



BIRLA INDUSTRIAL & TECHNOLOGICAL MUSEUM

(A unit of NCSM)

19A, Gurusaday Road, Kolkata – 700019.

Bill Of Quantity

Name of work: Renovation of office block and water proofing treatment at DSC, Purulia.

Item no.	Description of item	Quantity	Unit	Rate (Rs)	Amount (Rs)
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 roof.	1	Cu.M	447.00	447.0
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.	1	Cu.M	1417.00	1,417.0
3.0	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	Sq.M	19.00	950.0
4.0	125mm thick brick work with 1st class bricks in cement mortar (1:4) at any floor.	10	Sq.M	592.00	5,920.0
5.0	Brick work with 1st class bricks (Class designation 75) in cement mortar (1:6) In superstructure, upto 2nd floor.	1	Cu.M	4466.00	4,466.0
6.0	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 & direction of Engineer-In-Charge.	5	Sq.M	324.00	1,620.0
7.0	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 1:6 cement mortar, 20mm thick plaster.	50	Sq.M	153.00	7,650.0
8.0	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).	1	Cu.M	6757.22	6,757.2
9.0	Providing and fixing of false ceiling with powder coated exposed G.I. grid suspension system (<i>Armstrong make</i>) E-Grid U-1520 or equivalent load carrying capacity with mid span deflection not exceeding 1/360 span with hanger spacing of 1200mm c/c) consisting of Main Runner 3600 mm long, Cross Tee 1200 mm / 600 mm long and Wall Angle. The Wall Angle shall be fixed on PVC Dash Fasteners on the perimeter of the wall by steel screws with distance 300mm c/c. The Main Runners to be placed @ 1200 mm. The Cross Tee 1200mm will be inserted in the pre-cut slots of Main Runner at a regular interval of 600 mm to form a modular grid of 1200mm X 600mm. Additional Cross Tees of 600 mm shall be placed perpendicular to the Cross Tee 1200 mm long to finally form a grid of 600 mm X 600 mm. Grid of module size 600 mm X 600 mm shall be supported by 6 mm dia G.I. wire from purlins / soffit. 16mm thick Mineral Fiber Acoustic Ceiling Tiles of size 600mm X 600mm with NRC value > 0.65 should be placed in the Grid module to form a False Ceiling. All complete as per the drawing & directions of Engineer-in-charge. (<i>Approved make & brand : Armstrong, Model: Minatuff RH99/ DUNE RH-99, Micro look.</i>)	125	Sq.M	1357.00	1,69,625.0
10.0	Rendering the surface of walls and ceiling with white cement based wall putty of approved make and brand (1.5mm thick) and prepare the surface even and smooth all complete.	150	Sq.M	122.00	18,300.0
11.0	Applying Interior grade Acrylic Primer of approved quality and brand on plastered or concrete surface in old or new work 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 <i>One coat.</i>	150	Sq.M	30.80	4,620.0

Item no.	Description of item	Quantity	Unit	Rate (Rs)	Amount (Rs)
12.0	Applying Acrylic Emulsion Paint of approved make and brand (Asian Paints Apcolite/ ICI Dulux Super Clean / Berger Easy clean) on walls and ceiling including sand papering in intermediate coats including putty (to be done under specific instruction of Superintending Engineer) : Two coats with Luxury Quality.	150	Sq.M	70.00	10,500.0
13.0	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)	25	Sq.M	29.00	725.0
14.0	Painting with best quality synthetic enamel paint of approved make and brand including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary. On steel or other metal surface :Two coats (with any shade except white)	25	Sq.M	79.00	1,975.0
15.0	Applying Exterior grade Acrylic primer of approved quality and brand (ICI Dulux Weathershield Alkalibloc or equivalent) 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 applied @ 0.9 ltr/ 10 Sq.M (Make: ICI/ Asian Paints/ Berger/ Nerolac) Physical consumption of primer will be verified with the actual area of painted surface and penalty @Rs.220/lit will be imposed if any deviation is found with respect to the consumption of primer according to the manufacturer's specifications.	50	Sq.M	31.40	1,570.0
16.0	Protective and Decorative Acrylic exterior emulsion paint of approved quality and brand (ICI Dulux Weathershield Max, Apex ultima of Asian paint, Barger Weather coat long life 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. Two or more coats applied @ 1.67 ltr/ 10 sqm with Super protective 100% Acrylic Emulsion paint. Rate is inclusive of applying additional coats wherever required to achieve even shade and colour. Physical consumption of paint will be verified with the actual area of painted surface and penalty @Rs.550/lit will be imposed if any deviation is found with respect to the consumption of paint according to the manufacturer's specifications.	50	Sq.M	97.00	4,850.0
17.0	Collapsible gate with 40mm x 40mm x 6mm Tee as top and bottom guide rail, 20mm x 10mm x 2mm vertical channels 100mm apart in fully stretched position 20mm x 5mm M.S. flats as collapsible bracings properly rivetted and washered including 38mm steel rollers including locking arrangements, fitted and fixed in position with lugs set in cement concrete and including cutting necessary holes, chasing etc. in walls, floors etc. and making good damages complete.(Payment will be made on the area of the gate covered by two guard rails and two extreme channels)	10	Sq.M	3402.00	34,020.0
18.0	M.S. structural works with hollow sections (square or rectangular shape) conforming to IS: 806-1968 & IS:1161-1998) connected to one another with bracket, gusset, cleat as per design, drawing & direction of Engineer-in-Charge complete including cutting to requisite shape & size, fabrication including 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. The rate includes the cost of all M.S. Hollow section, all consumables such as electrodes, gas and hire charges of all tools and plants and labour required for execution and all incidental chages (such as electricity, labour insurance) etc. complete. For roof truss works Payment to be made on the basis of calculated weight of structural memebrs of MS Holow Section as specified in relevent 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 roof truss works,Span up to 12 Mtr.	0.25	MT.	58832.00	14,708.0

Item no.	Description of item	Quantity	Unit	Rate (Rs)	Amount (Rs)
19.0	M.S. structural works in columns, beams etc. with simple rolled structural members (e.g. joists, angle, channel sections conforming to IS: 226, IS: 808 & SP (6)- 1964 connected to one another with bracket, gussets, cleats as per design, direction of Engineer-incharge complete including cutting to requisite shape and length, fabrication with necessary bolting, metal arc welding conforming to IS: 816- 1969 & IS: 1995 using electrodes of approved make and brand conforming to IS:814- 2004, haulage, hoisting and erection all complete. The rate includes the cost of rolled steel section, consumables such as electrodes, gas and hire charge of all tools and plants and labour required for the work including all incidental chages such as electricity charges, labour insurance charges etc. For structural members of specified sections weighing less than 22.5 Kg/m	0.06	MT.	59119.00	3,547.1
20.0	Supplying and laying true to line and level vitrified tiles of approved brand (size not less than 600 mm X 600 mm X 10 mm thick) in floor, skirting etc. set in 20 mm sand cement mortar (1:4) and 2 mm thick cement slurry back side of tiles using cement @ 2.91Kg./sqM or using polymerised adhesive (6 mm thick layer applied directly over finished artificial stone floor/Mosaic etc without any backing course) laid after application slurry using 1.75 Kg of cement per sqM below mortar only, joints grouted with admixture of white cement and colouring pigment to match with colour of tiles / epoxy grout materials of approved make as directed and removal of wax coating of top surface of tiles with warm water and polishing the tiles using soft and dry cloth upto mirror finish complete including the cost of materials, labour and all other incidental charges complete true to the manufacturer's specification and direction of Engineer-in-Charge. (White cement, synthetic adhesive and grout material to be supplied by the contrr[e]With Polymerised Adhesive [6 mm thick] & epoxy grouting materials for filling joints including spacer-2 mm [Applied directly over finished artificial stone floor/ mosaic etc.].Light Colour	120		1366.00	1,63,920.0
21.0	Supplying, fitting & fixing Zn-Al alloy (55% Al & 45% Zn) coating of 150 grams per sq. metre (followed by colour coated on both side) steel sheet work having minimum yield strength of 550 Mpa of trapizoidal profile of approved make as per IS: 15965: 2012 and IS: 14246: 2013 (excluding the supporting frame work) fitted and fixed with 55 mm & 25 mm self tapping screw, EPDM Washer 16 mm dia & 3 mm th. washer etc.complete with 150 mm end lap and one corrugation minimum side lap.In Roof:-With 0.5 mm thick sheet(Payment to be made on area of finished work).	10	Sq.M	896.00	8,960.0
22.0	Taking out existing partition/ceiling of particle board, masonite board, ply board, soft board , dais etc and stacking the material at the specified location within the campus.	1	L.S.	2000.00	2,000.0
23.0	Fabrication, Supply and installation of wooden partition with 5 mm thick glazing of approved make/ without glazing (Upto 2.4 m /ceiling height) with CP Teak wood framing consisting of 50mm x 38mm as horizontal and intermediate vertical members @ 600 mm center to center both ways or as shown in drawing including fixing of 6 mm thick phenol formaldehyde bonded marine ply of Century club Prime/ Green Ply Green make (IS:710, BWP grade) on both sides of wooden frame work and duly covered with 1mm thick laminate sheet (Make: Century/ Green) of approved colour and shade. Rate should be inclusive of necessary teak wood lipping (Polished) at door and window sides on the top of low height partition.	30	Sq.M	3800.00	1,14,000.0

Item no.	Description of item	Quantity	Unit	Rate (Rs)	Amount (Rs)
24.0	Fabrication, Supply and installation of wooden door(900mm x 2100mm) with CP Teak wood farming consisting of 75mm x 25mm as top, bottom and side styles, 150mm x 25mm lock rail and 50mm x 25mm intermediate member @ 600 mm centre to centre, including fixing of 6 mm thick phenol formaldehyde bonded marine ply of Century club Prime/ Green Ply Green make (IS:710, BWP grade) on both sides and duly covered with 1mm thick laminate sheet (Make: Century/ Green) of approved colour and shade, including necessary fittings like SS hinges (4nos), tower bolt, D- Handle, floor door stopper etc. all complete.	2	No's	4100.00	8,200.0
25.0	Providing & fixing Hydraulic door closer of approved quality as per ISI standard. Heavy type (Power Size 3), Make: Godrej/ Dorma.	2	Each	2064.00	4,128.0
26.0	Supplying, fitting and fixing chromium plated 6 levers 'Godrej' mortice lock with latch and keys complete.	2	Each	1300.00	2,600.0
27.0	Providing & fixing decorative CP teak wood moulding bead 2" at the edges of partition wall.	80	RM	120.00	9,600.0
	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete	3	Each	202.00	606.0
28.0	Supplying bubble free float glass of approved make and brand conforming to IS : 2835-1987 and fixed with nails, putty etc all complete. 5 mm thick coloured / tinted / smoke glass.	30	Sq.M	585.00	17,550.0
29.0	Supplying,fitting & fixing of 2-Track / 3-Track Aluminium sliding Window of all Aluminium sections viz. window frame (top,bottom & side frame), shutter (top, bottom, side & interlock member) made of aluminium alloy extrusions conforming to IS 733-1983 & IS 1285-1975, anodised conforming to IS 1868-1983, fitted with all other accessories viz. PVC roller, EPDM gasket, maruti lock, screws etc. including labour charges for fitting & fixing of aluminium 2-track/3-track sliding window with fixing of glass (excluding cost of glass) all complete as per architectural drawings and direction of Engineer-in-charge. 10-12 Micron thickness Anodizing film Natural white. For 2-Track window : Members for Bottom frame @ 0.875 Kg per Mtr. and for Top and Side frame @ 0.778 Kg per Mtr. and for shutter Bottom and Top member @ 0.472 Kg per Mtr., Style side member @ 0.493 Kg per Mtr. and Interlock member @ 0.612 Kg per Mtr.	60	Kg.	448.00	26,880.0
30.0	M.S. Ornamental grill of approved design joints continuously welded with M.S, W.I. Flats and bars of windows, railing etc. fitted and fixed with necessary screws and lugs in ground floor.Grill weighing above 10 Kg./sq.mtr and up to 16 Kg./sq. mtr.(The weight of grill per sq.m. will be determined by taking the physical weight of fabricated grill and dividing the same by covered area of the same.)	1	Qntl	7238.00	7,238.0
31.0	Supplying, fitting & fixing of partly glazed partly panelled or fully glazed single leaf Aluminium swing door of all aluminium sections viz door frame (top and side frame), shutter(top rail, bottom rail, lock rail, door vertical) , glazing clip made of Aluminium Alloy Extrusions conforming to IS: 733-1983 and IS: 1285-1975, anodized conforming to IS:1868- 1983, fitted with all other accessories viz. EPDM gasket,cleat, angle screws etc. including labour charges for fitting and fixing of aluminium door with door spring,/aluminium hinges, glass / Panel board all complete as per architectural drawings and direction of Engineer-incharge. (Excluding cost of glass/ panel board, door spring/ Al hinges, door closer, door stopper, handle, tower bolt and locking arrangement etc) 10-12 Micron thickness Anodizing film Natural white)	45	Kg.	385.00	17,325.0
32.0	Supplying of Anodised Aluminium butt hinges 100x75x4 mm with all necessary screws etc.	6	Each	47.50	285.0
33.0	Stainless steel butt hinges 100x58x1.9 mm IS : 12817 marked with all necessary screws etc.	6	Each	34.50	207.0
34.0	Supplying & fixing stainless steel (SS 304 grade) friction hinge for casement window as per approved brand as directed by Engineer- in - charge. (Natural White) 300mm long	4	Pair	332.00	1328.00
35.0	Supplying Heavy Duty Aluminium Handle (EBCO Type) Colour anodized.	5	Each	105.60	528.00
36.0	Supplying & fixing Zinc powdered coated star lock.	5	Each	40.00	200.00

Item no.	Description of item	Quantity	Unit	Rate (Rs)	Amount (Rs)
37.0	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 at any floor. 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. Make: Dr. Fixit, Wacker, Sika, M.Seal.	5	Per Cartridge	240.00	1200.00
38.0	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). The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane following manufacturer's specification. 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.) Make : Sika India Pvt Ltd or equivalent approved make.	750	Sq.M	407.00	3,05,250.0
39.0	Painting with superior quality aluminium paint of approved make and brand over the top surface of APP membrane. Two or more coats . 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.	750	Sq.M	57.00	42,750.0
40.0	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.	3000.00	3,000.0

Cost of Civil wo 10,31,422.36
GST, as applicable over cost of 1,85,656.02
Cost of Civil works excluding l 12,17,078.38
Labour welfare cess 12,170.78
Total amount of Civ 12,29,249.17
Say Rs. 12,29,249.00