Cum	1,417.00	2,834.00
4.0	Stripping off worn out plaster and raking out joints of walls, ceilings etc upto any height and in any floor including removing rubbish within a lead of 150m as directed.	300	Sqm.	19.00	5,700.00
5.0	Cleaning the concrete surface by removing dirt and debris, marking defective locations and removing loose concrete by careful stripping untill hard surface is exposed, cutting the concrete to regular shape, wire brushing the exposed surface and removing debris from site complete as per direction of the Engineer - in - Charge.	50	Sqm.	90.00	4,500.00
6.0	Cleaning the exposed reinforcement preferably upto full diameter by wire brush, applying two coats of polymer based rust removing compound left for 24 hours, removing the coating and then applying two (2) coats of polymer modified anti corrosive protective coating formulated to inhibit the corrosion of reinforcement as per manufacturer's specification				
6.1	Providing & applying rust removing compound (Sika Rustoff 100 or equivalent).	2	Kg	312.00	624.00
6.2	Providing & applying polymer modified anti corrosive protective coating (Sika Rustop or equivalent).	2.5	Kg	245.00	612.50
7.0	Applying 2 coats of bonding agent with synthetic multi functional rubber emulsion having adhesive and water proofing properties by mixing with water in proportion (1 bonding agent : 4 water : 6 cement) as per Manufacturer's specification and direction of EIC.	50	Sqm.	88.00	4,400.00
8.0	Providing & mixing polymer based water resistant, bonding agent like Dr. Fixit 101 LW+/ Sika Latex power or equivalent in cement plaster, concrete etc. as per manufacture's specification and direction of EIC.	10	Lit.	360.00	3,600.00
9.0	Brick work with 1st class bricks (Class designation 75) in cement mortar (1:6) In superstructure at any floor.	1	Cum	5,636.00	5,636.00
10.0	125mm thick brick work with 1st class bricks in cement mortar (1:4) at any floor.	10	Sqm.	736.00	7,360.00

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
11.0	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary at any height. With 1:4 cement mortar, 20mm thick plaster.	300	Sqm.	194.00	58,200.00
12.0	Neat cement punning about 1.5mm thick in wall, dado, window, sill, floor etc. NOTE: Cement 0.152 cu.m per100 sq.m.	100	Sqm.	34.00	3,400.00
13.0	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering at any floor/ level as per relevant IS code. 1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size).	2	Cum	6,374.25	12,748.50
14.0	Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams, columns, lintels, curved or straight including fitting, fixing and striking out after completion of works. 25mm to 30mm thick wooden shuttering without staging.	10	Sqm.	209.00	2,090.00
15.0	Taking out old damaged tarfelt/ APP membrane very carefully from the roof, parapet etc. preparing the roof surfaces by removing all spoils, blisters, moss etc. from the working site and disposal of the same beyond the compound and cleaning the site in all respect as per direction of Engineer-in-Charge.	200	Sqm	12.00	2,400.00
16.0	Preparation of drainage spout on roof for bituminous waterproofing treatment after required grading and shaping of the under bed with Cement Concrete (1:2:4) or Cement Mortar (1:4) as directed, Chamfering and moulding the parapet wall to form a bell mouth entry, if required and providing full course treatment with bituminous felt to facilitate quick and smooth drainage of water into the down pipes complete including cost of all materials and labour according to satisfaction of the Engineer - in - Charge.	10	Each	110.00	1,100.00
17.0	Supplying & laying 3mm thick pre-fabricated plastomeric water proofing membrane conforming to EN 12311-1 & ASTM D 5147, manufactured with atactic poly propylene (APP) modified premium grade asphalt , specially reinforced with non-woven polyester core with polyester reinforcement @160 gms per sqm & both faces covered with thermo-fusible polyethylene film /Mineral on top face over a coat of primer @ 0.40 lit/sqm of manufacturer's specification on smooth, clean dry surface prepared wherever required including repairing the old surface with cement mortar (1:2) admixing Sika Latex etc. Lap joint shall be provided of 75 mm in longitudinal & 100 mm in transverse direction and fused using LPG/ Propane torch employing extra care ensuring full bondage, complete removal of entrapped air and sealing edges into grooves in appropriate manner as per direction of Engineer -in-charge all complete including materials, labour and applicable taxes. Membrane Property: Softening Point > 150 deg C, Cold Flexibility < -6 deg C, Tensile Strength, N/cm : 600 (longitudinal), 450 (transverse), Tearing Strength, N: 300 (longitudinal), 200 (transverse)	200	Sq.m	407.00	81,400.00

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	<b>The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane following manufacturer's specification.</b> Necessary groove to be made on vertical wall and inserted the APP membrane into the groove, including mending the damages, complete. (Payment shall be made on the basis of finished surface area, no extra payment for lapping/ wastage / grooving & mending etc.) <i>Make : Sika India Pvt Ltd or equivalent approved make.</i>				
18.0	Painting with superior quality aluminium paint of approved make and brand over the top surface of APP membrane. <i>Two or more coats .</i> The rate is inclusive of all materials, labour, taxes, scaffolding, staging, safety measures, insurance coverage for workmen and other incidental charges complete. Manufacturer: ICI, Asian paints, Berger, Nerolac or equivalent.	200	Sqm	57.00	11,400.00
19.0	Sealing new/ old expansion joint with Elastomeric polysulphide Sealant of gap size 50mm X 25mm Including cleaning of the expansion joint thoroughly, mending of edges & surface, placing 50mm dia Backer rod as back up material with the cost of materials, labours & all other incidental charges as per manufacturer's specification & direction of Engineer-in-charge.	10	Mtr.	792.00	7,920.00
20.0	Filling the gap in between aluminium frame & adjacent RCC / Brick/ Stone work by providing weather silicon sealant over 6mm dia backer rod of approved quality as per architectural drawings and direction of Engineer-in- Charge complete. Upto 5 mm depth and 5 mm width. The work is to executed on the inside or out side wall upto 30m height from ground level. The rate is inclusive of materials , labour, scaffolding etc. complete.	10	Mtr.	69.00	690.00
21.0	Supplying, fitting & fixing UPVC pipes A- Type and fittings conforming to IS:13592-1992 with all necessary clamps, nails, including making holes in walls, floor etc. cutting trenches in any soil through masonry concrete structures etc if necessary and mending good damages including joining with jointing materials (Spun Yarn, Valamoid/Bitumen/M-Seal etc) complete. (Make: Supreme, Oriplast, Ashirvad or equivalent)				
21.1	UPVC Pipe: 110mm dia.	60	Metre	251.00	15,060.00
21.2	UPVC Pipe: 160mm dia.	30	Metre	485.00	14,550.00
	<b>UPVC Fittings</b>				
21.3	Plain Tee: 110 mm dia.	4	Each	172.00	688.00
21.4	Plain Tee: 160 mm dia.	2	Each	507.00	1,014.00
21.5	Plain Y: 110 mm dia.	2	Each	223.00	446.00
21.6	Plain Y: 160 mm dia.	2	Each	579.00	1,158.00
21.7	Bend 87.5 degree: 110 mm dia.	8	Each	140.00	1,120.00
21.8	Bend 87.5 degree: 160 mm dia.	2	Each	346.00	692.00
21.9	Shoe: 110 mm dia.	4	Each	111.00	444.00
21.10	Shoe: 160 mm dia.	2	Each	305.00	610.00
21.11	Door Tee: 110 mm dia.	2	Each	195.00	390.00

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21.12	Door Tee: 116 mm dia.	2	Each	514.00	1,028.00
21.13	Door Bend 87.5 degree: 110 mm dia.	2	Each	147.00	294.00
21.14	Door Bend 87.5 degree: 160 mm dia.	2	Each	369.00	738.00
21.15	Half Bend 45 degree: 110 mm dia.	2	Each	89.00	178.00
21.16	Half Bend 45 degree: 160 mm dia.	2	Each	293.00	586.00
21.17	Vent Cowl: 110 mm dia.	4	Each	33.00	132.00
21.18	Vent Cowl: 160 mm dia.	2	Each	57.00	114.00
21.19	Pipe clip: 110 mm dia.	15	Each	21.00	315.00
21.20	Pipe clip: 160 mm dia.	15	Each	43.00	645.00
22.0	Providing & Fixing of MS clamps of approved design & shape for fixing of UPVC pipes including cutting holes in wall etc. and mending good all damages.				
22.1	MS Clamp: 110 mm dia.	10	Each	50.00	500.00
22.2	MS Clamp: 160 mm dia.	10	Each	75.00	750.00
23.0	Uprooting and removing plants from the surface of walls parapet etc and making good damages. (Repairing of damages to be paid separately). Small plant of girth of exposed stem upto 75 mm. The work includes any height of the exterior wall, roof etc and treatment to be done with CuSO4 (Copper sulphate solution) and mending damages good with C.C. (1:1.5:3) including sika latex. The cost of concrete shall be paid separately.	10	Each	50.00	500.00
24.0	Supplying, fitting and fixing fiber reinforced polymer (FRP) Composite door frame as per approved section with glass fiber reinforced plastic moulded skins and a special sandwich core, so as to impart monolithic composite structure as per approved technology of Department of Science and Technology (DST) to satisfy IS: 4020 door testing performance criteria. Size: 66 mm x 70 mm	30	Mtr	446.00	13,380.00
25.0	Supplying, fitting & fixing fiber reinforced polymer (FRP) composite door shutters as per approved design with glass fiber reinforced plastic moulded skins and a special sandwich core, so as to impart monolithic composite structure as per approved technology of Department of Science and Technology (DST) to satisfy IS:4020 door testing performance criteria. <b>25 mm thick panel.</b>	10	Sqm	2,581.00	25,810.00
26.0	Supplying, fitting and fixing M.S. clamp for door and window frame made of flat bent bar, end bifurcated with necessary screws etc in cement concrete (1:2:4) including cutting of brick work/ concrete work as per direction. (Cost of concrete will be paid saperately) 40 mm x 6 mm x 200 mm long	24	Each	25.00	600.00
27.0	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete. 100 mm x 58 mm x 1.90mm	20	Each	65.90	1,318.00
28.0	Anodised aliminium D-type handle of approved quality manufactured from extruded section conforming to I.S. Specification (I.S. 230/72) fitted and fixed complete. With continuous base plate (Hexagonal/ Round rod) 150 mm grip x 12 mm dia rod.	10	Each	111.00	1,110.00
29.0	Anodized aluminium barrel / tower / socket bolt (full covered) of approved quality manufactured from extruded section conforming to IS:204/74 fitted & fixed with cadmium plated screw. 300mm long x 12mm dia bolt.	10	Each	151.00	1,510.00

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30.0	Iron hasp bolt of approved quality fitted and fixed complete (oxidised) with 16 mm dia rod with centre bolt and round fitting - 300 mm long.	10	Each	166.00	1,660.00
31.0	Supplying bubble free float glass of approved make and brand conforming to IS : 2835-1987 and fixed with nails, putty etc complete. 4 mm thick coloured / tinted / smoke glass.	10	Sqm	468.00	4,680.00
32.0	Applying Water based interior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive Distemper/Acrylic emulsion paint including scraping and preparing the surface thoroughly, complete as per manufacturer's specification and as per direction of the EIC (At any Floor) Water based interior grade Acrylic Primer- One Coat.	430	Sqm.	30.80	13,244.00
33.0	Applying Acrylic emulsion paint of approved make and brand on walls and ceiling including sand papering in intermediate coats including putty (to be done under specific instruction of EIC). Two Coats Standard quality (as approved by the Engineer-in-Charge)	430	Sqm.	62.00	26,660.00
34.0	Priming one coat one timber or plastered surface with synthetic oil bound primer of approved quality including smoothing surfaces by sand papering etc.	50	Sqm.	38.00	1,900.00
35.0	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothing surfaces by sand papering etc.	100	Sqm.	29.00	2,900.00
36.0	Painting with best quality synthetic enamel paint of approved make and brand including smoothing surface by sand papering etc. including using of approved putty etc. on the surface, if necessary.				
36.1	Two coats (with any shade except white) with high gloss on timber or plastered surface.	50	Sqm.	81.00	4,050.00
36.2	Two coats (with any shade except white) with high gloss on steel or other metal surface.	100	Sqm.	79.00	7,900.00
37.0	Applying Exterior grade Acrylic primer of approved quality and brand on plastered or concrete surface old or new surface to receive decorative textured(matt finish) or smooth finish acrylic exterior emulsion paint including scraping and preparing the surface thoroughly, complete as per manufacturer's specification and as per direction of the EIC. (At any Floor). One Coat & more	500	Sqm.	31.40	15,700.00
38.0	Protective and Decorative Acrylic exterior emulsion paint (weather coat) of approved quality, as per manufacturer's specification and as per direction of EIC to be applied over acrylic primer as required. The rate includes cost of material, labour, scaffolding and all incidental charges but excluding the cost of primer. Two coats or more - Premium 100% Acrylic Emulsion (Weathershield Max of AKZONOBEL or approved make)	500	Sqm.	84.00	42,000.00

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
39.0	Hire and labour charges for bamboo scaffolding <b>upto 26mtr height</b> for replacing of glass panels, painting, uprooting of plants, changing pipe lines and any other minor repairing of building and Sanitary & Plumbing works for external works with 10 cm. dia bamboo as main posts at the rate of 2 metre centre to centre and 7.5 cm. dia bamboo ties @ 0.9 metre apart fitting and fixing with necessary coir rope, nails etc. and removing the same after completion of work as per direction of the Engineer-incharge.	1	L.S.	10,000.00	10,000.00
40.0	Removal of rubbish, earth, scrap material etc. from the working site and dispose of the same beyond the compound in truck loads in conformity with Municipal/Corporation rules and as per instruction of Engineer - in - Charge.	20	Cum	166.00	3,320.00

Cost of Civil works ::: 441,379.00  
 GST, as applicable over cost of Civil work @ 12% ::: 52,965.48  
 Cost of Civil works excluding labour welfare cess ::: 494,344.48  
 Labour welfare cess @ 1% ::: 4,943.44  
**Total amount of Civil Work ::: 499,287.92**  
**Say Rs. 499,288.00**