

## Bill of Quantity

### Renovation of Mechanical workshop's roof shed at BITM, Kolkata.

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
1.0	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	2	Cum	447.00	894.00
2.0	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 (above 150mm thick).	1	Cum	1,417.00	1,417.00
3.0	Cutting chase in brick wall upto 125 x 150 mm. and subsequent mending of damages [Cement-3.6 Kg/Mtr].	50	Mtr.	93.00	4,650.00
4.0	Repairing crack in wall 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)	200	%Mtr.	1,392.00	2,784.00
5.0	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.	50	Sqm.	19.00	950.00
6.0	Taking out carefully G.C.I. or C.I. or asbestos sheets (including ridges etc.) from roof or wall after unscrewing bolts, nuts, screws etc. and stacking the material at site as directed. (Payment to be made on measurement of portion of roof or wall removed.)	170	Sqm	41.00	6,970.00
7.0	Ordinary cement concrete (mix 1:1.5:3) with graded stone chips (20mm nominal Size) excluding shuttering and reinforcement, if any at any floor/level as per relevant IS code.	1	Cum	5,999.81	5,999.81
8.0	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 as per decision and direction of Engineer-in-charge.	10	Sqm.	335.00	3,350.00
9.0	Hire and labour charges for high scaffolding ( <b>above 4 metre height</b> ) for replacing glass panels, painting, structural fabrication work, uprooting of plant and any other repairing works of building and S&P works for internal/ external works with 10 cm. dia bamboo as main posts at the rate of 1 metre centre to centre and 7.5 cm. dia bamboo ties @ 0.75 metre apart fitting and fixing with necessary coir, nails etc. as per direction of the Engineer-in-charge.	1	L.S.	10,000.00	10,000.00
10.0	Brick work with 1st class bricks (Class designation 75) in cement mortar (1:6) In superstructure at any floor.	0.5	Cum	5,636.00	2,818.00
11.0	125mm thick brick work with 1st class bricks in cement mortar (1:4) at any floor.	5	Sqm.	736.00	3,680.00

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
12.0	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	50	Sqm.	194.00	9,700.00
13.0	Providing & mixing polymer based water resistant bonding agent like Dr. Fixit 101 LW+ or equivalent in cement plaster as per manufacture's specification and direction of EIC.	5	Lit.	150.00	750.00
14.0	Neat cement punning about 1.5mm thick in wall, dado, window, sill, floor etc. NOTE: Cement 0.152 cu.m per100 sq.m.	50	Sqm.	34.00	1,700.00
15.0	25 mm thick Artificial stone in floor, dado, staircase etc. with cement concrete (1:2:4) with stone chips, laid in panels as directed with topping made with ordinary / white cement (as necessary) and marble dust in proportion (1:2) including smooth finishing and rounding off corners including racking out joints or roughening of concrete surface and application of cement slurry before flooring works, using cement @ 1.75 Kg./Sqm. all complete including all materials and labour. 3mm. thick topping (high polishing grinding on this item is not	50	Sqm.	273.00	13,650.00
16.0	Providing and mixing non metallic floor hardener like Sika Chapdur or equivalent in Artificial stone flooring work as per manufactures specification. This item is to be operated only on specific instruction of Engineer-In-Charge.	30	Kg.	35.00	1,050.00
17.0	M.S. structural works in roof trusses with tubular sections/ hollow sections (square or rectangular shape) conforming to IS: 806-1968 & IS: 1161- 1998 connected to one another with bracket, gusset cleats as per design, drawing & direction of Engineer-in-charge complete including cutting to requisite shape & size, fabrication with necessary metal arc welding conforming to IS: 816- 1969 & IS: 9595 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete at any height.				
	The rate includes the cost of all MS hollow section/ rolled steel section, all consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental charges (such as electricity, labour insurance) etc. all complete. Payment to be made on the basis of calculated weight of structural tubular members/ hollow sections as specified in relevant IS code in finished work. Payment for gusset, bracket, cleat may be made by adding the actual weight of such items with weight of finished structural members. For trusses spanning up to 12.00 m	1.5	MT	72,951.00	1,09,426.50

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
18.0	Supplying, fitting & fixing Industrial Troughed (Trapezoidal) colour coated Aluminium sheet (excluding the supporting frame work) of approved make & brand in alloy 3105 conforming to IS: 1254-1991 fitted and fixed with 75 mm & 25 mm Self tapping screw, EPDM Washer 16 mm dia & 3 mm thick washer etc complete with 150 mm. end lap and one corrugation minimum side lap. (Payment to be made on Plan area of finished work) (Aluminium sheet to be supplied by contractor). In roof with 0.91 mm thick sheet. <b>Make: Hindalco Everlast</b>	210	Sqm.	1,010.00	2,12,100.00
19.0	Aluminium sheet ridging fitted with self tapping screws, EPDM washers etc complete. Minimum 300 mm lapping each way with 0.91 mm sheet	25	Mtr.	475.00	11,875.00
20.0	Providing & fixing 300 mm wide Eaves gutter made of 2.0 mm. thick anodised aluminium sheets (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15) having 300mm end lapping & 1240 mm over all girth fitted and fixed with necessary 50 mm x 6 mm M.S flat bar clamps bent to required design & shape including bolts, nuts, washers etc. all complete. The fabrication drawings (Long section & Cross section) have to be submitted by the contractor to get approval from the competent authority prior execution of the work. The rate is inclusive of preparation and submission of drawing. <b>Make: Hindalco, Jindal.</b>	140	Kg	400.00	56,000.00
21.0	Supply, fitting and fixing Industrial type automatic powerless (wind driven) roof top Air Ventilator of Size: 24 Inch made with stainless steel of 304 grade, mounted over FRP base plate. The rate is inclusive of SS air ventilator with necessary mounting arrangements, base plate etc matching with profile roof sheets all complete. The joints between the aluminium corrugated roofing sheet and the FRP base of Air ventilator must be watertight by providing suitable waterproofing materials etc complete in all respect. The fabrication drawing showing junction details between roof sheet and Air ventilator has to be submitted prior execution of work.	6	Each	10,000.00	60,000.00
22.0	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 or equivalent)				
22.1	UPVC Pipe: 160mm dia.	36	Metre	485.00	17,460.00
	<b>UPVC Fittings</b>				
22.2	Plain Tee: 160 mm dia.	2	Each	507.00	1,014.00
22.3	Plain Y: 160 mm dia.	2	Each	579.00	1,158.00
22.4	Bend 87.5 degree: 160 mm dia.	4	Each	346.00	1,384.00
22.5	Shoe: 160 mm dia.	2	Each	305.00	610.00
22.6	Half Bend 45 degree: 160 mm dia.	2	Each	293.00	586.00
22.7	Door Tee: 160 mm dia.	2	Each	514.00	1,028.00
22.8	Door Bend 87.5 degree: 160 mm dia.	2	Each	369.00	738.00

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
23.0	Applying 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 <b>One coat.</b>	550	% Sqm.	3,080.00	16,940.00
24.0	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 Superintending Engineer) : <b>Two coats</b> with Luxury Quality (Make: Asian Paints / ICI/ Berger)	550	Sqm.	70.00	38,500.00
25.0	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. (Make: ICI/ Asian Paints/ Berger/ Nerolac)	500	% Sqm.	3,140.00	15,700.00
26.0	Protective and Decorative Acrylic exterior emulsion paint of approved quality and brand (ICI weathershield Max or equivalent), as per manufacturer's specification and as per direction of Engineer-In-Charge 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. Premium 100% Acrylic Emulsion	500	Sqm.	84.00	42,000.00
27.0	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. (This item is applicable to new work or old work when the original surface has been exposed by removal of old paint)	50	Sqm.	38.00	1,900.00
28.0	Priming one coat on steel or other metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc. (This item is applicable to new work or old work when the original surface has been exposed by removal of old paint)	150	Sqm.	29.00	4,350.00
29.0	Painting with best quality synthetic enamel paint of approved make and brand (Make: ICI/ Asian Paints/ Berger/ Nerolac) including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary.				
29.1	Two coats (with any shade except white) with super gloss (hi-gloss) on timber or plastered surface.	50	Sqm.	81.00	4,050.00
29.2	Two coats (with any shade except white) with super gloss (hi-gloss) on steel or other metal surface.	150	Sqm.	79.00	11,850.00
30.0	Removing old paint from blistered painted surface of steel or other metal with application of any approved chemical paint remover or by chipping including scraping and cleaning and exposing the original surface.	150	Sqm.	47.00	7,050.00

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
31.0	Applying Polyurethane sealant of approved make and brand for sealing of groove line between the roof sheets & brick wall as per manufacturer's specification & direction of Engineer-in-charge. The rate is inclusive of materials cost, labours & all other incidental charges. <i>Make: Sika, Dr. Fixit, Fosroc, Choksey</i>	10	Each Cartridge	640.00	6,400.00
32.0	Supplying bubble free float glass of approved make and brand conforming to IS : 2835-1987 and fixed with nails, putty etc all complete. 4 mm thick clear glass	5	Sqm.	398.00	1,990.00
33.0	The charges for shifting of machinery, office furniture, tools & tackles etc. in Mechanical workshop and/or covering it properly with plywood and tarpaulin sheet during execution of work to avoid any damage to the machinery.	1	L.S.	5,000.00	5,000.00
34.0	Removal of rubbish, earth, scrap material etc. from the working site and dispose off the same beyond the compound in truck loads in conformity with Municipal/Corporation rules and as per instruction of Engineer – in – Charge.	1	L.S.	6,000.00	6,000.00

Cost of Civil works :::	7,05,472.31
GST, as applicable over cost of Civil work @ 12% :::	84,656.68
Cost of Civil works excluding labour welfare cess :::	7,90,128.99
Labour welfare cess @ 1% :::	7,901.29
<b>Total amount of Civil Work :::</b>	<b>7,98,030.28</b>
<b>Say Rs.</b>	<b>7,98,030.00</b>