

Bill of Quantity

Name of work: Up-gradation of auditorium including false ceiling, flooring & wall panelling at BSC, Bardhaman.

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 roof.	10	Cu.M	447.00	4,470.0
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.	5	Cu.M	1,417.00	7,085.0
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.	100	Sq.M	19.00	1,900.0
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.	4	Cu.M	4,466.00	17,864.0
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.	20	Sq.M	324.00	6,480.0
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.	100	Sq.M	153.00	15,300.0
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	6,757.22	6,757.2
9.0	Reinforcement for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc. including supply of rods, initial straightening and removal of loose rust (if necessary), cutting to requisitelength, hooking and bending to correct shape, placing in proper position and binding with 16 gauge black annealed wire at every intersection, complete as per drawing and direction. For works in foundation and upto roof of ground floor/ upto 4 m using Tor/HYSD steel. (JSW/JSPL/SHYAM/ SRMB/BMASL/ELECROSTEEL/SSL)	0.1	MT	68,053.00	6,805.3
10.0	Providing and fixing of false ceiling with powder coated exposed G.I. grid suspension system (Armstrong make) 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. (Approved make & brand : Armstrong, Model: Minatuff RH99/ DUNE RH-99, Micro look OR as approved by the Engineer-in-charge) N.B : Required arrangements are to be made in the wall panelling for electrical light fixtures / cables etc. and finish it properly and the rate is inclusive.	90	Sq.M	1,357.00	1,22,130.0

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11.0	M.F. suspended ceiling made with 12.5 mm thick fire resistant Gypsum plaster board including G.I. perimeter channel of 0.55 mm flush (having two flanges 20 mm and 30 mm respectively and web 27 mm) along with perimeter of ceiling with G.I. intermediate channel of 0.9 mm thick size 45 mmx15mm placed at 750 mm c/c with G.I. ceiling angle of size 25 mmx10mmx0.55 mm thick fixed to the ceiling with G.I. Cleat and steel expansion fastener ceiling section 0.55 mm thick of size 51.50 mmx26mm fixed to the intermediate channels with the help of connecting clip and in the direction of perpendicular to the intermediate channel of 300 mm c/c 12.5 mm thick Gypsum plastered board are to be fixed under ceiling section as above by machine screws. The boards are to be joined and finished with jointing compound, paper tape and application of top coat etc. as per the direction of Engineer-in-charge. (The rate includes of cost of all materials including taxes, cost of accessories, fittings and fixtures, scaffolding and labour charges etc. complete) (Make: Saint Gobain-Gyproc, Model: Fireline or equivalent approved make). In ground floor. N.B: Required arrangements are to be made in the false ceiling for electrical light fixtures / cables / A.C units etc. and finish it properly. Mode of measurement : Finished surface area to be measured in Sq.m.	100	Sq.M	1,159.00	1,15,900.0
12.0	Supplying, fitting and fixing minimum 8mm thick Laminated wooden Flooring Work conforming to EN13329:2006 with plank size not less than 1200mmX 190 mm (with unilin/tongue-groove locking arrangement) having 0.2mm thk top abrasive layer over a decorative layer followed by a High-density fibreboard (HDF) having density > 940 kg/m3 substrate core over a resin saturated backing layer and installing through unilin or tongue- groove system (having locking strength not less than 1000 kg/m) over a 2 mm thk underlayer polyurethane foam on polythene sheet 250 micron, over a smooth, flat, hard subfloor free from moisture (< 8%), grease etc. complete in all respect with requisite accessories like end profile, transition profile, reducer 'T' profile etc. wherever required and preparation of base including all other incidental works as per direction & satisfaction of Engineer in charge. Cost of Laminate Floor Accessories only (Skirting,End edge, T- moulding,Reducer)shall have to be added separately, wherever required. In Ground Floor: Category: High Footfall ; Class- 23;Abrasion resistance:-AC4 Thk on Swelling:- < 15% ;Impact resistance:- IC 2. (Make: Armstrong / Square Foot/ Greenlam Mikasa/ Century or equivalent approved make.)	30	Sq.M	1,275.00	38,250.0
13.0	Supplying, fitting and fixing of Laminate Floor Accessories (Skirting, End edge, Tmoulding, Reducer) to 8mm thick Laminated wooden Flooring Work conforming to EN13329:2006 with plank size not less than 1200mmX 190 mm (with unilin/tongue-groove locking arrangement) having 0.2mm thk top abrasive layer over a decorative layer followed by a High-density fibreboard (HDF) having density > 840 kg/m3 substrate core over a resin saturated backing layer and installing through unilin or tongue- groove system (having locking strength not less than 1000 kg/m) over a 2 mm thk underlayer polyurethane foam on polythene sheet 250 micron, over a smooth, flat, hard subfloor free from moisture (< 8%), grease etc. complete in all respect as per direction & satisfaction of Engineer in charge. Cost of labour charge for fitting & fixing of Laminate Floor Accessories only (Skirting,End edge, T- moulding,Reducer) is also included. (Make: Armstrong / Square Foot/ Greenlam Mikasa/ Century or equivalent approved make.) In Ground Floor: Category: High Footfall.	25	Mtr.	391.00	9,775.0
14.0	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
15.0	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 throughly, complete as per manufacturer's specification and as per direction of the EIC at any floor. Water based interior grade Acrylic Primer One coat.	900	Sq.M	30.80	27,720.0

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16.0	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 or more with Luxury Quality.	900	Sq.M	70.00	63,000.0
17.0	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)	100	Sq.M	29.00	2,900.0
18.0	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 or more (with any shade except white).	100	Sq.M	79.00	7,900.0
19.0	Priming one coat on timber or plastered surface with synthetic oil bound primer of approved quality including smoothening surfaces by sandpapering etc. (This item is applicable to new work or old work when the original surface has been exposed by removal of old paint)	50	Sq.M	38.00	1,900.0
20.0	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 timber or plastered surface :Two coats or more (with any shade except white).	50	Sq.M	81.00	4,050.0
21.0	Supplying, fabrication and installation of wall panelling with 12.5 mm thick Gypsum Plaster Board (Gyproc-Glasroc H Board or equivalent approved make) upto 1.20 m. height from floor with C-stud of 34x48x36x0.5mm (Al-Zn coating of 150 gsm) {Material-IS 513, Y/S-300Mpa, Finish - AZ150 (IS 15961)} placed at 297.5mm c/c in 32x50x32x0.5mm floor channel {Material-IS 513,Y/S-300Mpa, Finish - AZ150 (IS 15961)}. The Floor channel is anchored to the floor with Rawl plug Ø8x45mm {Material-IS 513 CR1 grade, Zinc coating, Pull Out Load-6.8kN for M30 concrete grade} /Hilti X-GN20MX anchor fasteners at 600mm c/c in center line manner. 50x32x32x0.5mm floor channel to be cut & bend & bracing at every 1200mm c/c vertically. The Floor channel is cut-bend & fixed to brick wall with Hilti HPS-1 (Ø6x40mm) Impact anchor. The Floor channel is to be wrapped with 70µ Self Adhesive LDPE moisture barrier film to further improve corrosion resistance performance. Then Resin bonded glass wool of 24kg/M3 and 50mm thick (Make: Saint Gobain- TWIGA or equivalent make) is placed between the studs and noggin channels, 12.5mm thick mold resistant Gypsum Plaster Board (Gyproc-Glasroc H Board or equivalent approved make) with Glass mat reinforcement & inorganic coating on surface, conforming to EN 15283-1 Type GM - FH1,GH having flexural strength – {Longitudinal > 540N & transverse > 210N}, to be screw fixed with Drywall screws of 25mm at minimum spacing of 300mm at centre and 150mm at periphery. Finally, the edges are to be jointed and finished so as to have a flush look which includes filling and finishing with Pro- Fill Jointing Compound Air Dry (Conforms to ASTM C475), Joint Paper tape. The junction of the partition with masonry & all penetration through the partition has to be treated with Hilti/Pyroplex fire and acoustic sealant. All other detailing and specifications are to be followed as per approved drawing / instruction of Engineer-in-charge. N.B : Required arrangements are to be made in the wall panelling for electrical light fixtures / cables etc. and finish it properly and the rate is inclusive. Mode of measurement: Payment shall be made on the finished surface area of the 12.5 mm thick Gypsum Plaster Board... No extra payment shall be considered for wastage or extra height of frame structure. (Make: Saint Gobain, Saint Gobain-TWIGA or approved equivalent)	60	Sq.M	2,417.00	1,45,020.0
22.0	Shifting all the seating arrangements carefully from the auditorium (e.g. chairs, tables etc) and stack the same at the specified place within the campus as directed ,dismantling and removing all the existing false ceiling, wall panelling, wooden partitions with the supporting framework, taking out existing carpet from the floor and dais etc complete in all respects. All the work should be done carefully with sorting and stacking servicable materials at site and removing rubbish as directed.	1	L.S.	10,080.00	10,080.0

Sl. No.	Description of item	Qty.	Unit	Rate	Amount
23.0	<p>Supplying, fabrication and installation of wall panelling above 1.20 m. level from floor upto height of false ceiling with 12.5 mm thick Gypsum Acoustical Plaster Board , of size 1200x2400 mm or part there of, having four tapered edges, 16% perforation area of board & hole size of 12mm square shape, having 8 perforation sets per board and each set of size (487x487)mm, 56.5mm border and 113mm center band, backed with acoustic tissue, having NRC values more than 0.60 (Saint Gobain Gyproc Single layer of Gyptone Quattro 41 Big board or equivalent approved make), is to be screw fixed to C- Stud with Drywall screws of 25mm at minimum spacing of 300mm at centre and 150mm at periphery. Including 34x48x36x0.5mm C-stud {Material-IS 513, Y/S-300Mpa, Finish - AZ150 (IS 15961)} placed at 297.5mm c/c in 32x50x32x0.5mm {Material-IS 513,Y/S-300Mpa, Finish - AZ150 (IS 15961)} upto the ceiling channel. Ceiling channel is anchored to the true ceiling using Rawl plug Ø8x45mm {Material-IS 513 CR1 grade, Zinc coating, Pull Out Load-6.8kN for M30 concrete grade} /Hilti X-GN20MX anchor fasteners at 600mm c/c in center line manner. 50x32x32x0.5mm ceiling channel to be cut & bend & bracing at every 1200mm c/c vertically. Floor/Ceiling channel is cut-bend & fixed to brick wall with Hilti HPS-1 (Ø6x40mm) Impact anchor.Ceiling channel to be wrapped with 70µ Self Adhesive LDPE moisture barrier film to further improve corrosion resistance performance. 40x48x40x0.5mm size of noggin channel {Material-IS 513, Y/S-300Mpa, Finish - AZ150 (IS 15961)} has to be provided at the horizontal joints of the two boards.For higher NRC value, Resin bonded glass wool of 24kg/M3 and 50mm thick is to be placed between C- Studs (NRC value more than 0.8) .Finally tapered edges of the boards are to be jointed and finished so as to have a flush look which includes filling and finishing with Jointing Compound Air Dry (Conforms to ASTM C475), Joint Paper tape. The junction of the partition with masonry & all penetration through the partition has to be treated with Hilti/Pyroplex fire and acoustic sealant. All other detailing and specifications are to be followed as per approved drawing / instruction of Engineer-in-charge.</p> <p>(Make: Saint Gobain, Saint Gobain-TWIGA or approved equivalent)</p> <p>N.B.: Required arrangements are to be made in the wall panelling for electrical light fixtures / cables / A.C units etc. and finish it properly and the rate is inclusive.</p> <p>The frame structure C-Studs etc. shall be constructed upto the true ceiling i.e. R.C.C. ceiling and the 12.5 mm thick Gypsum Acoustical Plaster Board... shall be upto the false ceiling height.</p> <p>Mode of measurement: Payment shall be made on the finished surface area of the 12.5 mm thick Gypsum Acoustical Plaster Board... No extra payment shall be considered for wastage or extra height of frame structure upto the mother ceiling.</p>	120	SQM	2,697.00	3,23,640.0
24.0	<p>Supplying and laying true to line and level Anti Skid, Full Body, Homogeneous & Granular finish Vitrified Tiles conforming to IS:15622-2006 & IS 4457-2007 and testing shall be made in accordance with IS:13630 [Non- modular sizes for tiles with Skid resistance > 0.5, Mohr's hardness > 5.0, Staining resistance:Class-1, Water Absorption: E < 0.5%], MOR > 35 N/sq.mm in Internal area of building e.g. Toilet Block, Passage, Corridor, Accessible Open Terrace etc. set in 20 mm sand cement mortar (1:4) and 2 mm thick cement slurry at back side of tiles using cement @ 2.91 Kg./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 contractor). In Ground Floor: Sizes-600 mm x600mm x10 mm with breaking strength > 1500 N.</p>	425	Sqm.	1,589.00	6,75,325.00
25.0	<p>Anti-termite treatment to the outside of foundations with chemical emulsion by admixing chloropyrifos emulsifiable concentrates (1%concentration) with water by weight including cutting shallow channel by excavating soil along and close to the wall face ensuring uniform dispersal of the chemical emulsion to a depth of 300mm. from the ground level by rodding with 12mm. dia. M.S. rod at 150mm.interval in the channel. 1.75 litres of chemical emulsion per metre length shall be used and a balance quantity of 0.5 litres of the chemical emulsion per running metre shall then be used to treat the back fill earth by directing the spray of the imulsion towards the wall surface. The entire work is to be carried out as per specification laid down in para 4.3.1.1 of code IS-6313 (Part-III) 1981.</p>	300	Mtr.	72.00	21,600.00

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26.0	Anti-termite treatment to the soil under floor with chemical emulsion by admixing chloropyrofos emulsifiable concentrate (1% concentration) with water by weight including drilling vertically 12mm.dia holes at the junction of floor and wall at 300mm. interval to reach the soil below using hand operated pressure pump to squirt chemical emulsion into the pump to squirt chemical emulsion into the holes at the rate of one litre per hole. The holes shall be sealed after operation to match with the existing floor. The entire work is to be carried out as per specification laid down in para 4.3.1.4 of code I.S.-6313 (Part-III)-1981. (Mode of measurement : along the length)	900	Sqm.	93.00	83,700.00
27.0	Anti-termite treatment to the junction of wood work and masonry walls with chemical emulsion by admixing chloropyrofos emulsifiable concentrates (1% concentration) with water by weight including spraying at the points of contact with the adjoining masonry by drilling 6m. dia holes at a downward angle of about 45 degree at the junction of woodwork and masonry and squirting chemical emulsion into these holes at the rate of half litre per hole. The entire work is to be carried out as per specification of Code I.S.-6313 (Part-III)-1981. The shutters are to be sprayed with emulsion. on both sides. All wooden fixtures like almirahs, racks etc. are also to be thoroughly sprayed with chemical emulsion. (Payment will be made on the basis of outside measurements of doors and windows) (Mode of measurement : treated floor area to be measured)	80	Sqm.	61.00	4,880.00
28.0	Partition of teak veneer [1 mm] as per design fitted and fixed complete (excluding the supporting frame work & necessary teak wood battens): In ground floor.4mm thick commercial quality	9	Sqm.	1,000.00	9,000.00
29.0	Ready mix Wax polishing to wood work including preparing surface.On new wood work.	4	Sqm.	200.00	800.00
30.0	Supplying wooden (Teak wood beat) moulding slanting beat of size 37mm X 18mm (finished) of approved design to decorate and finish the joint between veneer work in true line and level fitted & fixed with adhesive and head less pins, complete with ready mix Wax polishing as per direction of Engineer -in-charge.	16	R.M	250.00	4,000.00
31.0	Supplying, fitting and fixing 6mm thick boiling water proof ply conforming to IS: 710-1977 bonded with phenol formaldehyde synthetic resin conforming to IS: 848-1974 of approved make and brand fitted and fixed as per design as per approval and direction of Engineer-in-Charge. [excluding the cost of supporting frame work and teak wood batten/Lipping]. In Ground Floor.Make: Century club prime/ Green ply / Sylvan Ply.	9	Sqm.	1,122.00	10,098.00
32.0	Providing and fixing of factory made uPVC casement window (White Colour) (U value=1.9-1.3 W/m 2 K, flame resistant, self extinguishing, lead free) comprising uPVC multi-chambered frame, Sash, & Mullion with having wall thickness of 2.3 mm (±0.2 mm) duly reinforced with G.I. section 1.6 mm (±0.2 mm) made from roll forming process of required length. All corners of frame and sash will be fusion welded. mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's, uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. shall be provided in all frame, sash & mullion, wherever necessary. Thereafter, 5 mm clear annealed glass shall be provided in the sash with the help of uPVC glazing bead and hardware, i.e., stainless steel (SS 304 grade) friction hinges & zinc alloy (white powder coated) casement handles (in window) & 3D Hinges & Multipoint Lock (in door) shall be provided. Window frame shall be fixed to the wall with 100mm long and 8mm dia. Fasteners and after fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size, of approved quality complete in all respect as per approved drawing & direction of Engineer-In-Charge. (Note: Profile manufacturer & Window Manufacturer must be one & same, Only manufacturer Warranty is acceptable) Casement Window frame of size 45 x 50 mm & Sash / Mullion of size 45 x 78 mm both having wall thickness of 2.3 ± 0.2 mm,(Make : As approved by the Engineer-in- Charge)	2	Sqm.	6,439.00	12,878.00
33.0	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.	3,000.00	3,000.00

Cost of Civil works = 17,88,427.52
GST, as applicable over cost of Civil work @ 18% = 3,21,916.95
Cost of Civil works excluding labour welfare cess = 21,10,344.47
Labour welfare cess @ 1% = 21,103.44
Total amount of Civil Work = 21,31,447.92
Say Rs. 21,31,448.00