

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
POWAI, MUMBAI, MAHARASHTRA - 400 076

EO/UMBRELLA/ACAD,WORKSHOP&TSC/WKS-195/24-25

ESTATE OFFICE

Name of work: Name of work: Annual percentage (%) rate contract for repair, renovation, addition and alteration works, waterproofing, retrofitting to buildings, minor construction and road works etc in academic, workshop and TCS area under umbrella contract.

Sr. No.	Description of work	Qty.	Unit	Rate (In Rs.)	Amount (In Rs.)
1	Dismatling & Removing works				
1.01	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead of area beyond 3 sq. metres	150.00	Nos	415.96	62,393.48
1.02	Removing teak wood or aluminium paneled / partly glazed or veneer / plywood partitions, any type of ceiling carefully without damaging the frame or panels and taking out the same outside IIT Campus etc. complete.	1,500.00	m2	46.66	69,986.65
1.03	Carefully removing the existing G.I. pipe 12mm to 50mm diameter from floor / walls / slab/ trenches etc. with out damaging the structures and taking out the same outside campus including scaffolding etc. completed as directed. (5% cost will be deducted from item of work for material taken outside IIT Campus)	375.00	Rmt	124.52	46,695.40
1.04	Carefully removing the existing PVC / HDPE / C I drain pipes from floor / slab with out damaging the structure and taking out the same out of IIT Campus etc. completed as directed.	250.00	Rmt	60.00	15,000.00
1.05	Removing urinal pans /wash hand basins/ European closet/flush tank of any type with brackets including disconnecting the sanitary and water supply connections, removing the same carefully and stacking the serviceable materials as and where directed including throwing the unserviceable materials out side the campus etc. complete.	150.00	Nos	104.00	15,600.00
1.06	Removing w.c. pans of all sizes including disconnecting the sanitary and water supply connections, removing and breaking flooring and bed concrete around pans and removing pan and disposing the debris outside the campus etc. complete.	50.00	Nos	111.08	5,553.78
1.07	Dismantling plain cement concrete work by mechanical or manual means including breaking concrete by chiselling, wedging etc., and stacking the debris upto a distance of 50 metres as directed etc. complete.	150.00	m3	1,243.81	1,86,570.87
1.08	Dismantling burnt brick masonry (in cement mortar) with plaster including sorting out serviceable bricks and lowering down debris, stacking the same and debris separately upto a distance of 50 meters as directed etc. complete..	250.00	m3	1,704.21	4,26,053.15

1.09	Removing any type of roofing sheets and taking out the same outside IIT Campus etc. complete as directed. (Recovery of scrap will be done@ Rs. 5 per kg from Item of work against actual weight if material taken outside campus)	1,000.00	m2	136.46	1,36,461.43
1.10	Removing the old cement concrete or any type of tiles/ door, window sill/ platform stone slab from floor / wall carefully including levelling the surface, cleaning the site, lowering down the debris from any height by manual or mechanical means and stacking the debris up to 50 mtr distance etc. complete.	2,500.00	m2	93.72	2,34,292.23
1.11	Carefully removing the existing damaged PVC/ wooden/ carpet flooring sheets & cleaning and leveling the surface, lowering down the debris and stacking upto distance of 50 metres as directed etc. all complete.	2,500.00	m2	54.00	1,35,000.00
1.12	Pulling down stone masonry in cement mortar with plaster / pointing without dust nuisance including sorting out the stone chips and debris separately and stacking upto distance of 50 metres or spreading the debris as directed.	250.00	m3	2,033.98	5,08,495.00
1.13	Removing existing waterproofing treatment from the WC/Bathroom up to the mother slab including tiles, plaster etc. of any thickness without damages to structure, pipes using electrically operated cutting tools, leveling and cleaning the surface, including lowering down the debris and stacking the same at a distance of 50mtr etc. all complete as directed.	500.00	m3	1,133.00	5,66,500.00
1.14	Taking out old C.I. / PVC nahani trap with connecting pieces from floor carefully and taking out the same outside campus etc. complete.	150.00	Nos	190.00	28,500.00
1.15	Removing soling without dust nuisance including sorting out the stone chips and debris separately and stacking upto distance of 50 metres as directed.	629.00	m3	235.00	1,47,815.00
1.16	Removing existing open or concealed flush valve/ urinal sensors from its position without damaging the side tiles, walls etc. and taking away the same outside campus etc. completed as directed.	150.00	Nos	377.00	56,550.00
1.17	Disposing debris, loose stones, boulders, concrete pieces broken etc. collected and stacked as directed including loading in trucks, transporting out of IIT Campus including obtaining approval from Government/ private land owners for disposing off on to their approved location. The contractor will be solely responsible for disposing debris out of campus and the debris are to be removed from site within 72 hours from stacking (30% voids will be deducted from actual measurement for debris, loose stones, boulders, concrete pieces).	500.00	m3	688.00	3,44,000.00
1.18	Removing excavated earth or debris including loading in trucks and conveying to approved dumping point in IITB campus unloading spreading etc. complete. 30% voids will be deducted in case of truck measurement.	200.00	m3	181.00	36,200.00

1.19	Dismantling Reinforced cement concrete work including breaking concrete by chiselling, wedging including scaffolding, covering area with jute kantan to avoid spreading of dust etc., lowering down the debris from any height and stacking the same upto a distance of 50 metres as directed.	150.00	m3	2,938.03	4,40,705.19
1.20	Dismantling steel work in built-up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including lowering down from any height and dismembering and stacking within 50 meters of lead etc. completed as directed.	10,000.00	kg	4.67	46,657.77
1.21	Dismantling existing platform made of kadappa/concrete slab top, granite top and kadappa/concrete/ brick support of height and width upto 900mm carefully and lowering down the debris at ground level from any height and stacking up to 50 meters beyond the building area as directed by Engineer Incharge. as directed.etc, complete.	500.00	Rmt	456.00	2,28,000.00
1.22	Refixing aluminium partition of any type including making any required modification as per site condition, including all required material all complete including additional glazing clip, aluminium section if necessary as directed by Engineer in charge.	375.00	m2	433.00	1,62,375.00
1.23	Taking out existing CC interlocking paver blocks from parking area, footpath, central verge etc. including removal of rubbish, disposal of unserviceable material upto 50 mtr distance. Stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	1,366.00	m2	109.02	1,48,919.45
1.24	Cutting of road surfaces by mechanical means or manually including bituminous macadam, etc. including stacking the debris upto a distance of 50 metres or spreading as directed.	150.00	m3	354.85	53,227.48
1.25	Dismantling existing brickbat coba waterproofing from the terrace up to mother slab or as per the requirement as directed by Engineer in charge without damaging the RCC slab carefully using electrically operated tools including lowering down the debris and stacking the same upto 50 mtrs from the working site etc. all complete as directed.	150.00	m3	2,840.00	4,26,000.00
2	Earthwork				
2.01	Excavation for foundation, trenches, Roadway etc. in earth, soil of all types, sand, gravel, soft and hard murum, soft rock etc. including removing the excavated materials up to a distance of 50 meters beyond the site of work and lift up to 1.50 meters, stacking and spreading as directed preparing the bed for the foundation and necessary dewatering using pump, backfilling, ramming, watering, including shoring and strutting, providing necessary barricading around excavated area etc. complete.	400.00	m3	287.82	1,15,129.30

2.02	Excavation for foundation, trenches, Roadway etc. in earth, soil of all types, sand, gravel, loose boulders, soft and hard murum, soft rock etc. beyond 1.50 meter and upto 3.00 meter depth including removing the excavated materials up to a distance of 50 meters beyond the building area, stacking and spreading as directed including dewatering using pumps, preparing the bed for the foundation and necessary backfilling, ramming, watering complete including shoring and strutting, providing necessary barricading around excavated area etc. complete..	75.00	m3	415.25	31,144.06
2.03	Excavation for foundation, trenches, Roadway etc. in earth, soil of all types, sand, gravel, loose boulders, soft and hard murum, soft rock etc. beyond 3.0 meter and upto 4.5 meter depth including removing the excavated materials up to a distance of 50 meters beyond the building area, stacking and spreading as directed including dewatering using pumps, preparing the bed for the foundation and necessary backfilling, ramming, watering complete including shoring and strutting, providing necessary barricading around excavated area etc. complete..	50.00	m3	603.84	30,192.09
2.04	Excavation work in Hard rock (blasting prohibited) by mechanical means (Hydraulic excavatory) or manual means including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.	50.00	m3	1,262.87	63,143.51
2.05	Excavation work in Hard rock (blasting prohibited) by mechanical means (Hydraulic excavatory) manual means including dressing of sides and ramming of bottoms, beyond 1.5m upto 3.0m including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.	25.00	m3	1,450.91	36,272.75
2.06	Excavation work in Hard rock (blasting prohibited) by mechanical means (Hydraulic excavatory) or manual means in foundation, trenches or drains including dressing of sides and ramming of bottoms, beyond 3m upto 4.5m including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.	50.00	m3	1,638.94	81,947.00
2.07	Earth work in surface excavation not exceeding 30 cm in depth including getting out and disposal of excavated earth upto 50 m and lift upto 1.5 m, as directed by Engineer-in-Charge:	50.00	m2	107.36	5,368.00
3	Concrete				

3.01	Providing and laying in position ready-mixed or machine batched or machine mixed design mix M-25 (1:1:2) grade cement concrete (with minimum cement content 330Kg/Cum) for all work up to plinth level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per relevant IS code to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	75.00	m3	8,024.43	6,01,832.53
3.02	Providing and laying in position ready-mixed or machine batched or machine mixed design mix M-25 (1:1:2) grade cement concrete (with minimum cement content 330Kg/Cum) for all work above plinth level upto any floor level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per relevant IS code to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	75.00	m3	10,114.35	7,58,576.29
3.03	Providing and laying in position Ready mix or machine batched M-30 grade cement concrete (with minimum cement content 350Kg/Cum)for all work up to plinth level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per relevant IS code to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	50.00	m3	8,628.53	4,31,426.32

3.04	Providing and laying in position Ready mix or machine batched M-30 grade cement concrete (with minimum cement content 350Kg/Cum) for all work above plinth level upto any floor level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per relevant IS code to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	50.00	m3	10,256.38	5,12,819.04
3.05	Providing and laying cement concrete 1:11/2: 3 (M-20) plinth level to upto any floor using sand as fine aggregate and graded stone aggregate 20mm maximum size for foundation, coping and bedding, levelling, dewatering by any means, compaction, finishing, curing etc. complete all as directed.	75.00	m3	7,810.06	5,85,754.41
3.06	Providing and casting in position ready mixed or machine batched M-20 grade cement concrete (Min cement content 270Kg/Cum) for foundation, coping and bedding etc. as per approved excluding shuttering, including compaction, finishing, curing etc. including cost of admixtures in recommended proportions as per relevant IS code to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer-in-charge including casting cubes and testing.	75.00	m3	8,415.61	6,31,170.48
3.07	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Foundations, footings, bases of columns, coping, raft etc.	100.00	m2	308.99	30,899.48
3.08	Centering and shuttering including strutting, propping etc. and removal of form for all heights ::Walls (any thickness) including attached pilasters, buttersesses, plinth and string courses etc.	50.00	m2	671.82	33,591.08
3.09	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Suspended floors, roofs, landings, staircase waste slab, balconies, cantilever chajjas and access platform	100.00	m2	769.15	76,915.08
3.10	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Lintels, beams, plinth beams, girders, bressumers and cantilevers	50.00	m2	610.41	30,520.70
3.11	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Columns, Pillars, Piers, Abutments, Posts and Struts	25.00	m2	806.98	20,174.47

3.12	Providing and laying in position Ready mix M-40 grade cement concrete (with minimum cement content 390Kg/Cum)for all work up to plinth level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including 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 including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	50.00	m3	9,139.40	4,56,970.19
3.13	Providing and laying in position Ready mix M-40 grade cement concrete (with minimum cement content 390Kg/Cum) for all work above plinth level upto any floor level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per relevant IS code to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	50.00	m3	10,767.31	5,38,365.42
3.14	Cutting Transverse/ contraction/ expansion, construction & longitudinal joints by groove cutting machine upto required depth including labour, transportation, tools and plants etc. completed as directed.	2,000.00	Rmt	20.00	40,000.00
3.15	Providing and filling the joint using foam baker rod as base with cold Polysulfide with labour, transportation, tools and plants etc. completed as directed.	2,000.00	Rmt	252.00	5,04,000.00
4	Stonework				
4.01	Providing uncoursed rubble masonry of trap stones in cement mortar 1:6 (Cement:sand/grit) including racking out joints when plastering is to be done, striking out joints, watering and pointing with cement mortar 1:3 on outside exposed faces, including providing M-20 grade concrete block header @ 1 header per sqm. to the full thickness of wall, providing weep holes with 100mm dia P.V.C pipes etc. all complete as directed.	25.00	m3	6,676.02	1,66,900.61
4.02	Laying dry trap / rubble stone soling of required thickness including hand packing and compacting etc. complete using IITB stone including transportation stone from various locations from IIT campus up to working site and cutting the stone, laying and compaction in required size as per requirement.	75.00	m3	808.00	60,600.00
4.03	Laying dry trap / rubble stone soling of required thickness including hand packing and compacting in proper level all complete as directed by Engineer-in-charge.	75.00	m3	1,889.00	1,41,675.00

4.04	Providing coursed rubble masonry of trap stones in cement mortar 1:6 (Cement:sand/grit) including racking out joints when plastering is to be done, striking out joints, watering and pointing with cement mortar 1:3 on outside exposed faces, including providing M-20 grade concrete block header @ 1 header per sqm. to the full thickness of wall, providing weep holes, with 100mm dia P.V.C pipes etc. all complete as directed.	25.00	m3	7,941.35	1,98,533.82
4.05	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :Flush/ruled pointing in proper line and level all complete.	500.00	m2	320.43	1,60,216.75
4.06	Providing tuck-pointing with cement mortar 1:3 for stone masonry including removing existing tuck-pointing and curing etc, complete.	500.00	m2	582.22	2,91,109.35
4.07	Providing coursed rubble masonry (using IITB stones) of trap stones in cement mortar 1:6 (Cement:sand/grit) including racking out joints when plastering is to be done, striking out joints, watering and pointing with cement mortar 1:3 on outside exposed faces, including providing M-20 grade concrete block header @ 1 header per sqm. to the full thickness of wall, providing weep holes, with 100mm dia P.V.C pipes including collecting and transporting stone stacked from various locations of IIT Campus upto working site, cutting stones/ bouldres in piceses as per requirement, scaffolding etc. complete as directed.	25.00	m3	3,630.00	90,750.00
4.08	Providing and laying dry trap / rubble stone pitching to the sloping side in average 200 to 300mm thickness including cuffing, dressing and levelling the undulation of sloping surface, making uniform slope in line and level, laying stone pitching in line level etc. including removing loose earth, cleaning compacting the base providing and fixing 100mm dia. A.C. pipe for weep holes at in 1m. c/c in staggered position if required.	150.00	m2	650.00	97,500.00
5	Brickwork	0.00			
5.01	Providing second class burnt brick masonry with IS approved quality well burnt bricks having crushing strength of 35 kg. / square cm. and maximum water absorption of 20% in cement mortar 1:6 in superstructure including striking joints, racking out joints, watering etc. complete as directed.	75.00	m3	8,316.47	6,23,735.25
5.02	Providing second class burnt brick masonry with IS approved quality well burnt bricks having crushing strength of 35 kg. / square cm. in cement mortar 1:6 upto plinth level including striking joints, raking out joints, watering etc. all complete as directed by Engineer In-Charge.	50.00	m3	6,680.84	3,34,042.00

5.03	Providing second class burnt brick masonry with best available approved quality well burnt bricks having crushing strength of 35 kg. / square cm. and maximum water absorption of 20% in cement mortar 1:4 in half brick thick wall including providing RCC patli M-20 concrete (1:1½:3), 100mm x 100mm to the full length of wall at every one meter height, using two numbers 8mm dia tor steel reinforcement, racking out joints and watering etc. complete as directd .	100.00	m2	1,021.50	1,02,150.41
5.04	Providing and laying autoclaved aerated cement blocks masonry with 100mm/150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineerin-Charge. (The payment of RCC band and reinforcement shall be made for seperately).	50.00	m3	7,017.88	3,50,894.01
6	Granite, Marble, Kadappa				
6.01	Providing and fixing not less than 16 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Marble (area of slab upto 0.50 m2) for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	100.00	m2	2,916.31	2,91,631.12
6.02	Providing and fixing not less than 16 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Marble (area of slab above 0.50 m2) for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	150.00	m2	2,648.41	3,97,260.79
6.03	Providing and fixing not less than 16 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Granite (area of slab upto 0.50 m2) for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	250.00	m2	4,695.23	11,73,806.59

6.04	Providing and fixing not less than 16 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Granite (area of slab above 0.50 m2) for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	300.00	m2	4,440.36	13,32,109.37
6.05	Providing and fixing Kadappa stone slab for platform, shelves, vertical supports etc. as directed by Engineer In-charge of approved type and design 20mm to 25 mm thick in cement mortar 1:4 including filling joints, curing, cleaning etc. complete as directed.	150.00	m2	753.00	1,12,950.00
6.06	Providing flamed/ lapato/ sand blasting/hon Finish polishing to Granite Including transportation, site cleaning, washing, etc. complete as directed.	150.00	m2	575.00	86,250.00
6.07	Providing and laying Polished Granite stone flooring in required design and patterns, in linear as well as curvilinear portions of the building, all complete as per the architectural drawings, with not less than 16 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand), laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade, including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.	150.00	m2	3,922.06	5,88,309.30
6.08	Extra for fixing marble /granite stone, over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive, including cleaning etc. complete.	150.00	Rmt	477.16	71,574.52
7	Building repairs				
7.01	Carefully removing internal or external plaster in patches or any length without damaging structure brickwork in the vicinity by using electric cutting tools including cutting a groove first to demarcate exact area of damage taken place stacking the debris with in 50 meter, cleaning the site etc. complete. including covering the furniture, floor, windows and partitions with plastic sheets while chipping etc. completed as directed. Note:- a) No extra payment shall be made for extra thickness removed. b) Proper tools to be used for removal of concrete and it should be seen by contractor no damage on the other side / near by area will be taken place and if required other portions are to be checked by the contractors with respect to the damage before commencement of the work. c) The area in vertical plane shall be measured.	3,500.00	m2	45.20	1,58,209.97

7.02	Chipping the R.C.C surface and cleaning the rusted reinforcement and exposed surface by wire brush mechanical device or any other established method and applying rust removing solution of approved make and quality with cotton waste swab to reinforcement and allowing to dry the same for 24 hour, brushing of loose particles and applying first coat of rust preventive coating of polymer and cement slurry in 1:1.5 proportion with soft brush without adding water including applying another coat of rust preventing after 4 hours allowing air curing for 48 hours etc. completed as directed.	5,000.00	m2	133.00	6,65,000.00
7.03	Providing and applying an effective bond coat of Polymer (SBR) approved by IITB and cement in the proportion of 1:1 by using brush in multiples coats as required to accommodate the whole thickness of polymer modified mortar wherever required etc. on the surface of old concrete / repaired concrete Polymer (SBR) of approved manufacturer. Note: The actual consumption of polymer shall be measured for payment on weight basis. Challans of authorized dealer will be verified.	25,000.00	Kg	417.00	1,04,25,000.00
7.04	Providing and applying an effective bond coat of Epoxy bonding agent manufactured by M/s. Krishna conchem, Dr. Fixit , Roff , Chembond or M.C. Bouchmey and hardner in the proportion and mixing throughly base & hardner as per manufacture instruction (Base hardner) by using brush in multiples of coat as required to accommodate the whole thickness of PMM wherever required on the surface of old concrete/required concrete. Note- The actual consumption of Epoxy bonding coat shall be measured for payment on weight basis . Challans of authorized dealer will be verified	75,000.00	Kg	1,080.00	8,10,00,000.00
7.05	Providing and Placing in position readymix polymer mortar manufacture by Dr. Fixit, Sunanda, Roff, MC Bouchmey, Chembond and adding water in the proportion of 1:0.14 (polymer mortar : water) in prepared grooves / cracks of the concrete court in layers as directed including mixing the polymer mortar with water using forced action mixer mild curing with water for 3 days and finishing the surface in all respect etc. Complete as directed. (Payment will be paid for the actual quantity of polymer mortar used on weight basis. Challans of authorised Dealer will be verified etc all complete as directed by Estate office).	75,000.00	Kg	46.00	34,50,000.00
7.06	Providing internal cement plaster 12mm thick in single coats in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including curing complete as directed.	500.00	m2	295.85	1,47,925.19
7.07	Providing internal cement plaster 20mm thick in a single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions including curing etc. completed as direcetd.	750.00	m2	403.51	3,02,635.83

7.08	Providing and applying white cement based Birla make wall care putty of average thickness 1mm, over plaster/ concrete surface in proper line / level to prepare surface even and smooth for including preparing the wall surface for the application of wall care putty etc. complete as directed.	1,000.00	m2	124.27	1,24,270.21
7.09	Providing sand face plaster externally using approved screened sand in all positions including base coat of 15mm thick in cement mortar 1:4 using water proofing compound per cement bag as per manufacturer specification and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment not to exceed 8mm thick in cement mortar 1:4 using water proofing compound per cement bag as per manufacturer specification as per manufacturer specification, finishing the surface by taking out grains and curing for 14 days etc. completed as directed.	1,250.00	m2	665.00	8,31,250.00
7.10	Providing temporary steel supports such as tubular steel props 50mm dia, as required for supporting system till the repaired work of the beam, column, slab, chajja, etc. work completed in all respects as directed and when required in any floor of any height inside and outside of the building and removing the supporting system as directed without damaging the structure.	250.00	No	91.00	22,750.00
7.11	Providing and applying HILTY HIT-HY RE 500 injection in RCC including fixing in steel diameter 8mm to 12mm & length 4" to 6" reinforce bars including drilling hole as per manufacturer specifications, blowing out the hole and finishing etc. Complete as directed.	250.00	Nos	675.00	1,68,750.00
7.12	Providing and laying super fluid micro concrete of approved manufacturer at any floor after reinforcement treatment coat including providing marine plywood formwork in line and level, sealing the joints/ gaps with POP & cleaning, curing etc. complete. (Payment will be paid for the actual quantity of polymer mortar used on weight basis. Challans of authorised Dealer will be verified etc all complete as directed by Estate office).	50,000.00	KG	67.00	33,50,000.00
7.13	Drilling straight and inclined holes upto 300mm depth and upto 20mm dia in concrete / masonry using electrically operated drilling machine and fixing nipple for grouting, including scaffolding, conducting water test.	100.00	Nos	34.00	3,400.00

7.14	Grouting existing RCC structure as per following operations, sealing leak paths with lead wool, removing nipple, plugging the hole with neat cement paste by ram packing, cleaning etc. complete. 1) Add Sunflex powder 1.00 kg in one bag of cement of 50 kg with adequate water. 2) Using mechanical means of pressure grouting with the above mix. The pressure shall be 5-10 psi. 3) The grouting to be done into the cracks of ceiling , walls , columns, & beam if necessary. 4) After through grouting sealing the holes with cement slurry.	1,000.00	Kg	34.00	34,000.00
7.15	Grouting in any RCC structure with low viscosity Monomor manufactured by M/s. CICO, SIKKA, MC Bouchmey, Sunanda Chemicals, Roffee etc. or any other approved brand epoxy based product of similar properties, as per manufacture's specification by providing suitable arrangement for grouting at pressure 2 to 3 kg / sqm. for all lift and leads. The grouting is to be done after cement grouting is completed etc. as directed.	1,000.00	Kg	980.00	9,80,000.00
7.16	Providing and erecting arrester/safety net in double layer mesh having first layer 4mm PP rope in 100mmx100mm and second layer with blue fish net with 18mm mesh supported by border rope and tie cord 12mm PP at terrace floor level (6 th floor level) to prevent the debris from falling on ground during progress of work and keeping the same during the entire period.	1,000.00	m2	77.00	77,000.00
7.17	Providing and erecting Mechanical lift upto 6 storey building ,shifting material and lowering down debris on hire basis with steel tubular H – frame double scaffolding with bracings to all heights till completion of entire work as directed by engineer in charge and removing the same as per directions of Engineer In Charge after completion of work.	12.00	per month	49,968.00	5,99,616.00
7.18	Providing and erecting Mechanical lift for building 7 to 16 storey building ,shifting material and lowering down debris on hire basis with steel tubular H – frame double scaffolding with bracings to all heights till completion of entire work as directed by engineer in charge and removing the same as per directions of Engineer In Charge after completion of work.	12.00	per month	62,905.00	7,54,860.00
7.19	Providing and fixing Jute kantan (Tarat) screen to the scaffolding of external wall for any height of building, removing the same after the work is over etc. complete	10,000.00	m2	12.00	1,20,000.00

7.20	<p>Providing and filling separation crack of 75mm width and 25mm deep with polymer modified cementitious mortar.</p> <p>a) Filling polymer modified cementitious mortar in layers of 20mm thick (applying bond coat at every layer) upto profile of concrete in vicinity (composition of mortar: cement 1Kg.: polymer (SBR) of approved manufacturer 15% by wt. of cement : 3Kg silica sand (grading IS 383, zone II, silt content = 0%) over a polymer + cement bond coat including applying making tape on both side of groove, cleaning, finishing to match the plaster in vicinity, double scaffolding disposing of debris anywhere in IITB campus, cleaning as directed etc. complete.</p> <p>b) Proportion</p> <p>c) Bond coat</p> <p>d) SBR polymer + cement in the ratio 1:1 by volume</p> <p>e) Polymer modified cementitious mortar</p> <p>f) SBR polymer 150ml.</p> <p>g) Cement 1 Kg.</p> <p>h) Silica sand 3.0 kg.</p> <p>(Note: - Demarcating groove, breaking Plaster / concrete shall be paid under respective items).</p>	1,000.00	Rmt	174.00	1,74,000.00
7.21	<p>Cutting, demarcating grooves at any height with electrically operated cutter machine between sound and unsound plaster, cracks on external wall, separation cracks Including Scaffolding etc. complete.</p>	1,000.00	Rmt	43.00	43,000.00
7.22	<p>Providing and erecting mat scaffolding using H-frame and bamboos wherever required upto 15m height as directed before commencement of work and removing the same after completion of all works requiring scaffolding.</p>	1,500.00	m2	274.00	4,11,000.00
7.23	<p>Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to as per relevant IS code, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.</p>	100.00	m2	364.68	36,468.31
8	Flooring				
8.01	<p>Providing and laying nonskid ceramic tiles at any floor of Johnson & Johnson /Nitco/ Kajaria/ Orient Bell/ Somani for flooring approved by IITB required size upto 300mm x 300mm quality, brand and shade as available in market on cement mortar 1:4 bedding using white cement pigments finished to levels slope or plumb as required including cutting of tiles. Curing, acid washing etc. all complete.</p>	100.00	m2	938.77	93,877.00

8.02	Providing and laying at any floor nonskid / mat finish ceramic tiles Johnson & Johnson /Nitco/ Kajaria/ Orient Bell/ somani for flooring approved by IITB required size 600x600mm quality, brand and shade as available in market on cement mortar 1:4 bedding using white cement pigments finished to levels slope or plumb as required including cutting of tiles. Curing, acid washing etc. all complete.	200.00	m2	1,273.00	2,54,600.00
8.03	Providing and fixing Ist quality ceramic wall tiles conforming to as per relevant IS code of size 300mmx450mm and 300mm x 600mm as directed by Engineer-in-charge having thickness not less than 5mm, of approved make, in all colours, shades of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement plaster /mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade	1,000.00	m2	941.68	9,41,684.20
8.04	Providing and laying vitrified tiles of Size 600x600 mm and above for floor, skirting, dado's, riser, tread of steps tiles in different sizes having thickness not less than 8mm with water absorption less than 0.08% and conforming to as per relevant IS code, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) or 20 mm thick plaster of cement mortar 1:3 (1 cement : 3 coarse sand) , jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.	2,000.00	m2	1,421.46	28,42,912.98
8.05	Providing and laying vitrified tiles of Size 800x800 mm for floor, dados, skirting, riser, tread etc tiles in different sizes having thickness not less than 8mm with water absorption less than 0.08% and conforming to as per relevant IS code, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) or 20 mm thick plaster of cement mortar 1:3 (1 cement : 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.	50.00	m2	1,886.33	94,316.42
8.06	Providing and laying vitrified tiles of Size 1000x1000 mm for floor, dados, skirting, riser, tread etc tiles in different sizes having thickness not less than 8mm with water absorption less than 0.08% and conforming to as per relevant IS code, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) or 20 mm thick plaster of cement mortar 1:3 (1 cement : 3 coarse sand), jointing with grey cement slurry @ 3.3kg/sqm including grouting the joints with white cement and matching pigments etc., complete.	50.00	m2	2,560.61	1,28,030.42

8.07	Deduct for not using 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding in laying of floor tiles and jointing with grey cement slurry @ 3.3kg/sqm	200.00	m2	737.79	1,47,558.95
8.08	Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness	100.00	m2	635.75	63,574.97
8.09	Providing and laying Kotah stone for flooring, skirting, tread, riser of steps 20mm to 25mm thick of required size in plain / diamond pattern on a bed of 1:4 cement mortar (1 cement : 4 crush sand) or 20 mm thick plaster of cement mortar 1:3 (1 cement : 3 coarse sand) including cement float, filling joints with neat cement slurry, curing, polishing and cleaning complete.	500.00	m2	1,712.39	8,56,195.13
8.10	Providing and laying Kotah stone for flooring 25mm to 30mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete	250.00	Sqm	2,045.47	5,11,366.63
8.11	Providing and fixing two mm thick PVC flooring (vinyl flooring) in roll or tile form manufacture by armstrong of approved shade and in approved pattern on smooth and leveled bed, fixing the flooring as per manufacturer specifications etc. complete.	1,000.00	m2	1,610.00	16,10,000.00
8.12	Providing and fixing wooden flooring of 8 mm / 10 mm thk (AC-4 Grade) of approved make vista /amstrong/pergo in slat form including foam for levelling . Measurment will include the skirting and side/ floor profiles if any.	500.00	m2	1,725.00	8,62,500.00
8.13	Providing and fixing Chequerred precast Cement concrete tiles 22mm thick of approved colour and pattern over steps vertically and horizontaly including filling the joints with light shed pigment with white cement to match the shade of tiles including rubbing, curing and cleaning etc. complete on 20mm thick bed of cement mortar 1:4 (1 Cement : 4 coarse sand) .	75.00	m2	1,237.23	92,792.52
8.14	Machine polishing to cement / marble mosaic tiled flooring or any other type of flooring including cleaning, washing, etc. complete.	500.00	m2	242.00	1,21,000.00
8.15	Hand polishing to dado, skirting including cleaning, washing etc. complete as directed.	500.00	m2	136.00	68,000.00
8.16	Providing and fixing Welspun CNL flooring including skirting/profile of approved design /make and pattern of upto 5.0 mm thk in grain slats or any other size or any other pattern, approved colour etc and cleaning /brooming/mopping the floor before installation and laying Cusioning base /Plastic sheet etc complete as approved and directed.(Skirting/profile shall not be paid separately)	25.00	m2	3,875.00	96,875.00

8.17	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having water absorption less than 0.5% and conforming to IS: 15622, of approved make in all colours and shades in outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	100.00	m2	1,724.83	1,72,483.23
8.18	Providing and laying vitrified tiles of Size 600x600 mm and above for floor, skirting, dado's, riser, tread of steps tiles in different sizes having thickness not less than 10mm with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, including Fixing tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness complete.	50.00	m2	1,319.41	65,970.57
8.19	Providing and laying plain ceramic tiles of size 600mmx600mm and thickness as per manufacturers specification of approved make for flooring in required position including Fixing tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness complete.	50.00	m2	635.75	31,787.50
8.20	Providing and laying not less than 16 mm thick Italian Marble stone slab machine cut, mirror polished Marble stone flooring, in required design (Simple geometrical, abstract etc.) and in patterns in combination with Italian marble stones of different colours, shades and finished surface texture etc., in linear portions of the building, all complete as per the architectural drawings, with 18 mm thick stone slab laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm including pointing with white cement slurry admixed with pigment to match the marble shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge.	25.00	m2	6,116.18	1,52,904.53
9	Wood work				
9.01	Providing and fixing 2nd class country teakwood frame for doors, windows, ventilators by using wood of required size as per site condition including all moulding, rebating, hold fast etc. complete.	1.00	m3	1,55,425.00	1,55,425.00

9.02	Providing and fixing single leaf or double leaf panelled door shutters 35mm thick as per detailed drawings consisting of country cut teak wood styles, top rail, frieze rail of 95mm x 35mm, lock rail of 145mm x 35mm and bottom rail of 245mm x 35mm and insert panels of 12mm thick, marine plywood generally conforming to IS: 710 with heavy duty M.S. pressed butt hinges bright finished of required size with necessary screws, P/F 300mm long heavy duty stainless steel aldrop, other require fittings and fixtures etc. complete.	30.00	m2	6,152.00	1,84,560.00
9.03	Providing and fixing solid core flush door in single or double leaf 32mm thick of commercial type of exterior grade, approved commercial plywood facing both side without glazing and venetians, all necessary beads, moulding and lipping, 300mm long 2 nos. decorative type S.S handles for each shutters, 8" long stainless steel tower bolt 1 no for each shutter, 6 lever Godrej mortise lock with triplicate keys and other required fittings etc. complete (without frame). (fittings will be approved by Engineer in charge before fixing)	50.00	m2	5,571.00	2,78,550.00
9.04	Providing and fixing solid core flush door in single or double leaf 32mm thick of commercial type of exterior grade, approved commercial plywood facing both side without glazing and venetians, all necessary beads, moulding and lipping, 300mm long 2 nos. decorative type S.S handles for each shutters, 8" long stainless steel tower bolt 1 no for each shutter, 12" long stainless steel heavy duty aldrop and other required fittings etc. complete (without frame). (fittings will be approved by Engineer in charge before fixing)	50.00	m2	5,379.00	2,68,950.00
9.05	P/F single leaf FRP moulded shutter 35mm thk. of Advance FRP company or any other approved brand in flush or depress panel design as approved. FRP thickness to be 2.00mm, including extra reinforcement on sides and edges. The core of shutter to be Polyon Foam done in situ with wooden styles embedded for taking hinges, fixtures etc. Both side of shutter to be finish in Gel-Coat. Shutter to have recess to hinges. The whole shutter to be totally waterproff, resistance to mild acid/alkali. Colour as per choice including fixing of fittings such as 3 nos 4" heavy type stainless steel hinges for each shutter, 9" long tadi patti S.S, 2nos. 6" long S.S handles for each shutter etc. completed as directed.	50.00	m2	4,581.00	2,29,050.00
9.06	Refixing aluminium/ wooden framed door and windows by making small modification with new screws and required fittings etc. complete as directed.	25.00	Nos	1,558.00	38,950.00
9.07	Providing and fixing ISI marked and IITB approved make hydraulic door closer to door shutter including making proper adjustment for smooth operation etc. complete.	300.00	Nos	1,540.00	4,62,000.00

9.08	Providing and fixing double action hydraulic floor spring with stainless steel cover plate minimum 1.25 mm thickness of approved brand and manufacture conforming to as per relevant IS code, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.	10.00	Nos	2,457.16	24,571.59
9.09	Providing and fixing capsule door closer of approved quality and make to door shutter including making proper adjustment for smooth operation etc. complete.	10.00	Nos	666.00	6,660.00
9.10	Providing and fixing Godrej make concealed type door closer of approved quality and make to door shutter including making proper adjustment for smooth operation etc. complete.	50.00	Nos	5,865.00	2,93,250.00
9.11	Providing and fixing 3" Anchor Fastener 8 to 10mm diameter wherever necessary etc. complete.	75.00	Nos	41.00	3,075.00
9.12	Providing and fixing heavy duty anchor fastners of size 6" & 12mm dia including drilling hole as per manufacturer specifications, blowing out the hole and finishing including scaffolding etc. Complete as directed.	75.00	Nos	143.00	10,725.00
9.13	Providing and fixing mirrors 6mm thick of approved Indian quality copper plated of any size and shape fixing mirror on wall with SS studs/ mirror clips etc. all complete as directed.	50.00	m2	1,490.00	74,500.00
9.14	Providing and laying clear glass over table, table sides, table partition etc. of 10mm thick as per require shape with buffing, edge polishing, cutting etc. complete as directed.	50.00	Sqm	1,196.00	59,800.00
9.15	Providing, making and fixing fully glazed aluminium double glass partition using 15micron/ powder coated anodized aluminium section of size 100x37x1.5mm thick (1.90Kg/Rmt), P/F 5mm thick clear plain glass in two layer for top and bottom section and 5mm thick writable glass in two layers for middle section of the partition with all required fittings such as rubber gasket, silica gel, silicon selent, glazing clips, screws and other required fittings etc. completed as directed. (all alu. fittings should 15 micron anodized or powder coated.)	25.00	m2	8,449.00	2,11,225.00
9.16	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by with stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	25.00	Each	17.71	442.75
9.17	Providing and fixing zinc alloyed (white powder coated) touch lock for sliding window with necessary screws etc. complete	25.00	Each	167.72	4,192.93

9.18	Providing and fixing steel (white powder coated) crescent lock for sliding window/ door with necessary screws etc. complete	25.00	Each	162.35	4,058.72
9.19	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with float glass panes of 4.0 mm thickness including EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge .	50.00	m2	1,023.26	51,163.00
9.20	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with float glass panes of 5 mm thickness including EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge .	75.00	m2	1,330.05	99,753.56
9.21	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with float glass panes of 8 mm thickness including EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge .	50.00	m2	1,501.23	75,061.31
9.22	Providing and fixing 4 to 5mm thick both side designer aluminium composite sheet in partition, paneling and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	25.00	m2	1,827.00	45,675.00
9.23	Providing and fixing 4 to 5mm thick both side plain aluminium composite sheet in partition, paneling and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	250.00	m2	1,080.00	2,70,000.00
9.24	Providing and fixing 6mm thick transparent acrylic sheet in partition, paneling and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	250.00	m2	781.00	1,95,250.00
9.25	Providing and fixing 6mm thick opaque acrylic sheet in partition, paneling and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	50.00	m2	988.00	49,400.00
9.26	Providing and fixing bright finished brass night latch of approved quality including necessary screws etc. complete	139.00	Each	1,008.21	1,40,141.07
9.27	Providing and fixing special quality 50mm bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete.	25.00	Each	287.27	7,181.78
9.28	Providing and fixing special quality 75mm bright finished brass cupboard or ward robe locks with four levers of approved quality including necessary screws etc. complete.	25.00	Each	357.11	8,927.69
9.29	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete	100.00	Each	726.26	72,625.58

9.31	Providing and fixing 6mm thick commercial plywoods for table top, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	250.00	m2	341.00	85,250.00
9.32	Providing and fixing 12mm thick commercial plywoods for table top, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	250.00	m2	626.00	1,56,500.00
9.33	Providing and fixing 18mm thick commercial plywoods for table top, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	400.00	m2	764.00	3,05,600.00
9.34	Providing and fixing 12mm thick marine plywoods for table top, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	150.00	m2	943.00	1,41,450.00
9.35	Providing and fixing 18mm thick marine plywoods for table top, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	200.00	m2	1,306.00	2,61,200.00
9.36	Providing and fixing openable shutter made up of 18mm thick commercial plywood of approved make, P/F 1mm thick designer sunmika on expose side and edges of shutters and frame, P/F 0.80mm thick white sunmika on unexposed side and frame, P/F stainless steel hinges 2 nos. for each shutter, 1no handle(S.S) for each shutter, ball cage etc. with screws in line and level, P/F wooden frame of required size for frame rectification of all damages etc. complete as directed.	125.00	m2	4,340.00	5,42,500.00
9.37	Providing & fixing in position plywood panelling made using 2" x 1.5" or nearly available teakwood frame at 600mm c/c as frame with 12mm thick commercial plywood, finish with 1mm thick designer or solid colour laminate of century, green lam, royal touch, marino brand with approved pattern and colour, making necessary groves wherever required as per standard practice, making necessary arrangement for removable type panels for electrical work using mirror screws,, making edges smooth with all required fittings and fixtures etc. all complete as directed by Engineer-In-Charge.	350.00	m2	5,200.00	18,20,000.00
9.38	Providing and fixing openable shutter made up of 18mm thick marine plywood of approved make, P/F 1mm thick designer sunmika on expose side and edges of shutters and frame, P/F 0.80mm thick white sunmika on unexposed side and frame, P/F stainless steel hinges 2 nos. for each shutter, 1no handle(S.S) for each shutter, ball cage etc. with screws in line and level, P/F wooden frame of required size for frame rectification of all damages etc. complete as directed.	20.00	m2	4,667.00	93,340.00

9.39	Providing & fixing in position overhead storage cabinet having depth 1'-6" made out of using 18mm thick commercial plywood for sides, top, bottom, shelf & 12mm thick ply for back sides, 1mm thick decorative sunmica for outside and 1mm thick white sunmaica for inside surfaces, CP teakwood frame work/support fixing the unit on wall, 01 nos handle for each shutter, magnet, lock, polish with including necessary edging, moulding, buffing, autohinges, & other hardware required fitting etc. all complete as per drawing or as directed.	75.00	m2	12,202.00	9,15,150.00
9.40	Providing and fixing shutter below platform and for cupboard made of aluminium anodized 15 micron or powder coated L type section for frame 38 x 25x1.2mm or near available handle section 40x18x1.2mm for shutter Top & bottom and sides, P/F 4mm thick hardner sheet of bakelite P/F stainless steel hinges 75mm x 20mm, S.S. Tower bolt and magnet . handle (S.S.) fixing shutter on aluminium frame with screws properly in line and level, etc. Complete.	150.00	m2	7,487.00	11,23,050.00
9.41	Providing and fixing pin up board on walls using 8mm thick plywood for backside support, P/F 12mm thick soft board on plywood with fabric of approved pattern and design with all required fittings and fixtures and necessary hardware etc. completed as directed. The basic cost of fabric to be Rs. 350/- per RM (3 feet width).	50.00	m2	4,995.00	2,49,750.00
9.42	Providing and fixing PVC gasket/ rubber lining with necessary fittings and fixtures etc. completed as directed.	99.00	Rmt	79.00	7,821.00
9.43	Providing & fixing 1mm thick designer laminate of approved brand and pattern on partition/ door shutter/ door frame/ over window including, making necessary groves wherever required as per standard practice with all required fittings and fixtures etc. complete as directed.	1,000.00	m2	950.00	9,50,000.00
9.44	Providing and fixing 12mm thick cement bonded wood particle board (bison panel) for chajja, ceiling, staircase at any floor, providing suitable hole for fixing nuts and bolts including making suitable groove on walls, making vata at joint, P/F sheet in proper slope including double scaffolding wherever required complete as directed.	25.00	m2	1,217.00	30,425.00
9.45	Providing and fixing 20mm thick cement bonded wood particle board (bison panel) for chajja, ceiling, staircase at any floor, providing suitable hole for fixing nuts and bolts including making suitable groove on walls, making vata at joint, P/F sheet in proper slope including double scaffolding wherever required complete as directed.	150.00	m2	1,504.00	2,25,600.00

9.46	Providing & fixing 4mm teak veneer of approved brand and pattern on partition/ door shutter/ door frame/ over window including, making necessary groves wherever required as per standard practice with all required fittings and fixtures including polishing etc. complete as directed by Engineer-in-charge.	100.00	m2	1,778.00	1,77,800.00
9.47	Providing and laying 5mm thick acrylic sheet of 450mm width of approved company for damp proof course (Top glas acrylic/Swastik/Forte) in the bottom of brick masonry/concrete wall by cutting, making slit in it at floor level by 100 mm overlapping end to end including plastering, filling the gaps by mortar and making good surface etc. all complete as directed.	25.00	m2	1,184.00	29,600.00
9.48	Providing and fixing 2nd class teak wood lipping/ moulded beading or taj beading of required size fixed with wooden adhesive of approved quality and screws/ nails on the edges as per direction of Engineer-in-charge	100.00	Rmt	85.89	8,589.04
9.49	Providing and fixing fly proof stainless steel mesh of approved quality to windows, grills, doors and any other location using teak wood or aluminium anodised section of require size with necessary fittings and fixtures etc. complete as directed.	75.00	m2	1,409.01	1,05,676.08
9.50	Providing and fixing 300mm long stainless steel handles to door of approved quality and design with necessary fittings and fixtures etc. completed as directed.	100.00	Set	626.00	62,600.00
9.51	Providing and fixing 450mm long stainless steel handles to door of approved quality and design with necessary fittings and fixtures etc. completed as directed.	50.00	Set	741.00	37,050.00
9.52	Providing and fixing 12 mm thick Pre-laminated particle board with decorative lamination on both sides flat pressed three layer or graded wood particle board conforming to as per relevant IS code Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with galzing clips and rubber gasket/ C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-in-charge	25.00	m2	954.28	23,856.92
9.53	Providing and fixing Brass door handles H type 900mm with SS finish (Kich /Equivalent) with required fittings, screws all complete as directed by engineer incharge	20.00	Pair	9,433.00	1,88,660.00
9.54	Providing & fixing 0.8mm thick white laminate of approved brand and pattern on partition/ door shutter/ door frame/ over window including, making necessary groves wherever required as per standard practice with all required fittings and fixtures etc. complete as directed.	150.00	Sqm	752.00	1,12,800.00
9.55	Providing and fixing 5mm thick acrylic sheet board at desired place and location in aluminium framing/ wooden framing/ glass replacement/ window framing etc. including fitting, fixtures, scaffolding etc. all complete	50.00	m2	1,544.00	77,200.00

9.56	Providing and fixing drawer unit having anodized channel drawer of length 450mm consisting of 18mm thick commercial plywood for front,back and sides, lock with triplicate keys, handle , 1mm thick designer laminate for exposed area , 0.8mm white laminate for unexposed area as per given design etc. all complete as directed by Engineer-in-charge	5.00	m2	16,394.00	81,970.00
9.57	Providing and fixing drawer unit having anodized channel drawer of length 600mm consisting of 18mm thick commercial plywood for front,back and sides, lock with triplicate keys, handle , 1mm thick designer laminate for exposed area , 0.8mm white laminate for unexposed area as per given design etc. all complete as directed by Engineer-in-charge	1.00	m2	19,483.00	19,483.00
9.58	Providing and fixing mirror of Rectangular shape 1500x450 mm superior glass (of approved quality) with or without plastic moulded frame as per directed of approved make and shade with 6 mm thick hard board backing.	25.00	Each	1,823.37	45,584.14
9.59	P/F single leaf FRP moulded shutter 35mm thk. of Advance FRP company or any other approved brand in flush or depress panel design as approved. FRP thickness to be 2.00mm, including extra reinforcement on sides and edges. The core of shutter to be Polyon Foam done in situ with wooden styles embedded for taking hinges, fixtures etc. Both side of shutter to be finish in Gel-Coat. Shutter to have recess to hinges. The whole shutter to be totally waterproff, resistance to mild acid/alkali. Colour as per choice including fixing of fittings such as 3 nos 4" heavy type stainless steel hinges for each shutter, approved make dead lock/cylindrical lock, 2nos. 6" long S.S handles for each shutter etc. completed as directed.	5.00	m2	4,759.00	23,795.00
10	Steel Work				
10.01	Providing and fabricating structural steel works in rolled sections like joists, channels, angles, tees, hollow sections and any other required sections etc. as per detailed designs & drawings for supports, rafters, purlins, railing, staircase and any other work including fixing in position with connecting plates, braces and welding, riveting, bolting as necessary including one coat of redoxide priming coat etc. complete as directed.	1,000.00	kg	93.37	93,365.71
10.02	Providing, fabricating and fixing Chequered Plate of required thickness for steps and any other work including in required size, welding, fixing necessary supporting M.S frame work with the plate including one coat of steel primer and two coat of SEP etc. completed as directed. (M.S work will be paid separately)	500.00	Kg	102.60	51,298.46

10.03	Providing fabricating and fixing Steel work in built up tubular (round, square or rectangular hollow tubes, trusses etc.) in hot finished welded type tubes, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.	400.00	Kg	155.43	62,170.22
10.04	Steel work in built up tubular (round, square or rectangular hollow tubes, trusses etc.) in hot finished seamless type tubes, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.	400.00	Kg	169.52	67,809.29
10.05	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	400.00	Kg	614.33	2,45,730.91
10.06	Fabricating and fixing structural steel works supplied by Institute in rolled sections like joists, channels, angles, tees, hollow sections and any other required sections etc. as per detailed designs & drawings for supports, rafters, purlins, railing and any other work including fixing in position with connecting plates, braces and welding, riveting, bolting as necessary including painting, scaffolding etc. complete.	500.00	Kg	26.00	13,000.00
10.07	Providing and fixing hand rail using M.S Tube by welding for steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two coat of synthetic enamel paint.	300.00	kg	157.68	47,304.96
10.08	Providing and fixing hand rail using E.R.W Tubes by welding for steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	300.00	kg	150.91	45,273.09
10.09	Providing and fixing hand rail of using 'C' class G.I pipe by welding etc. for steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	100.00	kg	180.81	18,081.14
10.10	Providing and fixing mild steel grill work for window, ventilator, partition weighing 15 kg per sqm as per drawing including necessary welding and painting with one coat red oxide primer and two coats of synthetic enamel paint of approved shade etc. complete as directed.	200.00	m2	1,519.00	3,03,800.00

10.11	Add for extra weight or deduct for less weight over item no.10.11 for fabricating such as cutting, shaping, riveting etc. mild steel for grill works including painting with one coat red oxide primer and two coats of synthetic enamel paint of approved shade etc. complete as directed.	500.00	kg	100.00	50,000.00
10.12	Providing and fixing in position collapsible steel shutters with vertical channels 20 x 10 x2mm and braced with flat iron diagonals 20 x 5mm size with Top bottom rail of T-iron 40 x 40 x 6mm with 40mm dia. Steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles including applying priming coat of approved steel primer etc. Including removing the existing damaged collapsible gate and taking it away out of IIT campus etc. Complete as directed.	5.00	m2	9,429.23	47,146.17
10.13	Providing and fixing 50mm x 50mmx 8 gauge crimped mesh by cutting, welding etc with applying one coat of primer and two coats of synthetic enamel paint, scaffolding etc all complete as directed by engineer in charge.	200.00	m2	754.00	1,50,800.00
10.14	Providing and fixing weld mesh of 25mm x 25mm (10 guage) to structural steel frame work as per approved pattern of detailed drawing or as directed one coat of primer and two coat synthetic enamel paint, scaffolding etc complete.	50.00	m2	703.00	35,150.00
10.15	Providing and fixing G. I. chain link fencing 50mm x 50mm x 8 guage thick and of desired height for fencing including welding the chain link fencing with G.I. pipes or M.S. angle frames / flats, applying one coat of metal primer and two coats of synthetic enamel paint of approved colour / brand etc. complete.	150.00	m2	626.00	93,900.00
10.16	Providing and fixing 16mm dia. mild steel round bars at 100mm c/c to windows / ventilators / fanlights, fixing mild steel Flats 40 x 6mm in frame, cutting a recess to fit the flat exactly including drilling the holes to flats to pass the bars through it 25mm inside in wooden frame including providing one central mild steel flat of 40 x 6mm by drilling holes (when bar length exceeds 75cm) etc. complete.	25.00	Kg	100.04	2,500.96
10.17	Providing and fixing G.I. Welded mesh 12mm x 12mm and (18 gauge) to teakwood frame work including fixing weld mesh with 37mm x 12mm teakwood bedding patti and necessary pocketing for opening for shutters with necessary screws , fitting as directed	25.00	m2	738.00	18,450.00
10.18	Labour charges for modification of the existing window MS grills by means of cutting, fabricating,welding etc and refixing it in position/line/level/plumb including scaffolding,taking care of necessary safety precautions at site etc. complets as directed.	200.00	m2	361.00	72,200.00

10.19	Modifying existing chequered plates supplied by IIT by making necessary cutting, welding, making holes, including all lead and lift, transporting the plates from anywhere inside IIT till work site all complete as directed.	25.00	m2	481.00	12,025.00
10.20	Providing and fixing heavy duty ductile iron grating of size 300mmx600mm of NECO or IITB approved make in proper line and level all complete as directed.	20.00	Nos	6,371.00	1,27,420.00
10.21	Providing and fixing light duty ductile iron grating of size 450mmx600mm of NECO or IITB approved make in proper line and level all complete as directed.	10.00	Nos	2,926.00	29,260.00
10.22	Providing and fixing heavy duty ductile iron grating of size 450mmx600mm of NECO or IITB approved make in proper line and level all complete as directed.	50.00	Nos	7,285.00	3,64,250.00
10.23	Providing and fixing new worm gear at top and bottom with all necessary fitting etc., complete.	15.00	Nos	7,170.00	1,07,550.00
10.24	Providing and fixing rolling steel shutter fabricated from 18/19 gauge steel laths with side guides, bottom rail, brackets, door suspension shaft including rolling springs, locking arrangement and housing box at the top with one coat of red lead primer etc. complete.	25.00	m2	5,674.00	1,41,850.00
10.25	Extra for providing grilled rolling shutters manufactured out of 8 mm dia M.S. bar instead of laths as per design approved by Engineer-in-charge, (area of grill to be measured).	10.00	m2	671.22	6,712.20
10.26	Removing rolling shutters and collapsible gate of any size and type with fittings (if available) and taking out the same outside IIT Campus etc. complete. (5% cost will be deducted from Item of work for material taken outside campus)	25.00	m2	177.00	4,425.00
10.27	Providing and fixing in position tor steel bar having grade Fe-500D or more for reinforcement of various diameters for R.C.C. footings, foundations, slabs, beams, columns, canopies, staircases, chajjas, lintels, pardies, coping, fins, dowel bars with sleeve, tie bar, any other required work etc. as per detailed designs, drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required completed as directed.	1,000.00	Kg	89.95	89,954.17
10.28	Oiling, greasing rolling shutter and spring by opening the hood (house box) applying grease to spring, refixing the hood, applying greese to side guide channel, making pull type rolling shutter of any size with use of scaffolding/ step ladder etc. Complete as directed.	50.00	Job	1,464.00	73,200.00
11	Roofing				
11.01	Providing and fixing armstrong make dune microlook 99.9% NRC mineral fibre board 600mm x 600mm sheet in existing false ceiling frame by removing damaged sheet with required modification in frame as necessary all complete as directed.	750.00	Per Nos.	355.00	2,66,250.00

11.02	Providing and fixing modular false ceiling of 600mm x 600mm c/c and placing 3mm thick square aluminium composite sheet (alto bond sheet) to be fixed on frame work of aluminium section for suspended false ceiling consisting of aluminium T 1" x 1 ½"(25 x 40mm) weighing 0.259 Kg/m suspended on GI wire at 1200mm c/c, fixed on wall beams, slab including rounding the edge with aluminium T of 1"x 1 ½" (25mm x 40mm) weighing 0.259kg/m(all aluminium section shall be anodized 15micron or powder coated), making necessary cutout for light and fixtures including all labour, material, lifts and scaffolding all complete as directed by Engineer incharge etc.	400.00	m2	1,963.00	7,85,200.00
11.03	Providing & fixing 12mm thick Gypsum board on partition, false ceiling including, making necessary groves wherever required as per standard practice, The boards should be taped and filled from underside to give smooth, seamless surface with all required fittings and fixtures etc. complete as directed.	75.00	m2	1,121.00	84,075.00
11.04	Providing & fixing cove false ceiling of 6mm thick calcium silicate board of hilux make at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of intermediate G.I chanel 45 x15 x 0.90mm & perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long of required width as per site condition suspended from ceiling using angle hangers of 25 x10 x0.50mm of required length with nuts & bolts including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes,finishing with jointing compounds all as per manufacture's specification .	200.00	Rmt	466.00	93,200.00
11.05	Providing & fixing cove false ceiling of 12.5mm thick gypsum board of Gyproc make at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of intermediate G.I channels 45 x15 x 0.90mm & perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long of required width as per site condition suspended from ceiling using angle hangers of 25 x10 x0.50mm of required length with nuts & bolts including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes,finishing with jointing compounds suitable for boards, all as per manufacture's specification	25.00	Rmt	453.00	11,325.00

11.06	Providing & Fixing of G.I Lay-in perforated or plain metal ceiling system consisting of 600x600mm size grid with fleece laying in tiles of pre-coated galvanized steel in 0.4/0.5 mm thickness in required colour with 15mm wide T - section silhouete flanges of required colour having rotary stitching on the main Runner including P/F 1200mm &600mm cross Tees as per manufacturer specifications and Engineer-in-Charge.	200.00	m2	1,763.00	3,52,600.00
11.07	Providing & Fixing of Dune microlook R.H 99% NRC ceiling system consisting of 600x600mm size grid with fleece laying in tiles of pre-coated galvanized steel in 0.4/0.5 mm thickness in required colour with 15mm wide T - section silhouete flanges of required colour having rotary stitching on the main Runner including P/F 1200mm &600mm cross Tees as per manufacturer specifications.	750.00	m2	1,469.00	11,01,750.00
11.08	Providing & fixing 12mm thick Calcium Silicate board on partition, false ceiling including, making necessary groves wherever required as per standard practice, The boards should be taped and filled from underside to give smooth, seamless surface with all required fittings and fixtures etc. complete as directed.	75.00	m2	1,717.00	1,28,775.00
11.09	Providing & fixing 6mm thick Calcium Silicate board on partition, false ceiling including, making necessary groves wherever required as per standard practice, The boards should be taped and filled from underside to give smooth, seamless surface with all required fittings and fixtures etc. complete as directed.	50.00	m2	724.00	36,200.00

11.10	<p>Providing & fixing 6mm thick calcium silicate board (make: Hilux) false ceiling in classrooms, labs at all floors, foyer area, washrooms etc including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanel 45 x15 x 0.90mm running at the spacing of 1200 mm c/ c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of Rawl plugs at 450mm centre, with 25mm long dry wall screws @ 230mm interval, including fixing of calcium silicate Board to ceiling section and perimeter channels with the help of dry wall screws of size 3.5 x25mm at 230mm c/c, including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes,finishing with jointing compounds in three layers covering up to 150mm on both sides of joints, all as per manufacture's specification and also including the cost of making opening for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed, covering the carpet, tables, chairs, machines etc with plastic sheets all complete as per drawings, specificaton and direction of the Engineer in charge but excluding the cost of painting.</p>	100.00	m2	1,400.00	1,40,000.00
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11.11	<p>Providing & fixing 12.5mm thick gypsum board of Gyproc make at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of angle cleat of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm c/c, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25 x10 x0.50mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I chanel 45 x15 x 0.90mm running at the spacing of 1200 mm c/ c, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26 mm each having lips of 10.5mm, at 450mm c/c, shall be fixed in a direction perpendicular to G.I intermediate channel with connecting clip made out of 2.64mm dia x 230mm long G.I wire at every junction, including fixing perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/ partitions with the help of Rawl plugs at 450mm centre, with 25mm long dry wall screws @ 230mm interval, including fixing of gypsum Board to ceiling section and perimeter channels with the help of dry wall screws of size 3.5 x25mm at 230mm c/c, including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes,finishing with jointing compounds in three layers covering up to 150mm on both sides of joints all as per manufacture's specification and also including the cost of making opening for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed, covering the carpet, tables, chairs, machines etc with plastic sheets all complete as per drawings, specificaton and direction of the Engineer in charge.</p>	150.00	m2	1,317.00	1,97,550.00
11.12	<p>Providing at all heights, levels and locations 0.71 mm thick aluminium sheet, the profile detail width 1044/920 mm, cover width 1000/875 mm. aluminium profile industrial troughed sheet of Alloy 1500/31000/40800, conforming to as per relevant IS code. The sheet shall be fixed using self drilling/self tapping SS screws of size 5.5x65 mm with EPDM seal complete upto required pitch in horizontal, vertical or curved surfaces i/c cutting to size and shape where required as per specifications, detail drawings and direction of Engineer-in-Charge. The rate shall be inclusive of all screws, seal, ridge, labour, scaffolding, machinery for fixing and approved sealent where required etc. but excluding the cost of purlins, rafters and trusses.</p>	5.00	m2	987.24	4,936.19

11.13	Providing and fixing colour coated Galvalume profile precoated sheet for roofing and cladding having thickness 0.50mm TCT of Jindal AZ 150 Make with required colour along with necessary accessories like self drilling and tapping screws with weather cap with all leads and lift including scaffolding etc. complete as directed.	75.00	m2	1,051.00	78,825.00
11.14	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 150mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	50.00	Rmt	550.00	27,500.00
11.15	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 200mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	50.00	Rmt	607.00	30,350.00
11.16	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	25.00	Rmt	1,067.00	26,675.00
11.17	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT gutter having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	25.00	Rmt	573.00	14,325.00
11.18	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT ridge having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	50.00	Rmt	515.00	25,750.00
11.19	Carefully refixing the old precoated galvanised iron profile/GI/FRP sheets as per availability and requirement by using self drilling /self tapping screws and sealing the joints properly with approved sealant materials including all leads and lifts, scaffolding etc. all complete as directed.	25.00	m2	289.00	7,225.00

11.20	Providing and fixing multicell 16mm thick (min.) Polycarbonate UV Insulated sheets of Coxwell/ Danpal/ Palram/ DPI Daylighting make of approved colour in curve or plane shape, panel width 900mm (min.), panels shall be uniform in colour with multi-cell structure. Weight of the panel shall not be less than 3.31Kg/sqm. Panels shall have vertical standing seam at both sides of the panel including all fittings and fixtures such as snap on connector with grip lock 1 / 2 tooth locking mechanism for water and air tightness. Panels shall be fixed on purlins with SS expansion fastener and polycarbonate U connectors. Panels shall be sealed with additional End-cap/Aluminium U profile(mill finish) for ends or welded ends. Panels shall be fixed on end wall by making grooves on wall plaster and fixing the sheet with necessary cement plastering/ grouting with required flashing at the junction of wall/concrete surface and sheets and other required fittings as per manufacturer specifications etc. Panels should be covered under 10 years warranty against any manufacturing defects Note: Payment for flashing will be made in separate item.	50.00	m2	4,464.00	2,23,200.00
11.21	Carefully removing ACP sheet paneling with aluminium frame work and stacking the same upto 50mtrs distance as directed by Engineer-in-Charge all complete as directed	25.00	m2	185.00	4,625.00
11.22	Refixing existing ACP sheet at required location by correcting slope without damaging it with all necessary fittings, fixtures, screws, gaskets, pump filled structural 789 grade silicon sealant & hardware, making joints watertight up to any height including replacing damaged ACP sheet and aluminium members (if any) using scaffolding or any mechanical arrangements erected for ACP facade cleaning work etc. completed as directed Engineer In-charge.. (Replacment of damaged ACP sheet and aluminium members will be paid in respective item.)	25.00	m2	551.00	13,775.00
11.23	Design, supply and installation of ACP work incorporating of 3 mm thick Aluminum Composite Cladding sheet of Altobond or Eurobond make of approved colour, the top and bottom layer of 0.5 mm thick Aluminum Sheet sandwiched with 3 mm thick polythylene core, supported by M. S. cleat duly black painted. The back up structure will be made of Aluminum 38 mm x 38 mm rectangular tube with all fittings, fixtures, hardware and pump filled 789 grade Silicone Sealant with all fittings and fixtures up to any height using scaffolding or any mechanical arrangements erected for ACP facade cleaning work etc. completed as directed Engineer In-charge..	17.00	m2	4,307.00	73,219.00

11.24	Design, supply and installation of ACP work incorporating of 4 mm thick Aluminum Composite Cladding sheet of Altobond or Eurobond make of approved colour, the top and bottom layer of 0.5 mm thick Aluminum Sheet sandwiched with 3 mm thick polyethylene core, supported by M. S. cleat duly black painted. The back up structure will be made of Aluminum 38 mm x 38 mm rectangular tube with all fittings, fixtures, hardware and pump filled 789 grade Silicone Sealant with all fittings and fixtures up to any height using scaffolding or any mechanical arrangements erected for ACP facade cleaning work etc. completed as directed Engineer In-charge..	25.00	m2	4,738.00	1,18,450.00
11.25	Providing and pumping 789 grade Silicone sealants for the ACP sheet joints, window frames / window frame joints etc. including racking out and cleaning existing loose joints & making joints watertight up to any height using scaffolding or any mechanical arrangements erected for ACP facade cleaning work etc. all complete as directed by Engineer In-charge.	10.00	Rmt	158.00	1,580.00
11.26	Providing and fixing 4mm thick exterior grade ACP sheet of approved colour and pattern over existing aluminium frame, fixing the panels using 3M tape, filling the joints using 789 grade silicon sealant with all required fittings and fixtures, screws, hardware using scaffolding or any mechanical arrangements erected for ACP facade cleaning work etc complete as directed by Engineer In-charge. .	5.00	m2	3,023.00	15,115.00
11.27	P/F 12mm thick (minimum) Polycarbonate UV Insulated Sheets of Coxwell/ Danpal/ Palram/ DPI Daylighting make of approved colour in required shape, panel width shall not be less than 900mm, panels shall be uniform in colour including all fittings and fixtures such as snap on connector with grip lock double tooth locking mechanism, millfinish aluminium U profile end cap, required flashing at the junction of wall/concrete surface and sheets and other required fittings as per manufacturer specifications etc.all complete as directed by Engineer In-charge.	13.00	m2	4,037.00	52,481.00

11.28	Providing & fixing 6mm thick Shera board false ceiling in required colour pattern and texture screwed/fixed to the under structure of suspended G.I grid constructed and suspended from the main ceiling consisting of ceiling section of size 25 x 50 mm maximum c/c distance of 600 x 600mm perimeter channel and intermediate channel at maximum c/c to distance of 1200mm galvanised grid should be fixed to reinforced cement concrete slab. The shera board should be fixed to galvanised iron grid with necessary screws. The board should be taped and filled from underside to to give smooth , seamless ceiling. The rate should include necessary additional ceiling section and intermediate channels. Additional intermediate channels should be fixed to strap hangers for additional support to prevent strapping at every 1200mm item to be completed in all respect including necessary sleeves for ducts finishing of joints cut outs and including labour ,material, lift and scaffoldings at any height etc. all completed	10.00	m2	4,060.00	40,600.00
11.29	Providing and fixing acoustic board 25mm thick of armstrong, Anutone make in required colour, pattern, size and shape on existing plywood using clips, pasting the board on plywood using suitable pasting gel, necessary cutting, fitting all complete as directed. (excluding plywood)	75.00	m2	9,517.00	7,13,775.00
11.30	Providing and placing glasswool sheets of 50mm thickness of density not less than 48 Kg/m3 wrapped in 200G virgin polyethene bags placed in panelling, false ceiling frame held in position by criss cross GI wire including all lead, lift and scaffolding till any height all complete as directed.	100.00	m2	522.00	52,200.00
11.31	P/f 5mm thick glass for vision panel in door including making necessary cutting in the door of required size with necessary teakwood moulding and melamine polish on moulding all complete as directed.	25.00	m2	2,023.00	50,575.00
11.32	P/A Termigaurd spray (Make: Pidilite) on plywood, flush door, panel door etc. evenly as per manufacturer's specification all complete as directed.	10.00	m2	58.00	580.00

11.33	<p>Providing & fixing cove false ceiling of 6mm thick Shera board make at all height including providing & fixing of framework made of special section, power pressed from M.S. sheets and galvanised with zinc coating of 120 gms/ sqm (both side inclusive) as per IS : 277 and consisting of intermediate G.I channels 45 x15 x 0.90mm & perimeter channels 0.50mm thick 27mm high having flanges of 20mm and 30mm long of required width as per site condition suspended from ceiling using angle hangers of 25 x10 x0.50mm of required length with nuts & bolts including jointing & finishing to a flush finish of tapered and square edges of the board with recommended jointing compounds, jointing tapes,finishing with jointing compounds for boards all as per manufacture's specification.</p>	5.00	Rmt	615.00	3,075.00
11.34	<p>Supplying and fixing in position sandwich roofing in curved shape using color galvalume profile precoated sheet for roofing having thickness 0.5mm TCT and jindal 150 AZ make with required colour at top and bottom sheet including necessary accessories like self drilling and tapping screws with weather cap with all leads and lift and fixing as per manufacturers specification, stiching the lap joints (Minimum 150mm) along the length of the sheet with rivets at a maximum spacing of 450 mm including necessary cutting of sheet wherever required and fixing properly in all respects to make the wall /roof water tight and leak proof, providing and fixing WMVPR RB Glasswool 16 kg/m3 - 50mm thickness between galvalume sheets and G. I. Channel having 50mm depth and 1.5mm thickness and connecting the Z purlins with each other including scaffolding etc complete all as directed. No extra payment will be made for overlapping.</p>	75.00	m2	1,920.00	1,44,000.00
11.35	<p>Supplying and fixing in position sandwich roofing using color galvalume profile precoated sheet for roofing having thickness 0.5mm TCT and jindal 150 AZ make with required colour at top and bottom sheet including necessary accessories like self drilling and tapping screws with weather cap with all leads and lift and fixing as per manufacturers specification, stiching the lap joints (Minimum 150mm) along the length of the sheet with rivets at a maximum spacing of 450 mm including necessary cutting of sheet wherever required and fixing properly in all respects to make the wall /roof water tight and leak proof, providing and fixing WMVPR RB Glasswool 16 kg/m3 - 50mm thickness between galvalume sheets and G. I. Channel having 50mm depth and 1.5mm thickness and connecting the Z purlins with each other etc complete all as directed. No extra payment will be made for overlapping.</p>	175.00	m2	1,865.00	3,26,375.00

11.36	Supplying and fixing in position sandwich roofing using above existing sheet in required color galvalume profile precoated sheet for roofing having thickness 0.5mm TCT and jindal 150 AZ make with required colour at top including necessary accessories like self drilling and tapping screws with weather cap with all leads and lift and fixing as per manufacturers specification, stiching the lap joints (Minimum 150mm) along the length of the sheet with rivets at a maximum spacing of 450 mm including necessary cutting of sheet wherever required and fixing properly in all respects to make the wall /roof water tight and leak proof, providing and fixing WMVPR RB Glasswool 16 kg/m3 - 50mm thickness between galvalume sheets and G. I. Channel having 50mm depth and 1.5mm thickness and connecting the Z purlins with each other etc complete all as directed. No extra payment will be made for overlapping.	175.00	m2	1,562.00	2,73,350.00
11.37	Providing and fixing plain galvalume sheet for covering and any other work having thickness 0.60mm of Jindal 150 AZ make of required colour along with necessary accessories like self drilling and tapping screws with weather cap with all leads and lift etc. complete as directed.	50.00	m2	559.00	27,950.00
11.38	Providing and fixing trap door in existing false ceiling cutting and making 8mm Calcium silicate board trap door for service line using 15 mm GI pre-coated wall angle for framing and 8 mm calcium silicate board including all fixture with G.I support, stepladder , putty for filling gaps and joints ..etc.all complete as directed by Engineer In-charge.	50.00	m2	1,674.00	83,700.00
11.39	Removing existing modular alto bond or other 600X600mm grid false ceiling sheets with false ceiling aluminium supports, stacking the material without getting damaged to desired location and re-fixing the false ceiling after completion of other renovations including all necessary supports, making necessary cutout for light and fixture, all labour, material, lifts and scaffolding, covering the floor area, furniture with good quality sheets As directed by Engineer in charge etc.	40.00	m2	418.00	16,720.00
11.40	Providing and fixing adjustable continues Aluminium bracket of approved quality and with chromatised finish conforming and of required shape and size adjustable with stainless steel nuts and bolts/washer and anchor fastener for dry stone cladding for framework at suitable location including making necessary recesses in stone slab, drilling required holes etc. complete as per direction of Engineer-in-charge. The rate also includes the cost of providing and fixing anchor fastener, stainless steel nuts and bolts/washer etc and any other fixtures required for the completion of work and no additional payment shall be paid for the same.	5.00	kg	672.00	3,360.00

11.41	Providing and fixing plain 1.00mm thick aluminium sheet for covering, partition, door bottom and any other work of approved make along with necessary accessories, fittings and fixtures with all leads and lift etc. complete as directed.	5.00	m2	1,167.00	5,835.00
12	Finishing				
12.01	Providing and applying one coat of seal cement primer IITB approved brand, Including scrapping the surface, filling the holes with lambi/palti, covering the floor, windows, instruments with clean plastic sheet, including working platform / stepladder upto 3.5m height during painting etc. complete.	2,500.00	m2	64.67	1,61,671.67
12.02	Providing and applying roller finish plastic emulsion paint of IITB approved manufacturer and of desired colour and shade to old / new ceiling & wall surfaces in two coats with the use of stepladder/scaffolding upto 3.5m height,instruments with clean plastic sheet as per manufactures specification (excluding priming coat) complete.	1,000.00	m2	91.16	91,158.24
12.03	Providing and applying Acrylic distemper of IITB approved manufacturer and of desired colour and shade to old / new surfaces in two or more coats , preparing the surfaces (excluding priming coat), covering the floor, windows, instruments use of stepladder/scaffolding upto 3.5m height,with clean plastic sheet during painting complete.	1,000.00	m2	50.77	50,771.68
12.04	Providing and applying one coat acrylic distemper of approved quality colour and shade of IITB approved manufacturer to old/new surfaces including step ladder etc, complete.	2,500.00	m2	19.00	47,500.00
12.05	Providing and applying one priming coat of IITB approved brand to wood and wood based surface, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter, sand papering,stepladder, abro tape etc. all complete.	150.00	m2	61.66	9,248.77
12.06	Providing and applying one priming coat of IITB approved brand over steel and other metal surface, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter, sand papering etc.	150.00	m2	55.69	8,353.25
12.07	Providing and applying two coats of synthetic enamel paint of IITB approved brand and shade to wood and steel work Scrapping, cleaning, covering the floor, windows, instruments during painting etc. complete.	250.00	m2	86.84	21,710.00
12.08	Providing and applying three coats of white wash on old / new plastered surface for walls and ceiling and asbestos sheet using step ladder/ upto 3mtr. height, scrapping and cleaning the surface by sand paper and brooming, adding Robbin blue as required, adding adhesives for bonding, cleaning the floor, filling all cracks, holes etc. with plaster of paris, covering the floor, windows, instruments during painting etc. complete.	200.00	m2	32.56	6,512.02

12.09	Providing and applying French polishing in two or more coats for required finish on previously polished wood including knotting, preparing the surface, etc. complete as directed.	50.00	m2	369.55	18,477.48
12.10	Providing and applying Melamine polish of required finish to wood work by spray machine including knotting and preparing the surface by scrapping, applying French polishing, if required etc. complete as directed.	50.00	m2	1,021.00	51,050.00
12.11	Providing / applying interior wall finish luster of Asian/ Berger/ Nerolac/ Dulex Paints or IITB approved make on internal wall surface as detailed below scrapping the surface with emery paper and wipe clean. Applying Asian/ Berger/ Nerolac/ Dulex Paints or IITB approved make wall primer with mineral turpentine with brush 8 to 10% and oil 15 to 20% with roller and allowing to dry for a period 6 to 8 hours. Applying Asian/ Berger/ Nerolac/ Dulex Paints or IITB approved make Acrylic wall putty with appropriate proportion of water allowing to dry for period 4 to 6 hours. Scrapping with emery paper 180 and wipe clean. Applying Asian/ Berger/ Nerolac/ Dulex Paints with brush with mineral turpentine 8 to 10% and oil 15 to 20% with roller scrapping emery paper 320 and wipe clean, Applying Asian/ Berger/ Nerolac/ Dulex Paints or IITB approved make interior wall finish luster 1st coat with brush/ rubber/ sprary with mineral turpentine 7 to 9% and oil with roller 19 to 21% after 8 hours of activity and applying 2nd coat with of Asian/ Berger/ Nerolac/ Dulex Paints with mineral turpentine 7 to 9% with brush and oil with roller 19 to 21% after allowing dry for the period of 6 to 8 hours activity.	50.00	m2	218.00	10,900.00
12.12	Providing and applying one coat of acrylic primer and two coats of exterior acrylic paint of approved colour & shade of IITB approved manufacturer i.e. Berger, Asian, Killick Nixon, Goodlass, Nerolac, ICI, Decocem and as per manufacturer's specification on old or new plastered surface over concrete / brickwork, stonework as per manufacturer's specification and cleaning the surface thoroughly with coir brush, watering the surface etc. complete including covering the floor, window glass with plastic sheet etc. all complete as directed by Engineer In-charge.	500.00	m2	167.42	83,708.05

12.13	<p>Providing and applying elastic, elastomeric membrane-forming system with anti-carbonation and breathing properties. The system shall be based on solvent free acrylic polymers with selected mineral fillers and shall be resistant to ultra-violet rays, crack bridging type, carbonation resistant, breathable, environment friendly, water proofing coating. For anti-carbonation, IITB approved makeAir layer Thickness denoted as R or SDCO₂≥50m for breathability IITB approved makeAir layer Thickness denoted as SDH₂O shall be ≤4m for vapor transmitting barrier. The system consists of one coat primer or equivalent. The consumption of main elastomeric coating to give film thickness of 150-200 microns (Solid contents, 40% ±3%) shall be approx. 400-450 gms/m² per two coat depending upon the method of application (either by roller or brush) and surface smoothness of the concrete The total Dry Film Thickness of the coating system shall be minimum 150 microns for the above system.</p>	100.00	m ²	292.00	29,200.00
	<p>Elastomeric coating shall be in suitable approved shades, including cost of materials, cleaning the external Surfaces/ Plaster/ RCC members by stiff brushes/ by special methods as directed, by Pressurized water-jet, opening of cracks as directed, crack-filling, & as per approved specifications, including cost of scaffolding. P/A Coating system as per approved scheme & type, as per detailed specifications, including cost of scaffolding. The entire system shall be guaranteed for water-tightness & for colour-fastening, for Five years. The contractor shall submit detailed scheme for coating system which shall be got approved from the consultants/ Society. The system shall be manufactured & guaranteed by reputed & approved manufacturer. The system shall either have colour of its own or there shall be a final coating of approved shade as integral part of the system. (Brand to be approved by Engineer-in-charge)</p>				
12.14	<p>Providing and applying one coat of Berger Protectomastic self priming high build coating, solvent borne zinc rich primer, having thickness as per manufacturer specification including preparing the surface by thoroughly removing grease, oil and other containments preferably by using Bison degreasing solvent, using mechanical tools along with manual chipping and wire brushing to remove loose rust, thoroughly dust down all surfaces, followed by one coat of Epilux – 4 High Build Epoxy finish having thickness as per manufacturer specification followed by two coats of acrylic polyurethane enamel paint of Bergerthane finish of Berger having thickness as per manufacturer specification including tools, taking all safety measures etc complete..</p>	100.00	m ²	637.00	63,700.00

12.15	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	25.00	m2	215.03	5,375.68
12.16	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.	50.00	m2	249.20	12,459.87
12.17	Providing and applying two coat of synthetic enamel paint of IITB approved brand (Asian, Berger, ICI, Jenson & Nicholson, Goodlass Nerolac) and shade to tubelight and ceiling fans with the use of step ladder including scrapping cleaning etc. complete.	10.00	Nos	131.89	1,318.90
12.18	Providing and applying acrylic synthetic plaster (Dura plaster) of IITB approved make manufacturer over existing cement plaster or concrete surface including removing existing paint/synthetic plaster to receive the acrylic synthetic plaster as per manufacturer specification Including all the necessary tools & plants,stepladder etc, complete all as directed by Engineer in charge.	250.00	m2	454.00	1,13,500.00
12.19	Providing and applying lamination polish to woodwork including knotting, sanding the wood with a sandpaper, cleaning and preparing the surface smooth to receive lamination polish as per manufacturers specification, finishing the surface using buffing wheel Etc. All Complete.	3.00	m2	7,660.00	22,980.00
12.20	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/ yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc complete. (Two or more coats)	200.00	m2	240.76	48,152.82
12.21	Providing an applying two coat of exterior synthetic enamel paint of approved make and colour to kerb stones after cleaning and scrapping the old paint with wire brush and by other means, in alternate colour pattern within the required time and cleaning the site after painting etc all complete as per directed by engineer in charge.	200.00	m2	293.00	58,600.00
13	Sanitary				
13.01	Providing and fixing white vitreous china pedestal type water closet (European type) with ISI marked white solid plastic seat and lid, 10 liter low level white white P.V.C. flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc. complete as directed.	10.00	Nos	5,559.35	55,593.48

13.02	Providing and fixing coloured vitreous china pedestal type water closet (European type) with seat and lid, 10 liter low level coloured P.V.C. flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc. complete as directed.	1.00	Nos	7,132.67	7,132.67
13.03	Providing and fixing White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot restswater closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required etc. completed as directed.	5.00	Nos	5,800.97	29,004.83
13.04	Providing and fixing coloured Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot restswater closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level coloured P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required etc. completed as directed.	1.00	Nos	6,217.12	6,217.12
13.05	Providing and fixing white wall hung with cistern closet Parryware make of approved with UF Soft close Seat & Cover wall hung fittings and other required fittings, cutting and making good walls and floors etc. complete as directed.	8.00	Nos	15,915.00	1,27,320.00
13.06	Providing and fixing coloured wall hung with cistern closet Parryware make of approved with UF Soft close Seat & Cover wall hung fittings and other required fittings, cutting and making good walls and floors etc. complete as directed.	1.00	Nos	19,756.00	19,756.00
13.07	Providing and fixing 10cm cast iron nahani trap with removable S.S grating with S.S rim, cast iron plug bend and piece of cast iron pipe upto plug bend etc. complete.	50.00	Nos	1,020.00	51,000.00
13.08	Providing and fixing in position best quality salt glazed stone ware gully trap with 150mm x 150mm square inlet and 100 mm n.b. outlet conforming to IS 651 including embedding the trap in M-15 (1:2:4) cement concrete, construction of brick masonry chamber 300mm x 300mm internal in 230mm thick brick masonry, plastering, finishing with neat cement floating coat, providing and fixing C. I. cover and frame weighing not less than 7 kg. etc including removing the old damaged gully trap, connecting all old and new inlets and out let pipes including running lines, jointing etc. all complete as directed.	25.00	Nos	2,482.80	62,069.88

13.09	Providing and fixing urinal sensor flush valve electrically or battery operated of Askon, hindware, Kohler, Jaguar make including making cut out in walls and concealed outlet pipe up to the urinal pot with all required fittings and fixtures etc. completed as directed.	10.00	Nos	11,400.00	1,14,000.00
13.10	Providing and fixing 12mm thick frosted toughen glass or FRP partition of greenlam for urinal partition including making edge molding and polishing, fixing the glass over D type stainless steel hooks of approved quality, making necessary holes in glass etc. completed as directed.	5.00	m2	8,924.00	44,620.00
13.11	Providing and fixing liquid soap dispenser (Model no.1135N) of Jaquar make with all require fittings and fixtures etc. completed as directed.	3.00	Nos	1,127.00	3,381.00
13.12	Providing and fixing liquid soap dispenser (Model no.1137N) of Jaquar make with all require fittings and fixtures etc. completed as directed.	3.00	Nos	1,817.00	5,451.00
13.13	Providing and fixing P.V.C. rain water pipes 'A' Type 160mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including maintenance for 3 years for any leakages or dislocation of pipes. All the PVC fittings and additional two piece socket clips shall be got approved from engineer in charge complete.	75.00	Rmt	929.00	69,675.00
13.14	Providing and fixing P.V.C. rain water pipes 'A' Type 110mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including maintenance for 3 years for any leakages or dislocation of pipes. All the PVC fittings and additional two piece socket clips shall be got approved from engineer in charge complete.	13.00	Rmt	834.00	10,842.00

13.15	Carefully removing existing PVC rain water pipe of various diameter from its position and refixing the same by replacing damaged fittings including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary scaffolding etc. completed as directed.	100.00	Rmt	308.00	30,800.00
13.16	Disconnecting damaged overhead/terrace PVC water storage tank of any size from water supply line and removing from the terrace carefully including shifting at ground level from any height using manual/ mechanical means without damaging the structure and making good the damaged structure if damaged during hoisting at contractors risk and cost as per direction of Engineer-in- charge and taking away the same outside campus.(Recovered will be done at rate of Rs.6 Per Kg from Item of work if material taken outside campus)	5,000.00	Litre	1.00	5,000.00
13.17	Providing hoisting and fixing in position MCGM approved ISI mark plastic storage water tank on roof of buildings at any height with all fitting, fixtures viz 1" PTMT ball cock, extension nipple, 1" dia coupling and plug for washout and 1" dia coupling and bend for overflow connecting the tank (in let and out let) with the existing water line, providing and fixing over flow pipe with mosquito proof brass coupling & mosquitoproof CI cover with locking arrangements approved by MCGM, using required fitting / fixtures including hoisting till any height using manual/ mechanical means without damaging the structure and making good the damaged structure if damaged during hoisting at contractors risk and cost all complete as directed by Estate office.	12,500.00	Per lit	14.00	1,75,000.00
13.18	Providing and laying 110mm dia. 'B' Type P.V.C. pipes conforming to I.S. including proper slope, filling the joints using solvent cement etc. completed as directed.	50.00	Rmt	430.00	21,500.00
13.19	Providing and laying 75mm dia. 'B' Type P.V.C. pipes conforming to I.S. including proper slope, filling the joints using solvent cement etc. completed as directed.	50.00	Rmt	334.00	16,700.00
13.20	Providing and laying 50mm dia. 'B' Type P.V.C. pipes conforming to I.S. including proper slope, filling the joints using solvent cement etc. completed as directed.	50.00	Rmt	284.00	14,200.00
13.21	Providing and laying 40mm dia. 'B' Type P.V.C. pipes conforming to I.S. including proper slope, filling the joints using solvent cement etc. completed as directed.	50.00	Rmt	247.00	12,350.00

13.22	Providing and fixing 75mm(ID)dia ISI approved HDPE pipes manufactured by ARHAM Engineering/BERLIA /NOCIL / PIL with wall thickness of 6 mm to 8mm for taking sewage waste water with all required fittings such as bend, elbows etc. with proper line and gradient connecting all joints with fusion butt weilding by using suitable welding machine or hot plate, testing the line & joint as per manufacturer specification etc. all complete as directed by Engineer In-charge.	100.00	Rmt	552.00	55,200.00
13.23	Providing and fixing ISI approved grade 75mm dia. cast iron waste water pipes with necessary fittings such as bends, tees, single junctions, double junctions, slotted vent, offsets on walls or in the ground including filling joints with cement mortar 1:2 and two coats of anticorrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens complete or as directed.	125.00	Rmt	1,171.00	1,46,375.00
13.24	Providing and fixing ISI approved grade 100mm dia. cast iron soil / waste water pipe with necessary fittings such as bends, tees, single junctions, double junctions, slotted vent, offsets on walls or in the ground including filling joints with cement mortar 1:2 and two coats of anticorrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens, complete or as directed.	125.00	Rmt	1,764.00	2,20,500.00
13.25	Providing and fixing 1/2" dia CP push tap of Jaquar with wall flange with stainless steel pipe upto urinal pot including necessary fittings and fixtures etc. complete as directed.	50.00	Nos	2,309.00	1,15,450.00
13.26	Providing and fixing oval shape white earthenware below counter wash hand basin of Parryware make including one cold water angle cock of Jaguar make (Continental series), Stainless steel click clack waste coupling, chromium plated brass bottle trap etc. complete as directed.	25.00	Nos	5,751.00	1,43,775.00
13.27	Providing and fixing oval shape coloured earthenware below counter wash hand basin of Parryware make including one cold water angle cock of Jaguar make (Continental series), Stainless steel click clack waste coupling, chromium plated brass bottle trap etc. complete as directed.	5.00	Nos	6,815.00	34,075.00
13.28	Providing & fixing colour table top wash hand basin including vertical pillar cock of jaguar, Stop Cock of jaguar, waste Coupling, chromium plated brass bottle trap, Connection Pipe upto trap or pipe, etc complete as directed.	8.00	Nos	9,430.00	75,440.00
13.29	Providing and fixing stainless steel sink having bowl size 610 x460x254mm of nitali make inside platform or on brackets including UPVC waste coupling pipe up to outlet pipe, steel waste coupling etc. complete as directed.	6.00	Each	10,311.00	61,866.00

13.30	Providing and fixing stainless steel sink having bowl size 560 x410x254mm of niral make inside platform or on brackets including UPVC waste coupling pipe upto outlet pipe, steel waste coupling etc. complete as directed.	8.00	Each	8,545.00	68,360.00
13.31	Providing and fixing stainless steel sink having bowl size 410 x355x165mm of niral make inside platform or on brackets including UPVC waste coupling pipe upto outlet pipe, steel waste coupling etc. complete as directed.	5.00	Each	5,459.00	27,295.00
13.32	Providing and fixing white glazed earthenware wash hand basin of size 500 x 400 or 450 x 300 of parryware make including waste coupling, PVC pipe upto trap, testing etc. complete.	13.00	Each	3,120.00	40,560.00
13.33	Providing and fixing white glazed earthenware corner wash hand basin of size 400 x 400 of parryware make including waste coupling, PVC pipe upto trap, testing etc. complete.	5.00	Each	2,717.00	13,585.00
13.34	Providing and fixing bottle trap 31mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms for Wash basin, urinal and sink and removing old fittings (if any) depositing it in Estate store.	25.00	Each	326.20	8,155.08
13.35	Providing and fixing C.P. bottle trap 32mm jaguar make bottle trap (ALD-CHR-769L250X190 connecting to waste coupling with minimum water seal for wash basin, urinals, sinks and removing old fittings (if any) depositing it in estate stores etc all complete as per directed by engineer in charge.	25.00	Each	1,578.00	39,450.00
13.36	Providing and fixing 15.88 mm outer dia pipe stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting, fixing of the pipe with stainless steel clamps at 1.00m spacing including testing of joints complete as per direction of Engineer-in-charge.	5.00	Rmt	353.34	1,766.72
13.37	Providing and fixing 22.22 mm outer dia pipe stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting, fixing of the pipe with stainless steel clamps at 1.00m spacing including testing of joints complete as per direction of Engineer-in-charge.	5.00	Rmt	508.42	2,542.10
13.38	Providing and fixing 15 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	25.00	Rmt	256.77	6,419.21

13.39	Providing and fixing 20 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	25.00	Rmt	326.20	8,155.08
13.40	Providing and fixing 25 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	25.00	Rmt	409.94	10,248.40
13.41	Providing and fixing 32 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	5.00	Rmt	502.65	2,513.25
13.42	Providing and fixing 40 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	25.00	Rmt	676.64	16,915.95
13.43	Providing and fixing 50 mm dia nominal bore Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.	25.00	Rmt	930.15	23,253.63
13.44	Providing and fixing stainless steel cockroach trap of approved pattern, quality and make with all required fittings and fixtures etc. completed as directed.	50.00	Nos	437.00	21,850.00

13.45	Providing and fixing 150mm(ID)dia ISI approved HDPE pipes manufactured by ARHAM Engineering/BERLIA /NOCIL / PIL with wall thickness of 6 mm to 8mm for taking sewage waste water with all required fittings such as bend, elbows etc. with proper line and gradient connecting all joints with fusion butt weilding by using suitable welding machine or hot plate, testing the line & joint as per manufacturer specification etc. all complete as directed by Engineer In-charge.	125.00	Rmt	1,041.00	1,30,125.00
13.46	Constructing chambers of internal clear dimensions 900mm x 900mm with 230mm thick brick masonry wall in cement mortar 1:6 over abed of 150mm thick cement concrete M-20 (1:1½:3) foundation with 150mm minimum offset beyond masonry wall plastering with cement mortar 1:4, 12mm thick on internal, external and all exposed faces, finished with floating coat of neat cement including providing and fixing FRP cover with frame, heavy duty, manufactured by KK Industries as approved by Engineer Incharge all complete including necessary dewatering, if required etc. for chambers of depth upto 1000mm.	5.00	Nos	35,509.00	1,77,545.00
13.47	Constructing chambers of internal clear dimensions 900mm x 600mm with 230mm thick brick masonry wall in cement mortar 1:6 over abed of 150mm thick cement concrete M-20 (1:1½:3) foundation with 150mm minimum offset beyond masonry wall plastering with cement mortar 1:4, 12mm thick on internal, external and all exposed faces, finished with floating coat of neat cement including providing and fixing FRP cover with frame, heavy duty, manufactured by KK Industries as approved by Engineer Incharge and fixing with cement concrete coping M-20 (1:1½ :3) and plastering complete including necessary dewatering, if required etc. for chambers of depth upto 1000mm.	5.00	Nos	27,302.00	1,36,510.00
13.48	Providing and constructing brick masonry inspection chamber 900mm x 450 mm and 45cm to 90 cm in depth including cement concrete in M-20 foundation, PCC 10 cm thick channels, brick masonry, plastering on inside and outside as required in cement mortar 1:6, providing and fixing FRP cover with frame, heavy duty, manufactured by KK Industries etc all complete as directed bt Engineer In charge.	5.00	No.	23,301.00	1,16,505.00
13.49	Making connection / disconnection of G. I. Distribution branch with G. I. Main of following 25 to 40 mm nominal bore sizes by providing and fixing tee, including cutting and threading the pipe etc. Complete.	25.00	Nos	759.67	18,991.75
13.50	Providing and fixing 32mm regular flush valve of Jaguar including making concealed arrangment by making cut out in walls including fixing 32mm dia galvanised iron / PVC heavy type flush pipe with fittings and clamps up to the WC and other required fittings and fixtures etc. completed as directed.	25.00	Nos	3,527.00	88,175.00

13.51	Providing and fixing 40mm regular flush valve of Jaguar including making concealed arrangement by making cut out in walls including fixing 32mm dia galvanised iron / PVC heavy type flush pipe with fittings and clamps up to the WC and other required fittings and fixtures etc. completed as directed.	13.00	Nos	4,497.00	58,461.00
13.52	Providing & fixing ISI approve heavy type Angle Cock (jaguar make) including extension Pipe, C.P Double nippal etc.complete.	25.00	No	1,512.00	37,800.00
13.53	Providing and fixing parryware make white glazed earthenware pedestal wash hand basin (Model: Sepia) including one cold water contentail series 450mm long swan neck tap of jaguar , brackets, rubber plugs and brass chain, stop tap of jaguar and necessary pipe connection including jaguar make bottle trap etc. Complete as directed	3.00	No	10,514.00	31,542.00
13.54	Providing & fixing ISI approve long swan neck pillar tap jaguar make including necessary fixtures etc.complete as directed	25.00	No	1,875.00	46,875.00
13.55	Providing & fixing ISI approve heavy type Kitchen sink cock with swinging casted spout (wall mounted) jaguar make including necessary fixtures etc.complete as directed	5.00	No	2,685.00	13,425.00
13.56	Providing and fixing stainless steel jet spray of Jaguar make including necessary pipe of required length socket/union etc, complete as directed by Engineer in charge. contractor will be allowed to take away old jet spray if available and for which 5% deduction will be made of schedule rate of this item. Etc. complete.	100.00	No	1,976.00	1,97,600.00
13.57	Providing and fixing CON-CHR-347 KN sink cock of jaguar make including fitting fixture etc, complete as directed by Engineer in charge	25.00	No	1,715.00	42,875.00
13.58	Providing and laying temporary loop connection to main water supply inlet and outlet of water tank with 'C' class pipe upto 6 meter of length or as required of any dia elbows, tees, reducers, plugs, clamps etc. including other connections and commissioning the water supply line and remaking to original connections after repair etc. complete.	25.00	Job	5,175.00	1,29,375.00
13.59	Providing and fixing Overhead Shower 70 mm dia Round Shape Single Flow (ABS Body Chrome Plated with Gray Face Plate) with Rubit Cleaning System for bathroom of Essco make, as per existing model, heavy type including necessary fittings and fixtures, removing the old damaged overhead shower and cleaning the site etc. all complete as directed by Engineer In-charge. (Note: The old dismantled shower should be deposited in Estate store and take certificate of it)	25.00	No.	1,008.00	25,200.00
13.60	Providing and fixing Concealed Flush tank with kit of parryware make, as per existing model, including necessary fittings and fixtures, removing the old flush tank and cleaning the site etc. all complete as directed by Engineer In-charge.	25.00	No.	4,751.00	1,18,775.00

13.61	Providing and fixing 1/2" dia. Long neck with Aerator pillar type cock of Jaquar make for wash hand basin or sink etc. complete.	5.00	Nos	1,001.00	5,005.00
13.62	P/f pneumatic operational single flush 9 litre capacity (commandar make) flush tank with brackets and fittings, etc all complete as per directed by Engineer-in-Charge.	10.00	nos	3,864.00	38,640.00
13.63	Providing and fixing P.V.C. pipes 75mm dia.conforming to I.S. on wall using clips and jointing with solvent cement etc. completed as directed.	100.00	Rmt	334.00	33,400.00
13.64	Providing and fixing P.V.C. pipes 50mm dia.conforming to I.S. on wall using clips and jointing with solvent cement etc. completed as directed.	50.00	Rmt	284.00	14,200.00
13.65	Providing and laying P.V.C. pipes 110mm dia.conforming to I.S and jointing with solvent including making trenches as per direction of Engineer-in-Charge all completed as directed.	100.00	Rmt	439.00	43,900.00
14	Drainage				
14.01	Providing and fixing 560mm dia. Medium duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places manufactured by M/s.NECO or IITB approved make etc. all complete as directed.	5.00	Each	10,027.00	50,135.00
14.02	Providing and fixing 560mm dia. Heavy duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places manufactured by M/s.NECO or IITB approved makeetc. all complete as directed.	5.00	Each	11,214.00	56,070.00
14.03	Providing and fixing 900mm x 450mm rectangular medium duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places of NECO or IITB approved make etc. all complete as directed.	3.00	Each	13,786.00	41,358.00
14.04	Providing and fixing 900mm x 450mm rectangular heavy duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places of NECO or IITB approved make etc. all complete as directed.	3.00	Each	16,351.00	49,053.00
14.05	Providing and fixing 900mm x 600mm rectangular medium duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places of NECO or IITB approved make etc. all complete as directed.	3.00	Each	17,156.00	51,468.00
14.06	Providing and fixing 900mm x 600mm rectangular heavy duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places of NECO or IITB approved make etc. all complete as directed.	3.00	Each	21,106.00	63,318.00

14.07	Providing and fixing precast RCC slab for drain cover and chamber cover of required size with M-25 grade concrete and reinforced with 10mm dia main steel bars (along shorter span) and 8mm. dia distribution bars (along longer span) at 100mm center to center including making steel form work, making temporary concrete platform for casting, compaction using surface vibrator, with two lifting hooks of 6mm dia / holes of 25mm dia finishing the surface with smooth cement finish curing, placing the precast slab in proper position etc. complete as directed.	1.00	m3	21,872.00	21,872.00
14.08	Providing lowering, and laying 150mm dia NP2 class R.C.C. spun pipes conforming to IS 458 of 300 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, jointing with hemp yarn and cement mortar 1:2 caulking the joints, finishing, curing etc. complete as directed.	50.00	Rmt	494.77	24,738.65
14.09	Providing lowering, and laying 250mm dia NP2 class R.C.C. spun pipes conforming to IS 458 of 300 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, jointing with hemp yarn and cement mortar 1:2 caulking the joints, finishing, curing etc. complete as directed.	25.00	Rmt	813.90	20,347.55
14.10	Providing lowering, and laying 300mm dia NP2 class R.C.C. spun pipes conforming to IS 458 of 300 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, jointing with hemp yarn and cement mortar 1:2 caulking the joints, finishing, curing etc. complete as directed.	100.00	Rmt	905.11	90,511.05
14.11	Providing and fixing PE 100 & PN 6 having 225mm dia.(OD) ISI approved HDPE pipes manufactured by ARHAM Engineering/ BERLIA /NOCIL / PIL/ SUPREAM with wall thickness of 15mm for drainage pipe line with all required fittings etc. with proper line and gradient connecting all joints with fusion butt welding by using suitable welding machine or hot plate etc, testing the line & joints as per manufacturer specification or as per direction of Engineer In-charge etc. all complete as directed by Engineer In-charge.	38.00	Rmt	1,810.00	68,780.00
14.12	Providing and fixing PE 100 & PN 6 having 315mm dia.(OD) ISI approved HDPE pipes manufactured by ARHAM Engineering/ BERLIA /NOCIL / PIL/ SUPREAM with wall thickness of 15mm for drainage pipe line with all required fittings etc. with proper line and gradient connecting all joints with fusion butt welding by using suitable welding machine or hot plate etc, testing the line & joints as per manufacturer specification or as per direction of Engineer In-charge etc. all complete as directed by Engineer In-charge.	50.00	Rmt	3,135.00	1,56,750.00

14.13	Constructing conical manhole of size 900mm internal diameter at bottom and 525mm internal diameter at top up to depth 1500 mm with brick masonry circular wall 340mm thick in cement mortar 1:6 over a bed of 230mm thick cement concrete M-20 (1:1½:3) foundation square shape in plan with 150mm minimum offset beyond masonry wall plastering with cement mortar 1:4, 20mm thick on internal, external and all exposed faces, finished with floating coat of neat cement, including necessary cement concrete M-20 (1:1½:3) for forming benching and channel, providing and fixing C.I. steps weighing not less than 3.50 Kg. fixing top one at 450mm from top level and remaining steps at 300mm vertical spacing in staggered fashion, including providing and fixing precast R.C.C. frame and cover of thickness 100/150mm, heavy duty, manufactured by K.K.Manholes or IITB approved make as approved by Engineer Incharge and fixing with cement concrete coping M-20 (1:1½ :3) and plastering complete including necessary dewatering etc.all complete as directed by Engineer In-charge.	10.00	No.	28,159.00	2,81,590.00
14.14	Extra over item No. 14.13 for depth beyond 1500mm in cylindrical shape of 900mm diameter with 450mm thick brick masonry wall in cement mortar 1:6 providing and fixing C.I. steps, plastering, finishing, dewatering etc. all as specified in item No. 8 above and as directed.	5.00	Rmt	12,695.00	63,475.00
14.15	Making necessary connection / disconnection to existing chamber / branch line / tank or as specified etc. with making necessary hole / cutting etc. & remaking the same etc.all completed as directed by Engineer In-charge.	25.00	No.	910.00	22,750.00
14.16	Providing and fixing HDPE green Braided, Knotted construction safety net of 6mm thickness with mesh size of 3 – 4 inch square to ceiling in various class rooms, With inner lay mesh of Delux Mono Knitted net, Border / Tie cord rope shall be of 12 mm dia Polypropylene (PP) (rope of M/s. Kwalitiy Nets Mfg Company or approved IITB approved make of specified type) The safety net to be fixed as per the size required at site. The cost includes all supplying & fixing the materials with labourers , fixing hooks, scaffolding & ropes required for tying / fixing etc all complete as directed by Engineer-In-charge.	50.00	m2	356.00	17,800.00
14.17	Providing & fixing 75mm dia. PVC temporary drain pipe line with fittings, necessary Coupling, bends, tees by supporting on scaffolding and maintaining the same from time to time till the new permanent drain pipes are laid and connected including removing the temporary pipes from site after work completion etc. all complete as per directed by Engineer-in-Charge.	25.00	Rmt	139.00	3,475.00

14.18	Providing & fixing 100mm dia. PVC temporary drain pipe line with fittings, necessary Coupling, bends, tees by supporting on scaffolding and maintaining the same from time to time till the new permanent drain pipes are laid and connected including removing the temporary pipes from site after work completeion etc. all complete as per directed by Engineer-in-Charge.	25.00	Rmt	188.00	4,700.00
14.19	Raising manhole cover and frame of any size slab to required level including dismantling existing slab and making good the damage as required (a) Rectangular manhole/ chamber of any size	8.00	No	2,732.89	21,863.13
14.20	Raising manhole cover and frame of any size slab to required level including dismantling existing slab and making good the damage as required (b) Circular manhole of any size	8.00	No	4,002.94	32,023.48
14.21	Providing lowering, and laying NP2 class R.C.C. spun pipes conforming to IS 458 of 450 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, providing and applying a coat of black bituminous paint to inside surface, water tight jointing with hemp yarn and cement mortar 1:1 caulking the joints, finishing, curing, testing the joints hydraulically etc. complete as directed.	3.00	Rmt	1,486.58	4,459.73
14.22	Providing lowering, and laying NP2 class R.C.C. spun pipes conforming to IS 458 of 600 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, providing and applying a coat of black bituminous paint to inside surface, water tight jointing with hemp yarn and cement mortar 1:1 caulking the joints, finishing, curing, testing the joints hydraulically etc. complete as directed.	5.00	Rmt	2,105.22	10,526.09
14.23	Providing lowering, and laying NP2 class R.C.C. spun pipes conforming to IS 458 of 900 mm dia (n.b) with necessary collars, laid to correct grade, alignment and levels at all depth including cutting to required length, providing and applying a coat of black bituminous paint to inside surface, water tight jointing with hemp yarn and cement mortar 1:1 caulking the joints, finishing, curing, testing the joints hydraulically etc. complete as directed.	3.00	Rmt	4,274.80	12,824.41

14.24	Constructing conical manhole of size 1500mm internal diameter at bottom and 525mm internal diameter at top in conical shape upto 1500mm depth with brick masonry circular wall 340mm thick and below 1500mm to 1800mm depth in cylindrical shape wall with 450mm thick in cement mortar 1:6 over abed of 230mm thick cement concrete M-20 (1:1½:3) foundation square shape in plan with 150mm minimum offset beyond masonry wall plastering with cement mortar 1:4, 20mm thick on internal, external and all exposed faces, finished with floating coat of neat cement, including necessary cement concrete M-20 (1:1½ :3) for forming benching and channel, providing and fixing C.I. steps weighing not less than 3.50 Kg. fixing top one at 450mm from top level and remaining steps at 300mm vertical spacing in staggered fashion, including providing and fixing precast R.C.C. frame and cover of thickness 100/150mm, heavy duty, manufactured by K.K.Manholes or IITB approved make as approved by Engineer Incharge and fixing with cement concrete coping M-20 (1:1½ :3) and plastering complete including necessary dewatering etc.all complete as directed by Engineer In-charge. for Man holes of depth up to 1800mm.	5.00	No.	48,049.66	2,40,248.28
14.25	Extra over item No. 14.24 for depth beyond 1500mm in cylindrical shape of 1500mm diameter with 450mm thick brick masonry wall in cement mortar 1:6 providing and fixing C.I. steps, plastering, finishing, dewatering etc. all as specified in item No. 8 above and as directed.	5.00	Rmt	25,201.00	1,26,005.00
14.26	Providing and fixing ISI approved HDPE pipes manufactured by NOCIL / PIL of 50mm diameters with wall thickness of 2.60 mm to 10.00mm for taking drain water with all required fittings such as bend, tee, elbows etc. with proper line and gradient connecting all joints with fusion butt welding by using hot plate, keeping hole in wall / pardi etc. filling the patches, with cement concrete 1:1½:3, clamping the pipes on wall / column etc. with the use of scaffolding, testing the line, providing inspection joints with and caps etc. all complete as directed.	5.00	Rmt	547.00	2,735.00
14.27	Providing and laying in trenches 15 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	25.00	Rmt	268.41	6,710.19
14.28	Providing and fixing in position pre-cast R.C.C. heavy duty -20T manhole cover and frame of IITB approved make of Circular shape 560 mm internal diameter including transport, lead and lift etc all complete as directed.	5.00	Nos	1,499.26	7,496.30

14.29	Providing and fixing 110mm(ID) dia. ISI approved HDPE pipes manufactured by ARHAM Engineering/BERLIA /NOCIL / PIL with wall thickness of 6 mm to 8mm for taking sewage waste water with all required fittings such as bend, elbows etc. with proper line and gradient connecting all joints with fusion butt weilding by using suitable welding machine or hot plate, testing the line & joint as per manufacturer specification etc. all complete as directed by Engineer In-charge.	100.00	Rmt	1,026.00	1,02,600.00
15	Watersupply				
15.01	Providing and laying in trenches 15 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of synthetic enamel paint with one coat of zinc primer including trenching and refilling etc. complete or as directed.	25.00	Rmt	268.41	6,710.19
15.02	Providing and laying in trenches 20 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	25.00	Rmt	316.42	7,910.50
15.03	Providing and laying in trenches 25 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	25.00	Rmt	419.37	10,484.20
15.04	Providing and laying in trenches 32 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	15.00	Rmt	459.25	6,888.79
15.05	Providing and laying in trenches 40 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	13.00	Rmt	560.24	7,283.18

15.06	Providing and laying in trenches 50 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	13.00	Rmt	656.42	8,533.45
15.07	Providing and laying in trenches 65 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	13.00	Rmt	771.21	10,025.70
15.08	Providing and laying in trenches 80 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt	922.22	4,611.09
15.09	Providing and laying 15 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. complete as directed.	250.00	Rmt	305.18	76,295.48
15.10	Providing and laying 20 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. completed as directed.	125.00	Rmt	374.62	46,827.09
15.11	Providing and laying 25 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. complete as directed.	100.00	Rmt	492.87	49,286.66

15.12	Providing and laying 32 mm dia nominal bore I.S.I. approved 'C' class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. complete as directed.	50.00	Rmt	565.51	28,275.61
15.13	Providing and laying 40 mm dia nominal bore I.S.I. approved 'C' class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. complete as directed.	50.00	Rmt	727.61	36,380.52
15.14	Providing and laying 50 mm dia nominal bore I.S.I. approved 'C' class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting etc. complete as directed.	50.00	Rmt	896.23	44,811.53
15.15	Providing and fixing 20mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	100.00	Nos	463.32	46,331.67
15.16	Providing and fixing 25mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	100.00	Nos	534.16	53,415.62
15.17	Providing and fixing 32mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	50.00	Nos	591.90	29,595.07
15.18	Providing and fixing 40mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	38.00	Nos	709.70	26,968.59
15.19	Providing and fixing 50mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	25.00	Nos	881.23	22,030.74
15.20	Providing and fixing 65mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	15.00	Nos	1,495.76	22,436.37
15.21	Providing and fixing 80mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	3.00	Nos	2,235.16	6,705.47

15.22	Providing and fixing 15 mm dia nominal bore brass stop cock of approved quality with required fittings and fixtures etc. completed as directed.	100.00	Nos	304.88	30,488.09
15.23	Providing and fixing 20 mm dia nominal bore brass stop cock of approved quality with required fittings and fixtures etc. completed as directed.	50.00	Nos	329.06	16,453.13
15.24	Providing and fixing 1/2" dia stop cocks and bib cocks of Jaquar (continental series) fittings consealed or open including necessary fittings and fixtures etc. complete as directed.	50.00	Nos	1,018.00	50,900.00
15.25	Providing and fixing 1/2" dia two way taps of Jaquar (continental series) fitting consealed or open including necessary fittings and fixtures etc. complete as directed.	50.00	Nos	1,231.00	61,550.00
15.26	Providing and fixing 1/2" dia angular stop cocks of Jaquar (continental series) fittings consealed or open including necessary fittings and fixtures etc. complete as directed.	50.00	Nos	943.00	47,150.00
15.27	Providing and fixing 12mm dia heavy duty brass chromium plated three way taps with all fittings etc all complete as directed.	125.00	Nos	1,682.00	2,10,250.00
15.28	Providing and fixing G.I. Pipes 15 mm dia nominal bore complete with G.I. fittings and clamps, making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall etc. completed as directed.	100.00	Rmt	486.85	48,684.62
15.29	Providing and fixing G.I. Pipes 20 mm dia nominal bore complete with G.I. fittings and clamps, making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall etc. completed as directed.	100.00	Rmt	542.94	54,293.59
15.30	Providing and fixing 450 x 300 x 150 mm white glazed earthenware sink including waste coupling, PVC pipe upto trap, testing etc. complete.	15.00	Nos	6,340.00	95,100.00
15.31	Providing and fixing 600 x 400x 200 mm white glazed earthenware sink including waste coupling, PVC pipe upto trap, testing etc. complete.	15.00	Nos	9,652.00	1,44,780.00
15.32	Providing and fixing C.P brass toilet roll holder of approved make including necessary socket/ union etc. complete as directed.	5.00	Nos	683.11	3,415.55
15.33	Providing and fixing gun metal pressure reducing valve I.S.I. approved heavy type including removing existing pressure reducing valve , with all required fittings etc. complete as directed a)25 mm dia	1.00	nos	4,177.00	4,177.00
15.34	Providing and fixing gun metal pressure reducing valve I.S.I. approved heavy type including removing existing pressure reducing valve , with all required fittings etc. complete as directed b) 32mm dia	1.00	nos	4,723.00	4,723.00

15.35	Providing and laying 100mm dia in trenches centrifugally cast (spun) Iron pipes, water quality conforming to as per relevant IS code specification including lowering down in trenches, connecting with existing and new lines, pumps etc. including cutting to length as per requirement, placing in position to correct line and alignment for jointing, testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq.cm after making necessary joints etc. complete. (joints will be paid separately).	50.00	Rmt	1,214.61	60,730.35
15.36	Providing and laying 150mm dia in trenches centrifugally cast (spun) Iron pipes, water quality conforming to as per relevant IS code specification including lowering down in trenches, connecting with existing and new lines, pumps etc. including cutting to length as per requirement, placing in position to correct line and alignment for jointing, testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq.cm after making necessary joints etc. complete. (joints will be paid separately).	38.00	Rmt	1,830.89	69,573.86
15.37	Providing and laying 200mm dia in trenches centrifugally cast (spun) Iron pipes, water quality conforming to as per relevant IS code specification including lowering down in trenches, connecting with existing and new lines, pumps etc. including cutting to length as per requirement, placing in position to correct line and alignment for jointing, testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq.cm after making necessary joints etc. complete. (joints will be paid separately).	13.00	Rmt	3,094.11	40,223.46
15.38	Providing and laying 250mm dia in trenches centrifugally cast (spun) Iron pipes, water quality conforming to as per relevant IS code specification including lowering down in trenches, connecting with existing and new lines, pumps etc. including cutting to length as per requirement, placing in position to correct line and alignment for jointing, testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq.cm after making necessary joints etc. complete. (joints will be paid separately).	13.00	Rmt	4,044.17	52,574.27
15.39	Providing and laying 300mm dia in trenches centrifugally cast (spun) Iron pipes, water quality conforming to as per relevant IS code specification including lowering down in trenches, connecting with existing and new lines, pumps etc. including cutting to length as per requirement, placing in position to correct line and alignment for jointing, testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq.cm after making necessary joints etc. complete. (joints will be paid separately).	3.00	Rmt	5,445.86	16,337.59
15.40	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per relevant IS code : Up to 300 mm dia	150.00	kg	82.20	12,329.32

15.41	Providing and making lead caulked joints to cast iron pipes and specials including cost of pig lead, spurn yarn, fuel, labour, lead pouring, caulking etc complete including testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq. cm. (100 mm dia pipe joints with not less than 2.20 Kg. lead per joint.)	5.00	No	411.64	2,058.21
15.42	Providing and making lead caulked joints to cast iron pipes and specials including cost of pig lead, spurn yarn, fuel, labour, lead pouring, caulking etc complete including testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq. cm. (150 mm dia pipe joints with not less than 2.20 Kg. lead per joint.)	5.00	No	617.84	3,089.20
15.43	Providing and making lead caulked joints to cast iron pipes and specials including cost of pig lead, spurn yarn, fuel, labour, lead pouring, caulking etc complete including testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq. cm. (200 mm dia pipe joints with not less than 2.20 Kg. lead per joint.)	5.00	No	821.13	4,105.63
15.44	Providing and making lead caulked joints to cast iron pipes and specials including cost of pig lead, spurn yarn, fuel, labour, lead pouring, caulking etc complete including testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq. cm. (250 mm dia pipe joints with not less than 2.20 Kg. lead per joint.)	5.00	No	1,026.52	5,132.61
15.45	Providing and making lead caulked joints to cast iron pipes and specials including cost of pig lead, spurn yarn, fuel, labour, lead pouring, caulking etc complete including testing the pipes and joints hydraulically with a pressure upto 10 kg. / sq. cm. (300 mm dia pipe joints with not less than 2.20 Kg. lead per joint.)	5.00	No	1,234.83	6,174.13
15.46	Providing flanged joints to double flanged C.I./ D.I. pipes and specials, including testing of joints : 80 mm diameter pipe	3.00	No	183.47	550.41
15.47	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class : Up to 300 mm dia	25.00	kg	56.69	1,417.20
15.48	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to as per relevant IS code : 150 mm dia Ductile Iron Class K-9 pipes	13.00	Rmt	1,630.56	21,197.33
15.49	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to as per relevant IS code : 200 mm dia Ductile Iron Class K-9 pipes	13.00	Rmt	2,235.71	29,064.23

15.50	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to as per relevant IS code : 250 mm dia Ductile Iron Class K-9 pipes	13.00	Rmt	3,115.74	40,504.56
15.51	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to as per relevant IS code : 300 mm dia Ductile Iron Class K-9 pipes	13.00	Rmt	3,895.87	50,646.35
15.52	Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to as per relevant IS code : 100 mm dia Ductile Iron Double Flanged	13.00	Rmt	1,546.83	20,108.80
15.53	Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to as per relevant IS code : 150 mm dia Ductile Iron Double Flanged	13.00	Rmt	2,320.75	30,169.72
15.54	Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to as per relevant IS code : 200 mm dia Ductile Iron Double Flanged	5.00	Rmt	2,931.06	14,655.31
15.55	Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to as per relevant IS code : 250 mm dia Ductile Iron Double Flanged	5.00	Rmt	4,156.76	20,783.78
15.56	Providing and laying Double Flanged (Screwed/Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to as per relevant IS code : 300 mm dia Ductile Iron Double Flanged	5.00	Rmt	5,339.71	26,698.53
16	Aluminium Work				
16.01	Providing and fixing without anodising or powder coating aluminium section for door frame, windows, partitions and any other require work etc. of required size including fixing with required fittings such as screws and other required fittings including fixing in proper alignment, rectifying all damaged, P/F wood inside frame for fixing hinges etc. completed as directed.	200.00	Kg	437.00	87,400.00
16.02	Providing and fixing 15 micron anodized/ powder coated aluminium section for door frame, windows, partitions and any other require work etc. of required size including fixing with required fittings such as screws and other required fittings including fixing in proper alignment, rectifying all damaged, P/F wood inside frame for fixing hinges etc. completed as directed.	400.00	Kg	495.00	1,98,000.00

16.03	Silicone sealants around window frames / window frame joints and drill holes for water outlet when the rain water on the glass fall into the channel and overflows (wherever required) including scaffolding etc all complete as directed by Engineer In-charge.	500.00	Rmt	68.00	34,000.00
16.04	Extra over for making glass toughened of any thickness including transport etc. completed as directed.	50.00	m2	1,399.00	69,950.00
16.05	Extra over for edge polishing to glass of any thickness including transport etc. completed as directed.	125.00	Rmt	182.00	22,750.00
16.06	Providing and fixing in position two track aluminium sliding windows using drain bottom section of size 61 mm x 45 mm x 1.3 mm thick(1.055kg/Rmt) for bottom, sections of size 61 mm x 31mm x 1.3 mm thick(0.659Kg/Rmt) for sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25 mm thick(0.417Kg/Rmt) , top member of size 40 mm x 18 mm x 1.20 mm thick(0.475Kg/Rmt), Interlocking section size of 43 mm x 27 mm x 1.30 mm thick(0.558Kg/Rmt) and handle section of size 43mm x 18 mm x 1.30 mm thick(0.424Kg/Rmt) including providing and fixing 5mm thk. glass in the shutter using rubber gasket, approved quality minimum two nos.PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).	50.00	m2	5,802.00	2,90,100.00
16.07	Providing and fixing in position three track aluminium sliding windows using drain bottom section of size 92 mm x 45 mm x 1.05 mm (1.659kg/mtr) thick for bottom, sections of size 92 mm x 31mm x 1.3 mm (0.933kg/mtr) thick for sides and top. The shutter comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and fixing 5mm thk. glass in the shutter using rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).	50.00	m2	6,007.00	3,00,350.00

16.08	Supplying, fabricating and fixing in position partly openable and partly fixed aluminium window using aluminium sections 42 x 30 x 1.5mm (not less than 0.526 kg/mtr) size aluminum single border outer frame of window shutter, 42 x 37 x 1.5mm (not less than 0.724 kg/mtr) size aluminum Z section for window shutter, 28 x 14.5 x 1.5mm size (not less than 0.286 kg/mtr), aluminum clip for window shutter, 45 x 45 x 1.5mm size (not less than 0.764 kg/mtr) Z aluminum center patti for mullion, 37mm x 37mm (not less than 0.820 kg/mtr) angles 2mm thick, 5mm thick plain or frosted glasses with rubber gasket, 3 Nos. S.S. hinges 75mm size (heavy) on each window shutter, aluminum tower bolt 100mm size 1 Nos on each leaf, aluminum stay 200mm to 250mm long 1 No per leaf, aluminum handle 1 Nos. per leaf, provision for fixing AC with teak wood members inside box, (if required) including fixing the window shutter on the aluminium single side partition section for outer frame and intermediate section of size 63x38x1.47mm thick (not less than 0.781 kg/mtr)etc. complete.(all aluminium sections should be 15 micron anodized / powder coated section)	13.00	m2	7,577.00	98,501.00
16.09	Providing and fixing in position shutter in sliding window using aluminium section for bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and fixing 304 grade stainless steel mosquito proof mesh in the shutter using approved quality minimum two nos.PVC rollers, necessary locks, handles and other required fittings, making shutter removable as and when require etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).	25.00	m2	2,988.00	74,700.00
16.10	Providing, making and fixing partly glazed partly opaque aluminium partition using 63mm x 38mm x 1.65mm (not less than 0.942kg/mtr)15 micron / powder coated anodized aluminium single groove partition section and 63mm x 38mm x 1.53mm (not less than 0.942kg/mtr) 15 micron / powder coated anodized aluminium double groove partition section for frame and ½” (12mm) thick both side decorative prelaminated three layer flat pressed teakwood particle board (phenol Bonded) of BWP type exterior grade for opaque panels and 5mm thick clear plate glass fixed with glazing clips, rubber gasket etc. complete.	5.00	m2	3,994.00	19,970.00

16.11	Providing, making and fixing partly glazed partly opaque aluminium partition using 63mm x 38mm x 1.65mm (not less than 0.942kg/mtr)15 micron / powder coated anodized aluminium single groove partition section and 63mm x 38mm x 1.53mm (not less than 0.942kg/mtr) 15 micron / powder coated anodized aluminium double groove partition section for frame and 4mm thick both side colour and designer aluminium composite sheet of approved make of approved colour up to 1200mm height or as per requirment and 5mm thick clear plate glass fixed with glazing clips, rubber gasket etc. complete.	100.00	m2	3,912.00	3,91,200.00
16.12	Providing, making and fixing fully glazed aluminium partition/ fixed glazing using 63mm x 38mm x 1.65mm (not less than 0.942kg/mtr)15 micron / powder coated anodized aluminium single groove partition section and 63mm x 38mm x 1.53mm (not less than 0.942kg/mtr) 15 micron / powder coated anodized aluminium double groove partition section for frame, providing and fixing 5mm thick clear plain glass fixed with glazing clips, rubber gasket etc. complete.	50.00	m2	3,913.00	1,95,650.00
16.13	Providing, making and fixing fully opaque aluminium partition using 63mm x 38mm x 1.65mm (not less than 0.942kg/mtr)15 micron / powder coated anodized aluminium single groove partition section and 63mm x 38mm x 1.53mm (not less than 0.942kg/mtr) 15 micron / powder coated anodized aluminium double groove partition section for frame, providing and fixing 4mm thick both side colour and designer aluminium composite sheet of approved make of approved colour fixed with glazing clips, rubber gasket etc. complete.	25.00	m2	3,912.00	97,800.00
16.14	Providing, making and fixing fully opaque aluminium partition using 63mm x 38mm x 1.65mm (not less than 0.942kg/mtr)15 micron / powder coated anodized aluminium single groove partition section and 63mm x 38mm x 1.53mm (not less than 0.942kg/mtr) 15 micron / powder coated anodized aluminium double groove partition section for frame, providing and fixing ½” (12mm) thick both side decorative prelaminated three layer flat pressed teakwood particle board (phenol Bonded) of BWP type exterior grade fixed with glazing clips etc. complete.	3.00	m2	3,936.00	11,808.00
16.15	Supplying, fabricating and fixing in position fully glazed double leaf aluminum anodized openable door shutter using aluminum standard door section 80mm x 40mm (not less than 1.055 kg/mtr) for all verticals, top & bottom members, providing and fixing 5mm thick clear/ bajri glass, glazing clips, rubber gasket including heavy duty hinges, 1' long decorative stainless steel handles 2 nos. for each shutter, lock, vertical aluminium section at side etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated and fittings should be approved before installation)	10.00	m2	4,423.00	44,230.00

16.16	Providing, fabricating and fixing in position partly opaque and partly glazed aluminum anodized openable door in single or double leaf shutter using aluminum standard door section 80mm x 40mm (not less than 1.139kg/mtr) for verticals and middle, 100mm x 40mm (not less than 1.60kg/mtr) for top & bottom members, 12mm thick both side decorative prelaminated particle board (Novapan) of approved colour up to 1200mm height and 5mm thick clear/ bajri glass above opaque panels, glazing clips, rubber gasket including using 3 nos stainless steel hinges 4" long for each shutter, 9" long stainless steel handles 2 nos. for each shutter, lock, stainless steel tower bolt 8" long 1 no for each shutter and other required fittings etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated)	5.00	m2	5,681.00	28,405.00
16.17	Providing, fabricating and fixing in position partly opaque and partly glazed aluminum anodized openable door in single or double leaf shutter using aluminum standard door section 80mm x 40mm (not less than 1.139kg/mtr) for verticals and middle, 100mm x 40mm (not less than 1.60kg/mtr) for top & bottom members, 4mm thick both side colour and designer aluminium composite sheet up to 1200mm height or as per plan and 5mm thick clear/ bajri glass above opaque panels, glazing clips, rubber gasket including using 3 nos stainless steel hinges 4" long for each shutter, 9" long stainless steel handles 2 nos. for each shutter, lock, stainless steel tower bolt 8" long 1 no for each shutter and other required fittings etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated)	25.00	m2	5,646.00	1,41,150.00
16.18	Supplying, fabricating and fixing in position partly opaque and partly glazed aluminum anodized sliding door shutter using aluminum standard door section 80mm x 40mm for verticals, 100mm x 40mm for top, middle & bottom members, 4mm thick both side colour and designer aluminium composite sheet of approved make and approved colour and 5mm thick clear/ bajri glass above opaque panels, glazing clips, rubber gasket including P/F sliding arrangement for top and bottom of door shutter, handles 2 nos., lock, vertical aluminium section at side etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated). Width and height of shutter will be measured for payment.	10.00	m2	5,095.00	50,950.00

16.19	Supplying, fabricating and fixing in position partly opaque and partly glazed aluminum anodized sliding door shutter using aluminum standard door section 80mm x 40mm for verticals, 100mm x 40mm for top, middle & bottom members, 12mm thick both side decorative prelaminate particle board (Novapan) of approved colour for opaque panels and 5mm thick clear/ bajri glass above opaque panels, glazing clips, rubber gasket including P/F sliding arrangement for top and bottom of door shutter, handles 2 nos., lock, vertical aluminium section at side etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated). Width and height of shutter will be measured for payment.	5.00	m2	5,134.00	25,670.00
16.20	Supplying, fabricating and fixing in position fully glazed single or double leaf aluminum anodized sliding door shutter using aluminum standard door section 80mm x 40mm (not less than 1.055 kg/mtr) for all verticals, top & bottom members, providing and fixing 5mm thick clear/ bajri glass, glazing clips, rubber gasket including P/F sliding arrangement for top and bottom of door shutter, handles 2 nos., lock, vertical aluminium section at side etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated and fittings should be approved before installation)	5.00	m2	4,183.00	20,915.00
16.21	Providing and fixing double leaf SS 304 grade stainless steel door 32mm thick with stainless steel frame of required size fabricated in company with 3 nos. 4" long heavy duty S.S Hinges for each shutter, lock, 2 nos. 230mm long S.S Handle for each shutter, 9" long S.S tower bolt for each shutter, providing and fixing vision panel using 5mm thick plain glass with S.S bedding and stainless steel grill in vision panel including fittings such as screws and other required fittings etc. completed as directed.	5.00	m2	21,349.00	1,06,745.00
16.22	Providing and fixing aluminum decorative type ornamental grills 50mm x 50mm opening size and 10mm thick on an anodized aluminum outer frame 50 x 25 x 17 gauge thick and intermediate members of hollow type box section, providing U / F type channels of required size around the grill etc. all complete as directed	50.00	m2	3,652.00	1,82,600.00
16.23	Providing and fixing aluminium louvered ventilators using 50mm x 25mm x 16 gauge (not less than 0.593 kg/mtr) aluminium box frame anodized to 15 microns / powder coated for outer frame and intermediate vertical members as directed including 5mm thick plain or frosted glass 125mm wide for louvers at proper inclination including P/F glass on adjustable aluminium louvered of approved size and making provision of fixing exhaust fan etc. all complete.	25.00	m2	6,022.00	1,50,550.00

16.24	Providing & fixing in position Aluminum partition made using 2.5" x 1.5" Aluminum pipe section at 600mm c/c as frame with 12mm thick commercial plywood finish with 1mm thick designer or solid colour laminate of century, green lam, royal touch, marino brand with approved pattern and colour on both side, making necessary groves wherever required as per standard practice, making necessary arrangement of raceway with removable type panels for electrical/ lan/ telephone work, making edges smooth with all required fittings and fixtures etc. complete as directed.	25.00	m2	4,439.00	1,10,975.00
16.25	Providing and erecting at site steel tubular H – frame double scaffolding with bracings to all heights as directed by engineer in charge before commencement of work and removing the same after completion of all external work requiring double scaffolding.	250.00	m2	144.00	36,000.00
16.26	Providing and fixing blackout horizontal (Marvell Make) roller blinds water resistant cloth of required size and colour including all necessary accessories and installation at any height etc.complete all as directed.(sample of blind should be approved before installation)	50.00	m2	1,485.00	74,250.00
16.27	Providing and fixing translucent horizontal (Marvell Make) roller blinds water resistant cloth of required size and colour including all necessary accessories and installation at any height etc.complete all as directed.(sample of blind should be approved before installation)	75.00	m2	1,423.00	1,06,725.00
16.28	Providing and fixing sun screen horizontal (Marvell Make) roller blinds water resistant cloth of required size and colour including all necessary accessories and installation at any height etc.complete all as directed.(sample of blind should be approved before installation)	50.00	m2	1,547.00	77,350.00
16.29	Providing and fixing reflective type sun control film of approved type of Garware make with cutting, fixing etc. complete as directed.	150.00	m2	1,060.00	1,59,000.00
16.30	Providing and fixing heavy duty capsule hinges for M.S gate including fixing with gate with necessary welding etc. completed as directed.	5.00	No	352.00	1,760.00
16.31	Providing and fixing medium duty capsule hinges for M.S gate including fixing with gate with necessary welding etc. completed as directed.	5.00	No	254.00	1,270.00
16.32	Providing and fixing signboards with 3mm thick ACP sheet & radium sticker background including pasting, computerized designing & radium sticker cutting & pasting, fixing with approved fittings and fixtures etc. all complete as directed by Engineer in charge.	5.00	m2	4,924.00	24,620.00
16.33	Providing stainless steel signboard and name board plate (18 gauge) and fixing the same over walls and doors using stainless steel stud of approved quality etc. completed as directed.	100.00	sq. inch	18.00	1,800.00

16.34	Providing & Pasting new wall paper of make Splendor, Royal, STC (Imported) of approved design with required adhesive all complete as directed by Engineer- incharge.	25.00	m2	150.00	3,750.00
16.35	Providing and fixing fire rated door having 2 hours of fire resistant of make Tata Pravesh, Sukriti, Navair, Hormann,Bhawani including G.I frame profile of (100 x 58mm)/(125mm x 55mm)/(125mmx75mm), thickness not less than 1.2mm and 0.80mm to 2mm thick extra stiffners to support the accessories filled with rockwool of density not less than 120kg/m3 with door shutter of 44mm to 60mm thick made of G.I sheet of 1.2mm thickness powder coated of Pure Polyester (PP) Coating, 60-90 microns (supplied by Jotun/Akzonobel) and filled with honeycomb (Cell size 21mm) including fixing the frame with anchor fastners (Hilti make) and including the following hardwares like S.S ball bearing butt hinges 4" – 4nos, S.S 'D' Type Handle – 1 pair, Vision wired glass (1Hrs fire rated, schott Pryan make) of size 200mm x 300 mm- 1 No, Door closer- 1 no, Panic bar- 1 No and all necessary required fittings and fixtures etc all complete as directed by Engineer In-charge. Note :- 1.All hardware are of GEZE/DORMA/HAFELE make 2.Five years warranty for defects/damage of fixtures & fittings for each door will be submitted on Rs 500 non-judicial stamp paper.)	10.00	m2	12,378.00	1,23,780.00
16.36	P/F Pivoted windows using 'Z' section of size 42 x 32 x 1.5mm (not less than 0.920 kg/mtr), 15 micron anodised,providing and fixing 6mm thk. tinted toughening glass including all necessary fittings such as aluminium Z clips, aluminium pipe, aluminium angle, screws,nails,aluminium pivoted stay 2 nos.,aluminium Z handels 1 no. etc. and other required fittings including microwave EPDM rubber gaskets,pump filled structural silicon sealent & hardware, making window watertight, scaffolding etc. completed as directed. (all aluminium sections should be 15 micron anodized/ powder coated and shop drawing will be provided by contractor before execution of work.)	3.00	m2	9,098.00	27,294.00
16.37	Providing and fixing in position aluminium 15 micron anodized openable window with stainless steel flyproof mesh of 304 grade having aluminium powder coated " L" pipe section 38mm x 25mm (0.45kg/rmt) for frame and shutter frame of 38mm x 18mm (0.45kg/m) aluminium section and fixing the stainless steel mesh with U channel with screws including necessary fitting and fixtures such as two numbers stainless hinges, stainless steel handle one number and magnet or tower bolt two numbers etc. complete as directed. (Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)	3.00	m2	3,777.00	11,331.00

16.38	Providing ,Fabricating and fixing at all floors, locations and heights stainless steel storage / Service Units / kitchen trolleys below existing granite Kitchen Platform upto depth 24 " to 26" as required made with 304 S.S. (Food grade) Comprising of 19mm square pipes outer frame , sink unit with bottle and bin holders , bottle pull out , utensils and storage unit kit etc. as desired by Engineer incharge and as per approved design consisting of 6mm dia S.S. round bars and 5mm dia distribution S.S. round bars or 1 mm thick perforated S.S. sheet where ever required & fabricated as directed including cost of providing teakwood Frame work , Sliding channel, 18mm waterproof plywood with sunmica facia , handles , screws , nails, cost of materials , transporting , labour, wastage and testing etc complete as directed(weight of the trolly should not be less than 55kg/sqm of elevational area)	5.00	Rmt	23,743.00	1,18,715.00
16.39	Providing and fixing in position aluminium 2 track sliding double glass window in heavy anodized section 15 micron with including frame work of aluminium hollow pipe section 75mm x 25mm size with 14 gauge thick weight of 1.036kg/m , aluminium sliding track of size 66.5x50mm of weight 1.329kg/m with shutter section of size 66x26mm of weight 0.774kg/m including gazing clip of size 38.7x 28.5 mm of weight 0.303kg/m including making holes for draining of water fixing 5mm thick clear double glass shutter with rubber gasket, concealed lock, Meeti make heavy quality bearing including all necessary fittings required for double glass window , providing silicon sealent if required all complete as directed.(all aluminium section will be Jindhal make)	5.00	m2	12,836.00	64,180.00
16.40	Providing/fixing toughened laminated thermal insulated 6mm thick glass having all clean cut and polished edges of IITB approved brand at all heights for balcony/outer railings including fixing it with appropriate D bracket SS 304 including removing old types of glass and cleaning & safely disposing all the glass pieces away.	5.00	m2	9,934.00	49,670.00
16.41	Providing & fixing in position Aluminum partition made using 2.5" x 1.5" Aluminum pipe section at 600mm c/c as frame (without anodizing) with 12mm thick marine plywood of IITB approved make using screws, nails in proper line and level, making necessary arrangement of raceway with removable type panels for electrical/ lan/ telephone work, with all required fittings and fixtures, inserting wood packing wherever required etc. complete as directed.	5.00	m2	3,725.00	18,625.00

16.42	Providing and fixing in position two track aluminium sliding shutters for Notice Board using rectangular box section of size 125mm x 38mm x 1.5mm (1.268 kg/m) for outer frame, sections of size 61mm x 31mm x 1.3mm (0.628 kg/m) thick for bottom, sections of size 61mm x 31mm x 1.3mm (0.52 kg/m) thick for sides and top. The shutter should be of bearing bottom of size 40mm x 18mm x 1.25mm (0.493kg/m) thick, top member of size 40mm x 18mm x 1.20mm (0.410 kg/m) thick, interlocking section size of 43mm x 27mm x 1.3mm (0.469 kg/m) thick and handle section of size 40mm x 18mm x 1.3mm (0.410 kg/m) thick including providing and fixing 5mm thk clear glass in the shutter with PVC lining & rubber, approved quality minimum two nos. PVC rollers for each shutter, necessary locking arrangement with keys, handles, PVC lining and other required fittings, including providing & fixing Soft board covered with green cloth complete as directed by Engineer in charge. Note : All aluminium sections and fittings are 15 micron anodized/powder coated).	5.00	m2	7,306.00	36,530.00
16.43	Providing and Fixing 12mm thick Acoustic Sheet for sound proof of approved brand like armstrong etc. size 600mm x 600mm on teakwood frame of size 50mm x 37mm having anti termite coating including one coat of wood primer and two coats of synthetic enamel paint, fixing the same on existing wall/ceiling with screws/nails, fevicol including necessary fittings and fixtures as per site requirement and as directed by Engineer-In-Charge. -	3.00	m2	4,020.00	12,060.00
16.44	Providing and fixing 25 mm thick neoprene rubber sheet having density not less than 1.35g/cubic cm, and weight not less than 32.5 kg per sqm in desired location pasting or placing it with directed procedure using necessary material etc all complete including transportation, etc all complete. (material is to be approved before placing by Engineer In charge)	3.00	m2	4,477.00	13,431.00
16.45	Providing and fixing in position three track aluminium sliding windows using sections of size 92 mm x 31mm x 1.30 mm (0.933kg/mtr) thick for bottom, sections of size 92 mm x 31mm x 1.30 mm (0.933kg/mtr) thick for sides and top. The shutter comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and fixing 5mm thk. glass in the shutter using rubber gaskek with require fittings such as approved quality minimum two nos.PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).	5.00	m2	6,007.00	30,035.00

16.46	<p>Providing and fixing in position two track aluminium sliding windows using sections of size 61 mm x 31mm x 1.3 mm (not less than 0.659kg/mtr) thick for bottom, sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25 mm (not less than 0.417kg/mtr) thick , top member of size 40 mm x 18 mm x 1.20 mm (not less than 0.475kg/mtr) thick, Interlocking section size of 43 mm x 27 mm x 1.30 mm (not less than 0.558kg/mtr) thick and handle section of size 43mm x 18 mm x 1.30 mm (not less than 0.424kg/mtr) thick including providing and fixing 5mm thk. glass in the shutter using rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittingsetc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).</p>	5.00	m2	5,674.00	28,370.00
16.47	<p>Providing and fixing in position two track aluminium sliding windows using sections of size 61 mm x 31mm x 1.3 mm (not less than 0.659kg/mtr) thick for bottom, sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25 mm (not less than 0.417kg/mtr) thick , top member of size 40 mm x 18 mm x 1.20 mm (not less than 0.475kg/mtr) thick, Interlocking section size of 43 mm x 27 mm x 1.30 mm (not less than 0.558kg/mtr) thick and handle section of size 43mm x 18 mm x 1.30 mm (not less than 0.424kg/mtr) thick including providing and fixing 304 grade stainless steel mosquito proof mesh in the shutter, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, provision for fixing A.C. units (if required) etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).</p>	5.00	m2	4,940.00	24,700.00
16.48	<p>Providing, making and fixing fully glazed aluminium double glass partition using 15micron/ powder coated anodized aluminium section of size 100x37x1.5mm thick (1.90Kg/Rmt), P/F 5mm thick clear plain glass in two layer with all required fittings such as rubber gasket, silica gel, silicon selent, glazing clips, screws and other required fittings etc. completed as directed. (all alu. fittings should 15 micron anodized or powder coated.)</p>	5.00	m2	7,145.00	35,725.00

16.49	Providing and fixing 12mm thick Toughen glass openable door shutter including heavy duty decorative stainless steel handles 300mm long (2 Nos.) on each leaf, lock of approved quality and make, heavy duty floor spring of CNR brand having capacity not less than 150kg for each leaf with dorma make top and bottom patch fittings, SS top and bottom pivot including making proper adjustment for smooth operation including making necessary excavation in floor for fixing the floor spring and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete all as directed Engineer-in Charge.	5.00	m2	11,564.00	57,820.00
16.50	Providing & fixing in position Aluminum partition made using 2.5" x 1.5" Aluminum pipe section at 600mm c/c as frame with 3mm thick one side designer aluminium composite sheet manufacturer by Altobond with approved pattern and colour on inside portion using double tape and silicone sealant, making necessary arrangement of raceway with removable type panels for electrical/ lan/ telephone work, with all required fittings and fixtures, inserting wood packing wherever required etc. complete as directed.	5.00	m2	4,028.00	20,140.00
16.51	P/F in position aluminium two track sliding windows in heavy anodized section 15 micron powder coated 30mm series including fixing of tracks, making holes for drainage water fixing 5mm thick clear double glass including adding silica gel crystals or IITB approved makematerial in between two glasses, glazing clips, silicon sealant, rubber gasket, locks with handles and other require fittings, pressure patti,etc. all completed as directed. (all alu. fittings and sections should be 15 micron anodized or powder coated.)	5.00	m2	8,514.00	42,570.00
16.52	P/F in position aluminium three track sliding windows in heavy anodized section 15 micron powder coated 30mm series including fixing of tracks, making holes for drainage water fixing 5mm thick clear double glass including adding silica gel crystals or IITB approved makematerial in between two glasses, glazing clips, silicon sealant, rubber gasket, locks with handles and other require fittings, pressure patti, etc. all completed as directed. (all alu. fittings and sections should be 15 micron anodized or powder coated.)	5.00	m2	8,593.00	42,965.00
16.53	Providing and fixing perforated aluminium 15 micron anodized sheet having 16 gauge thickness of approved pattern and fixing over existing frame using powder coated nut and bolt of required size and approved make, making panels of required size as per direction, panels should be removable type as and when required, including scaffolding, cutting in required size etc. completed as directed.	25.00	m2	1,064.00	26,600.00

16.54	Supplying, fabricating and fixing in position aluminum anodized openable door shutter using aluminum standard door section 80mm x 40mm (not less than 1.139kg/mtr) for verticals and middle, 100mm x 40mm (not less than 1.60kg/mtr) for top & bottom members, providing and fixing 80mm wide and 16 gauge aluminium louvered over 80mm x 16 gauge aluminium plate using 3 nos stainless steel hinges 4" long for each shutter, handles 2 nos. for each shutter, lock, stainless steel tower bolt 8" long 1 no for each shutter, providing and fixing box section of size 63x37mm (not less than 1.054 kg/mtr) for outer frame vertically and horizontally, P/F 'U' channel for border etc. all complete as directed. (All aluminium sections should be 15 micron anodized/powder coated)	5.00	m2	8,202.00	41,010.00
16.55	Providing and fixing 25mm to 50mm wide vertical venetian blinds in aluminium or fabric strips of approved make and colour with all accessories etc. complete as directed	25.00	Sqm	2,159.00	53,975.00
16.56	Supplying fabricating and fixing in position fully glazed aluminium openable window using aluminium section 42 x 30 x 1.5mm (0.526/rmt) size aluminium single border outer frame of window shutter, 42 x 37 x 1.5mm size(0.724kg/rmt), aluminium Z section for window shutter, 28 x 14.5 x 1.5mm(0.286kg/rmt) size, aluminium clip for window shutter 45 x 45 x 1.5mm(0.762kg/rmt)(size, Z aluminium center patti for mullion & intermediate section, 37mm x 37mm (0.820kg/rmt) aluminium angles 2mm thick, 5mm thick plain or frosted glasses with rubber gasket, 3 Nos. S.S. Hinges 75mm size (heavy) on each window shutter, aluminium tower bolt 100mm size 1 Nos on each leaf, aluminium stay 200mm to 250mm long 1 No per leaf, aluminium handle 1 Nos per leaf, provision for fixing AC with teak wood members inside box, (if required).etc. Complete. (all aluminium section should be 15 micron anodized/powder coated section)	5.00	Sqm	8,006.00	40,030.00
16.57	Providing, supplying & fabricating aluminium partition using perforated sheet 3mm thk fixed in aluminium frame of size 63mm x 38 mm x 1.5mm thk (0.942kg/Rmt) with glazing clip, rubber gasket etc all complete. similar to existing panel design wherever required(All aluminium sections should be 15 micron anodised/ powder coated)	5.00	Sqm	5,754.00	28,770.00
16.58	Providing and fixing 10mm thick toughened glass including edge polishing, making holes for fixing in position including fittings, fixtures, transport, etc all complete.	5.00	Sqm	5,190.00	25,950.00
16.59	Providing and fixing 12mm thick toughened glass including edge polishing, making holes for fixing in position including fittings, fixtures, transport, etc all complete.	5.00	Sqm	6,087.00	30,435.00

16.60	Providing and fixing in position Two track aluminium Sliding window using Domal sections of 66.5mm x 50mm for bottom, sides and top. (not less than 1.329 kg/mtr) The shutter should be of Handle Interlocking, bearing bottom of size 27 x 65 mm (not less than 0.91 kg/mtr) Domal Clip (not less than 0.41 kg/mtr) , including providing and fixing 5mm thk.glass in the shutter using rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections 15 micron anodized/ powder coated).	25.00	Sqm	7,897.00	1,97,425.00
16.61	Providing and fixing in position Three track aluminium Domal Sliding window using sections of 101.5mm x 50mm for bottom, sides and top. (not less than 1.798 kg/mtr) The shutter should be of Handle Interlocking, bearing bottom of size 27 x 65 mm (not less than 0.91 kg/mtr) Domal Clip (not less than 0.41 kg/mtr) , including providing and fixing 5 mm thk. glass in the shutter using rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections 15 micron anodized/ powder coated).	25.00	Sqm	9,241.00	2,31,025.00
16.62	Providing and fixing in position Two track aluminium Domal Sliding Double Glass window using sections of 66.5mm x 50mm for bottom, sides and top. (not less than 1.329 kg/mtr) The shutter should be of Handle Interlocking, bearing bottom of size 27 x 65 mm (not less than 0.91 kg/mtr) Domal Clip (not less than 0.41 kg/mtr) , including providing and fixing 5+5mm Glass (presser patti,double tap,Silca gel etc.) rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge.(Note: All aluminium sections 15 micron anodized/ powder coated).	25.00	Sqm	10,615.00	2,65,375.00
16.63	Providing and fixing in position Three track aluminium Domal Sliding Double Glass window using sections of 101.5mm x 50mm for bottom, sides and top. (not less than 1.798 kg/mtr) The shutter should be of Handle Interlocking, bearing bottom of size 27 x 65 mm (not less than 0.91 kg/mtr) Domal Clip (not less than 0.41 kg/mtr) , including providing and fixing 5+5mm Glass (presser patti,double tap,Silca jail etc.) rubber gasket, approved quality minimum two nos. PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge. (Note: All aluminium sections 15 micron anodized/ powder coated).	25.00	Sqm	11,959.00	2,98,975.00

16.64	Supplying , fabricating and fixing in position fully glazed aluminium openable double glass window using 15 micron anodised/ powder coated 52mm Domal section for window shutter, border outer frame, clip, & center, aluminium angle, 5+5mm Glass (presser patti,double tap,Silca jail etc.) with jumbo rubber gasket, adjustable hinges 2 Nos. on each shutter, Z handle 2 Nos, window stay 2 Nos, providing & fixing aluminium outer hollow- box section of 50x25x1.5mm & fixing the shutter on aluminium outer frame etc.complete or as directed by engineer in charge.	25.00	Sqm	12,628.00	3,15,700.00
16.65	Providing and fixing aluminium LOUVRE sections Size of (220.55mm x 31.95mm Section) (not less than 2.54 kg/mtr) , including fixing L Angle ,with Scrow/Fastner approved quality fittings, etc. complete as directed by Engineer in charge.	20.00	Sqm	2,752.00	55,040.00
16.66	Providing, fabrication & fixing structural glazing work using aluminum sections for vertical and horizontal having size 239mm x 50mm x 3mm thick (not less than 5.291 kg/mtr.),Pressure Plate section (not less then 0.404kg/mtr) & cover cap section (not less then 0.318kg/mtr) Site clip section (not less then .0108kg/mtr) LOUVRE sections Size of (220.55mm x 31.95mm Section) (not less than 2.54 kg/mtr) providing and fixing Tinted toughening 8mm thick glass in the panels with all necessary fittings, fixtures, screws, pump filled structural silicon sealant & hardware, making partition watertight, scaffolding etc. complete.	20.00	Sqm	17,422.00	3,48,440.00
16.67	Providing and fixing of Single glazed modular Profile Partition System VENUS-45 or IITB approved makewith 10mm thick toughened glass with a tested sound reduction Value from 28 TO 32 Db Wide Line single glazed partition with 10mm thick toughened glass. The panels are supported by Aluminium section of 45*25*1.2mm fixed to RCC slab with spacing as manufacturer specification. All sections shall be duly anodised up to 15-16 microns with 6063-T5 grade and required accessories ie glass to glass aluminium I sections, T section & 90 degree sections & Glass packing to adjust the floor level. Ceiling profile, Floor profile and wall profile are 25 mm visible face and 100 mm wide with 10mm toughen glass & insertion of Thermoplastic gasket to adhere the airtight as per manufacturer specification. including all necessary Hardware etc. Complete.	20.00	Sqm	9,268.00	1,85,360.00

16.68	Providing and fixing make 65mm System door as per manufacturer specifications, having size of 65mm x 35mm x 1.5mm thick with approved door profile ie. duly Anodized Aluminium Door Sections having sizes of 65mm x 35mm x 1.5mm thick, 10 mm thick Toughened Glass including Geze/Hafele or IITB approved make Open door closer, Flush Hinges, Dead lock or Mortise lock , DD type or liver handle, door stopper, Door Seal & Gaskets. (All Hardware in approved Shade) Rate to be quoted including all necessary Hardware etc. Complete.	20.00	Sqm	18,146.00	3,62,920.00
16.69	Providing and fixing in position fixed glazing / partition using 15 micron / powder coated anodised Alu.section of size 100mm x 37mm x 1.5mm thick fixed to wall with screws and 5mm thick clear plain double glass fixed to the above frame in 12mm x 12mm 'U' clips with rubber gasket, Alu angle glazing , Alu glazing plate, Alu.clips,Pressure patti filling all gaps with appropriate silica gel etc.complete.	5.00	Sqm	9,198.00	45,990.00
17	Waterproofing				
17.01	Providing waterproof plaster in WC 20mm thick for in cement mortar 1:3 with neat finishing, floating using waterproofing compound at the rate of 2% by weight of cement	100.00	m2	536.00	53,600.00
17.02	Providing & laying brickbat coba on terrace, chajjas & in w.c. and bath in all positions in cement mortar 1:5 with waterproofing compound at the rate of 2% by weight of cement and covering 7 years' guarantee including all leads, lifts including furnishing a guarantee on requisite judicial stamp paper etc. complete.	10.00	m3	6,516.00	65,160.00
17.03	Providing waterproof bedding for flooring of bath and W.C. 25mm thick in cement mortar 1:3 using waterproofing compound 2% by weight of cement including levelling, curing etc.	100.00	m2	427.00	42,700.00

17.04	<p>Providing and applying exterior coating for wall including Cleaning the surface, removing the laitance, greese, old paints, contaminants, curing compound with wire brushing with water pressure wash. Fine hair line cracks more than 0.50 mm must be widened up to 5 mm minimum in V shape and then fill cracks with Dr. Fixit Crack-X Paste on masonry plaster surface. Apply primer coat prepared with Dr. Fixit Crack-X Paste and water in 1:1 proportion over the crack. Fill Dr. Fixit Crack-X Paste when the surface is tacky and not dried completely. Press Dr. Fixit Crack-X Paste firmly into the crack with a spatula or putty knives and level with the surface. Care must be taken to avoid formation of cavities or bubbles during application. Allow it to set for 24 hours and then apply another coat of Dr. Fixit Crack-X Paste. Apply one coat of Dr. Fixit Primeseal with water in proportion of 2:1 and stir well until a uniform consistency is achieved. Apply a single coat of diluted Primeseal on the cleaned substrate. Allow it to dry for 2 to 3 hours. Apply Base coat of undiluted Dr. Fixit Raincoat Waterproof Coating over the primed surface. Allow the Dr. Fixit Raincoat Waterproof Coating to dry for 4 – 6 Hrs of approved colour. Apply using brush / roller / airless spray. Apply top coat of undiluted High Build durable exterior waterproof wall coating Dr. Fixit Raincoat Select Top coat over the Dr. Fixit Raincoat Waterproof Coating at applied areas of approved colour. Apply using brush / roller / airless spray to achieve DFT of 170 – 180 microns. Allow the Dr. Fixit Raincoat Select Top coat to dry for 6 – 8 Hrs. Allow the coated surface to air cure fully for 7 days. Work includes scaffolding and covering the floor, window glass with plastic sheet and as directed by this office. Work Shall be got executed through certified applicator of the product manufacturing company only and work shall be guaranteed for 03 years by the contractor on requisite stamp paper including submitting written guarantee from said certified applicator. Contractor to submit re-counsillation statement along with challans for work done.</p>	1,000.00	m2	341.00	3,41,000.00
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17.05	<p>Providing and applying three coats of Dr. Fixit Roof seal coating including preparing surface by pressure washing the surface to remove all algae, mould, dirt, dust, chalking and waste products. All visible hairline cracks more than 0.50mm and not giving hollow sound on the IPS/screed or at the junctions of flat roof & vertical parapet wall, pipe joints, should be cut and widen V shape with mechanical cutter in the size (6mm W x 6mm D) and fill with Dr. Fixit PU Sealant covering the entire area uniformly with suitable gun. Allow sealant to cure a minimum 24 hours. Apply minimum 50mm - 100 mm width 45 GSM Glass Fibre Mesh / non-woven geo textile fleece with the coat of Dr. Fixit Roofseal Select along the length of crack. Apply one coat of Dr. Fixit Primeseal primer dilute with water in the ratio 2:1. Allow it to dry for 2 to 3 hours. Apply 1st coat of Dr. Fixit Roofseal Select at the rate of 2.0 sqmt / litre / coat. An open 45 Gsm glass fibre mesh of 2.5 mm x 2.5 mm must be sandwiched between the first and second coat. While the 1st coat is still wet, place the fibre mesh on it. Allow the first coat to dry for 6-8 hours. Apply second coat of Dr. Fixit Roofseal Select with the same application coverage. Application direction of second coat should be perpendicular to that of the first coat. Allow second coat to dry for 6-8 hours. Apply third coat of Dr. Fixit Roofseal Select at an application direction that is perpendicular to that of the second coat with same application coverage rate. Check to see no void surface is left untreated / uncoated. Allow the system to air cure for 7 days minimum. A total thickness of 1 mm must be achieved when Dr. Fixit Roofseal Select is dry. Work Shall be got executed through certified applicator of the product manufacturing company only and work shall be guaranteed for 03 years by the contractor on requisite stamp paper including submitting written guarantee from said certified applicator. Contractor to submit re-counsillation statement along with challans for work done.</p>	2,000.00	m2	470.00	9,40,000.00
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17.06	<p>Providing and laying waterproofing treatment of 120mm av. thickness consisting of 12mm thick layer in cement mortar 1:3 with water proofing compound 2% by weight of cement as base, constructing and laying brick bat coba in cement mortar 1:5 with waterproofing compound at the rate of 2% by weight of cement and having average thickness of 80mm and finishing with 20mm thick cement plaster layer in cement mortar 1:3 with water proofing compound 2% by weight of cement including laying glass fibre cloth of approved quality in top layer including all lead, lifts and laid to proper slope to drain off water entirely including watta at the junction of parapet and work upto a height of 300mm or as directed and including finishing the top layer of water proofing treatment with false marking of 30cm x 30cm or as directed and covering the whole treatment with seven years' guarantee, on requisite stamp paper etc. complete.</p>	100.00	m2	1,528.12	1,52,811.72
17.07	<p>Providing and laying water proofing cement concrete flooring to terrace to average 50mm thickness with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand including compaction, filling joints, adding recommended waterproofing admixtures at the rate of 1Kg per cement bag, laying in required position flooring of broken china mosaic (broken piece of glazed tiled) of approved colour & pattern over a bed of cement mortar 1:4 adding waterproofing compound as per manufacturer's specification, finishing with neat cement float, giving proper slopes, compaction, curing, finishing preparing bell mouth including all lead and lifts etc. testing the roof by ponding with water for 14 days, providing waterproofing guarantee for 7 (seven) years in requisite non judicial stamp paper in favour of IITB etc. Complete. Note: In case of leakage during monsoon, contractor has to rectify leakage within 24hrs of intimation given by Estate Office, else Estate Office shall cover the surface with tarpaulin sheet at contractor's risk and cost.</p>	50.00	m2	949.00	47,450.00

17.08	<p>Providing and applying waterproofing treatment for horizontal surfaces using ROOF 540 waterproofing system manufacturer by Perfect Seal or Mastersealroof- 3500 waterproofing system manufacturer by BASF or CHRYSO PROOF ACRYLIC Five Layer System. The waterproofing treatment should be carry out as per manufacturers specifications with all lead, lift,polymer coating on entire surface etc. with use of scaffolding and covering the whole treatment with ten years guarantee on requisite five hundred rupees stamp paper. Work Shall be got executed through certified applicator of the product manufacturing company only including submitting written guarantee from said certified applicator. etc. complete as directed. Note: In case of leakage during monsoon, contractor has to rectify leakage within 24 hrs of intimation given by Estate Office, else Estate Office shall cover the surface with tarpaulin sheet at contractor's risk and cost.</p>	25.00	m2	830.00	20,750.00
17.09	<p>Providing and applying waterproofing treatment for vertical surfaces using ROOF 540 waterproofing system manufacturer by Perfect Seal or Mastersealroof- 3500 waterproofing system manufacturer by BASF or Chryso Proof Acrylic five layer system manufactured by M/s Chryso. The waterproofing treatment should carry out as per manufacturers specifications with all lead, lift, polymer coating on entire surface etc. with use of scaffolding and covering the whole treatment with ten years guarantee, on requisite five hundred rupees stamp paper Work Shall be got executed through certified applicator of the product manufacturing company only including submitting written guarantee from said certified applicator. Etc. complete as directed. Note: In case of leakage during monsoon, contractor has to rectify leakage within 24 hrs of intimation given by Estate Office, else Estate Office shall cover the surface with tarpaulin sheet at contractor's risk and cost.</p>	25.00	m2	730.00	18,250.00
17.10	<p>Providing and applying waterproofing treatment for vertical & horizontal construction joint using Masterseal NP1 sealant waterproofing system manufactured by BASF or CHRYSO Polyband system by Chryso India Ltd. The waterproofing treatment should be carry out as per manufacturers specifications with all lead, lift etc. with use of scaffolding and covering the whole treatment with ten years guarantee on requisite five hundred rupees stamp paper. Work Shall be got executed through certified applicator of the product manufacturing company only including submitting written guarantee from said certified applicator. etc. complete as directed. Note: In case of leakage during monsoon, contractor has to rectify leakage within 24 hrs of intimation given by Estate Office, else Estate Office shall cover the surface with tarpaulin sheet at contractor's risk and cost.</p>	25.00	Rmt	2,249.00	56,225.00

17.11	Providing and laying in situ marble mosaic of 10mm thickness with white and coloured marble chips upto maximum size of 6mm in coloured cement in suitable panels including glass strips including providing under layer of IPS 50mm thickness with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand including compaction, filling joints, adding recommended waterproofing compound at the rate of 1Kg per cement bag, finishing with neat cement float, giving proper slopes, compaction, curing, finishing preparing bell mouth including all lead and lift etc. testing the roof by ponding with water for 14 days, providing waterproofing guarantee for 07 (Seven) years in requisite judicial stamp paper in favour of IITB etc. Complete. Note: In case of leakage during monsoon, contractor has to rectify leakage within 24hrs of intimation given by Estate Office, else Estate Office shall cover the surface with tarpaulin sheet at contractor's risk and cost.	25.00	m2	894.00	22,350.00
17.12	Removing the existing waterproofing sheet bitumen/ dongri cloth/ tarfelt layer coating etc, of any thickness of terrace water proofing without damages to structure,brick bat layer, using electrically operated cutting tools, (pulversing/boshing tool breaking machine to avoid crack and vibration to structure) grinder, leveling and cleaning the surface for providing new waterproofing treatment etc. all complete, and collecting the removed membrane in guny bags and lowering down carefully with tied rope without causing dust nuisance as directed. (throwing down the APP/Tarfelt sheet from terrace will not be allowed)	200.00	m2	89.00	17,800.00
17.13	Providing and applying one coat of solvent based bitumen primer as per IS 3384 on roof of the building @0.25 liters/sqm. Inculding cleaning and removing defective exting loose layer of membrane thoroughly with wire brush / coir brush rectification of all damages etc.completed as directed.	1,450.00	m2	45.00	65,250.00
17.14	Providing and dammering to roof with one coat of bitumen 90/15 or 85/25 as per IS 73/ IS 702 @1.5 kg./sqm uniformly and providing dongri cloth including finishing surface with heat reflective bitumen based silver paint @0.10 ltr/sqm etc. Complete as directed and covering the bitumen treatment with the guarantee of 1 monsoon period,on requisite stamp paper etc.disel operated bitumen heating machine should be used for this activity (Wooden fuel is not allowed) complete as directed.	1,000.00	m2	251.00	2,51,000.00

17.15	<p>Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ litre and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc, and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 650/ 450N/ 5cm. Tear strength in longitudinal and transverse direction as 300/ 250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane (NILOBIT/ STP/ Pedilite or equivalent) including repairing the damaged rainwater spouts on terraces on existing membrane and patchwork with bitumen coating and finishing the surface with heat reflective bitumen based silver paint @0.10 ltr/sqm and covering the hole treatment with five years guarantee,on requisite stamp paper etc. complete.</p>	100.00	m2	565.41	56,541.19
17.16	<p>Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation.</p>	50.00	m2	103.85	5,192.50
17.17	<p>Providing and laying integral cement based treatment for waterproofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) Ist layer of 22mm to 25mm thick approved and specified shahabad stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound 2% by weight of cement conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement: 3 coarsesand) mixed with water proofing compound in recommended proportions. As directed by Engineer Incharge.</p>	50.00	m2	1,367.57	68,378.71

17.18	Providing and laying integral cement based treatment for waterproofing on vertical surface by fixing rough shahabad stone slab 22mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportion with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 Cement : 3 coarse sand) 20mm thick with neat cement punning mixed with waterproofing compound in recommended proportion complete at all levels and as directed by Engineer in charge.	50.00	m2	1,786.34	89,317.02
17.19	Providing and applying Dr.Fixit Dampguard Classic(Base + Hardener) as per manufactures specification including scrapping applying first coat of Dampguard Classic over that applying Damguard Classic Putty followed by Scrapping and after that applying final coat of Damgurad Classic etc.complete all as directed.	100.00	m2	468.00	46,800.00
17.20	Providing and applying one coat of Walgard Prime followed by 2 coats of Wagard WB PU coating of Apurva India Pvt. Ltd as per manufacturer specification etc. complete all as directed.	100.00	m2	433.00	43,300.00
17.21	Dismantling PCC, IPS layer above brick bat coba from terrace floor/chajjas of building carefully without damaging the existing brickbat, levelling the surface, cleaning the site, lowering down the debris and stacking the debris upto 50mtr from building at designated spot etc. complete.	10.00	m3	2,013.91	20,139.10
17.22	Providing and fixing machine moulded anodised aluminium sheet of not less than 1.0 mm thick of approved pattern & design, made out of machine cut aluminium sheet over expansion joints on vertical surfaces/ceiling floors, fixing in one row on two side of joint shall be done with stainless steel dash fasteners including filling the joint with bitumen filler/ foamboard and sealing the whole with joint sealent of approved company, providing aluminium washers at a staggered pitch, drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per directed.	5.00	m2	2,523.00	12,615.00
17.23	Providing and laying water proofing cement concrete flooring to terrace to average 50mm thick with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand including compaction, filling joints, adding recommended waterproofing admixtures @ 2% by weight of cement, marking lines to give appearances of tiles of 30cm x 30cm or other approved size laid diagonally / square, finishing with extra cement in any colour as directed, testing the roof by ponding with water for 14 days, providing waterproofing guarantee for 3 (three) years in requisite non judicial stamp paper in favour of IITB including all lead and lift etc. complete.	250.00	m2	647.00	1,61,750.00

17.24	Providing and laying water proofing cement concrete flooring to terrace to average 50mm thick with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand including compaction, filling joints, adding recommended waterproofing admixtures @ 2% by weight of cement, finishing the top surfaces with broken china mosaic (broken piece of glazed tiled) of approved colour & pattern including neat cement float, testing the roof by ponding with water for 14 days, providing waterproofing guarantee/warranty for 3 (three) years in requisite non judicial stamp paper in favour of IITB etc. all complete as directed by Engineer In-charge.	250.00	m2	1,170.00	2,92,500.00
18	Hiring Charges				
18.01	Hire charges for providing poclain for cutting and leveling the heaps of soil, for desilting / widening/deepening the kachha nallah /drains including necessary labour, operator, fuel etc. excavating, shifting, spreading and leveling the soil / debris at low lying area along the alignment of the proposed path using the machinery etc. all complete as directed.	12.00	Per Hr.	3,586.00	43,032.00
18.02	Hire charges for providing J.C.B for cutting and leveling the heaps of soil, for desilting / widening/deepening the kachha nallah /drains including necessary labour, operator, fuel etc. excavating, shifting, spreading and leveling the soil / debris at low lying area using the machinery etc. all complete as directed.	12.00	Per Hr.	1,286.00	15,432.00
18.03	Hire charges for providing crane for shifting material as per the requirement and condition including necessary labour, operator, fuel etc. without damaging the lifted material etc. all complete as directed.	1.00	Per day	14,950.00	14,950.00
19	Special Items				
19.01	Providing and erecting 2.00 meter high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion for day and night, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously including shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer In-Charge.etc all complete as directed by Engineer In charge. (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).	5.00	Rmt	2,836.99	14,184.96

19.02	Providing & fixing 25mm thick teak wood wooden flooring including cleaning, proper alignment etc all complete as directed by Engineer In-charge.	25.00	m2	4,479.00	1,11,975.00
19.03	Filling in roads with approved moorum brough from outside sources and filling in layesr not exceeding 150mm thick inlcuding breaking clods, watering, rolling each layer with power roller of minimum 8 tonnes capacity to attain at least 90% of proctor density, dressing the sides and top to the required profile and grade etc. complete including testing of proctor density and submitting repaorts etc. complete as directed.	25.00	m3	1,412.00	35,300.00
19.04	Providing making and erecting in position full height partition made using Gyp Board partition both side (Stud type) wall with glass wool insulation with standard GI section for frame work as per manufacturers specification ,with necessary fittings and fixtures,sealing the joints with sealing tapes, 6mm ply on both sides for receiving skirting and as directed as per drawing	25.00	m2	1,047.00	26,175.00
19.05	Providing and fixing in position 10mm thk back painted glass board approved colour and make including necessary edge polish and studs for fixing . Do as directed and drawings	25.00	m2	1,607.00	40,175.00
19.06	Laying old cement concrete interlocking paver blocks of any design/shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost).	25.00	m2	363.53	9,088.23
19.07	Providing and laying factory made chamfered edge Cement Concrete paver blocks in foot path, driveway & traffic parking etc. of any colour & 80mm thick of M-30 grade, approved design & pattern laid in required pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineerin-Charge.	25.00	Sqm	1,043.00	26,075.00

19.08	Providing and laying factory made chamfered edge Cement Concrete paver blocks in foot path, driveway & traffic parking etc. of any colour & 60mm thick of M-30 grade, approved design & pattern laid in required pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer-in-Charge.	25.00	Sqm	879.00	21,975.00
19.09	Providing and laying Lacquer finish coloured paver blocks in specified pattern 80mm thick for floor and steps etc. with compressive strength not less than 45 N/sqmm over and including 50mm thick compacted bed of fine sand in specified decorative designs with blocks of different colour and pattern including filling the joints with fine sand and cleaning completed as directed.	25.00	m2	1,195.00	29,875.00
19.10	Providing and laying Lacquer finish coloured paver blocks in specified pattern 60mm thick for floor and steps etc. with compressive strength not less than 45 N/sqmm over and including 50mm thick compacted bed of fine sand in specified decorative designs with blocks of different colour and pattern including filling the joints with fine sand and cleaning completed as directed.	25.00	m2	955.00	23,875.00
19.11	Fixing temporary partition during execution of work at site made up of plywood/ GI sheet including vertical support of props/teakwood/ plywood, transportation, lead, lift, removing the partition after completion of work etc. completed as directed.	200.00	m2	379.00	75,800.00

19.12	<p>Providing and applying Epoxy flooring of total not less than 2mm ESD where surface prepared by mechanical means and should be free from dust prior to application of primer (max. 5% moisture content). Applying one coat of epoxy primer which is thoroughly premixed prior to mixing together contents should be mixed slowly using a slow speed drill and paddle for at least 4 minutes primer to be applied on the dry concrete surface @ 0.2 to 0.25Kg/per square meter by Brush/Roller of Dr Cipy or IITB approved make. Applying epoxy material underlay screed 1mm coat i.e. base coat after drying of the Primer (usually after 6 - 8 hrs. from application of primer) , applying anti-static conductive black primer ; applying self-adhesive copper strip on to the clean primed substrate at a distance of 1 to 4 meter to each other, lengthwise and breadth wise at the periphery, near to the walls, stick the self-adhesive copper strip at a distance of 6 inches from the walls. at any one end in the room, copper strip should be extended out for connection of earthing.P/A cove finish for skirting wherever required. Applying 1mm-2mm avg top coat in glossy /Matt finish just after the drying of base coat (within at least 12 hrs) of Dr.Cipy or IITB approved make in approved design , finish , colour and all proportions as per manufacturers specification with required adhesive(within at least 12 hrs) all complete as directed by Engineer- incharge.</p>	25.00	m2	3,102.00	77,550.00
19.13	<p>Providing and applying Epoxy flooring of total not less than 2mm where surface prepared by mechanical means and should be free from dust prior to application of primer (max. 5% moisture content). Applying one coat of epoxy primer which is thoroughly premixed prior to mixing together contents should be mixed slowly using a slow speed drill and paddle for at least 4 minutes primer to be applied on the dry concrete surface @ 0.2 to 0.25Kg/per square meter by Brush/Roller of Dr Cipy or IITB approved make. Applying epoxy material underlay screed 1mm coat i.e. base coat after drying of the Primer (usually after 6 - 8 hrs. from application of primer) of Dr.Cipy or IITB approved make ;Spreading talc powder before P/A cove finish for skirting wherever required, Applying 1mm-2mm avg top coat in glossy /Matt finish just after the drying of base coat (within at least 12 hrs) of Dr.Cipy or IITB approved make in approved design , finish , colour and all proportions as per manufacturers specification with required adhesive all complete as directed by Engineer- incharge.</p>	25.00	m2	2,633.00	65,825.00

19.14	Providign and fixing TURBO VENTILATOR FAN not less than 610mm of FAISAL SHINE Turbo Ventilator Fan 24" inner 30" Outer Dia Hindalco Make Blade 0. 47 mm Thickness, Width-85 mm, Length-485 mm, FAISAL SHINE Turbo Ventilator Top & Ring SS 304, Width-Two Ring & Two Small Bearing, FAISAL SHINE Turbo Ventilator Fan Top & Bottom Plate SS (304), Main Saliya 16 mm Thickness, Length -485, Installation Soiled Ribit-147 Nos Per Nos, FAISAL LITE Polycarbonate Base Plate 2 mm Thickness. (Width-1080, Length-1665 mm)	5.00	nos	9,030.00	45,150.00
19.15	Providing and erecting at site bamboo double scaffolding wherever required to all height as directed by engineer incharge before commencement of work and removing the same after completion of all external work requiring scaffolding.	250.00	m2	77.00	19,250.00
19.16	Providing and erecting single bamboo scaffolding wherever required to all height as directed by engineer incharge before commencement of work and removing the same after completion of all external work requiring scaffolding.	250.00	m2	40.00	10,000.00
19.17	Detailed survey shall be undertaken using DGPS/Total Station. The contour points will be marked at an adequate number of location at site. All existing above ground features such as buildings, structures, permanent / temporary features, roads, adjoining roads (inclusive width), divider, footpaths, trees (girth inclusive), manhole, light poles, wells, bore wells, and any other existing features within the survey limit will be captured in the survey and final printout (one set) showing all the list of symbols & abbreviations will be submitted in suitable scale along with one soft copy .	200.00	m2	4.00	800.00
19.18	Spot levels shall be taken as per topography of the land w.r.t. to Temporary bench mark. Contours shall be interpolated at 0.50 m. Preparing AutoCAD format drawing and final printout (one set) showing all the list of symbols & abbreviations will be submitted in suitable scale along with one soft copy and X,Y,Z description survey data file in XLS format.	100.00	m2	1.00	100.00
19.19	Arranging welding maintenance works for old or new existing MS structure or gate or any other MS framework including necessary MS part or material not more than 2Kgs in weight, welding finishing, painting for welded part etc.	20.00	Job	1,390.00	27,800.00
19.20	Providing and fixing 900mm x 450mm rectangular medium duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	3.00	Each	12,090.00	36,270.00

19.21	Providing and fixing 900mm x 450mm rectangular Heavy duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	3.00	Each	17,782.00	53,346.00
19.22	Providing and fixing 900mm x 600mm rectangular medium duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	5.00	Each	14,505.00	72,525.00
19.23	Providing and fixing 900mm x 600mm rectangular Heavy duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	3.00	Each	21,462.00	64,386.00
19.24	Providing and fixing 600mm x 600mm rectangular Heavy duty FRP grating covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeincluding closing the gaps between frame and surface with cement mortar all complete as directed.	5.00	Each	17,552.00	87,760.00
19.25	Providing and fixing 900mm x 900mm rectangular Heavy duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	2.00	Each	28,420.00	56,840.00
19.26	Providing and fixing 900mm x 900mm rectangular Medium duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	2.00	Each	19,220.00	38,440.00
19.27	Providing and fixing 600mm x 600mm rectangular heavy duty FRP manhole covers with frame for inspection chamber / manhole / gulley trap and other required places manufactured by M/s.KK or IITB approved makeetc. all complete as directed.	2.00	Each	17,552.00	35,104.00
19.28	Providing and fixing 1200mm x 1200mm rectangular Heavy duty Composite FRP manhole covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved make including closing the gaps between frame and surface with cement mortar all complete as directed.	1.00	No.	60,708.00	60,708.00
19.29	Providing and fixing 900mm x 450mm rectangular Heavy duty FRP grating covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or IITB approved make including closing the gaps between frame and surface with cement mortar all complete as directed.	5.00	No.	18,388.00	91,940.00

19.30	Providing and fixing 600mm diameter circular Heavy duty composite FRP manhole covers with frame for inspection chamber/ manhole and other required places manufactured by M/s.KK or IITB approved make etc. all complete as directed.	5.00	No.	15,168.00	75,840.00
19.31	Providing and fixing C.I. sluice valves (with cap) 150mm diameter complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :	3.00	No.	6,684.40	20,053.21
19.32	Providing and fixing C.I. sluice valves (with cap) 200mm diameter complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :	3.00	No.	13,558.45	40,675.34
19.33	Providing and fixing C.I. double acting air valve 50mm diameter of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces,tapers etc if required will be paid separately)	3.00	No.	5,189.30	15,567.89
19.34	Providing and fixing C.I. double acting air valve 80mm diameter of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces,tapers etc if required will be paid separately)	3.00	No.	6,276.67	18,830.02
19.35	Providing and fixing C.I. double acting air valve 100mm diameter of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces,tapers etc if required will be paid separately)	3.00	No.	8,241.97	24,725.91
19.36	Providing and fixing gun metal non- return valve of approved quality (screwed end) : 50mm nominal bore	5.00	No.	1,325.28	6,626.41
19.37	Providing and fixing gun metal non- return valve of approved quality (screwed end) : 80mm nominal bore	5.00	No.	3,548.15	17,740.74
19.38	Supplying and fabricating in position M.S. Seamless pipe 150mm dia (@ outer dia 168mm & approx. 10.00mm thick) including unloading and stacking at site, lowering down in trenches with necessary cutting, jointing, fixing all types of specials like bends, Y, Tees, etc., with proper alignment and level & necessary welding connection to MCGM pipe with all tools & equipments etc. all complete as directed by Engineer In-charge.	5.00	Rmt	7,310.00	36,550.00

19.39	Providing measurement of tree canopy/ foliage as per site condition for every tree in the area to be surveyed including providing table with tree name and foliage all complete as directed by Engineer-in-charge	100.00	Nos.	18.00	1,800.00
19.40	Cleaning and washing of built-in chairs by vacuum cleaner and mechanical means including liquid soap detergent including dry cleaning etc. complete as directed.	50.00	Nos.	111.00	5,550.00
19.41	Replacing damaged Hinges of the writing pad including removing and refixing existing pad with necessary fitting and fixtures, taking away old and damaged material outside campus etc. complete as directed.	25.00	Nos	660.00	16,500.00
19.42	Replacing the damaged laminated writing pad matching as per the existing pattern including fixing with necessary fixtures and fitting, taking away old and damaged material outside campus etc. complete as directed.	20.00	Nos	693.00	13,860.00
19.43	Replacing the damaged MDF board chair handles having vinyl veneer paper finish to all sides matching with the existing pattern and finishing the surface using PU coating with necessary fixtures and fitting, taking away old and damaged material outside campus etc. complete as directed.	25.00	Nos	847.00	21,175.00
19.44	Replacing the damaged spring of the chair with a new spring, making the chair operational properly with necessary fixtures and fittings, taking away old and damaged material outside campus etc. complete as directed.	25.00	Nos	459.00	11,475.00
19.45	Replacing the damaged cloth of the chair matching to the existing pattern with necessary fixtures and fittings, taking away old and damaged material outside campus etc. complete as directed.	25.00	Nos	1,493.00	37,325.00
19.46	Replacing the damaged Cloth of the side walls and ceiling of the auditorium with new cloth with necessary clipping, fixtures and fittings, taking away old and damaged material outside campus etc. complete as directed.	25.00	m2	1,374.00	34,350.00
19.47	Providing and applying interior texture paint of IIT-approved manufacturer of desired colour and shade to wall surfaces in two coats with the use of a stepladder, scrapping the existing paint, preparing the base by scrapping the surface, applying putty etc. including priming coat etc. complete as directed	25.00	m2	720.00	18,000.00
19.48	Providing and fixing 12mm Anchor Bolts for Fixing the chair including removing damaged anchor bolts and taking away the same outside campus etc complete as directed.	23.00	Nos	177.00	4,071.00
19.49	Providing, making & fixing 12mm thick Softboard of IITB approved make over existing aluminium frame or Plywood as per drawing for wall panelling with necessary teak wood support, head moulding, nails, screws, adhesive including scaffolding etc. all complete as directed.	25.00	m2	1,086.00	27,150.00

19.50	Providing, making & fixing 25mm thick foam for ceiling fabric of IITB approved make over existing aluminium frame or Ply as per drawing with necessary teak .nails, screws, adhesive including scaffolding etc. all complete as directed.	25.00	m2	1,172.00	29,300.00
19.51	Providing & Fixing Aluminium L Angle Gripper of size 50 mm wide X 15 mm 'L' having thickness not less than 1 mm for floor carpet Step & Skirting including 15 micron anodizing fitting such as hold fast, screws etc completed as directed.(Krishna aluminium shop- 9930449742)	50.00	Rmt	195.00	9,750.00
19.52	Providing and fixing mild steel supporting structure with m.s clamps to the seats /chairs including removing existing seat and re-fixing the same in proper alignment with molded m.s. clamps with proper bore suitable to the existing pivots 2nos to each chair including necessary mould making to clamps necessary fittings screws etc. All complete as directed by Engineer in -charge.	50.00	Nos	1,038.00	51,900.00
19.53	Construction of granular sub-base, Grade-V having gradation as per MORTH table 400-1 (size range 75 mm to 0.425 mm) by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material using machinery to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge, collecting samples, testing as per section 900 of MORTH and submitting reports etc. completed as directed. (Note : The mix design with all relevant data to be submitted & prior approval is to be obtained from IIT Bombay. Compacted thickness will be taken for payment.)	50.00	m3	2,667.12	1,33,355.93
19.54	Providing and laying, spreading and compacting Grade -I Metal (size range 63 to 45mm (2) using Screening Type-A (13.2mm agg.) stone aggregates to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled steel / vibratory roller 8- 10 tonnes capacity in stages to proper grade and camber, applying and brooming requisite type of screening/ binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density etc. complete. (compacted thickness will be taken for payment)	50.00	m3	3,270.00	1,63,500.00

19.55	Providing and laying, spreading and compacting Grade -II Metal (size range 53 to 22.40mm)(2) using Screening Type-B (11.2mm agg.) stone aggregates to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled steel / vibratory roller 8- 10 tonnes capacity in stages to proper grade and camber, applying and brooming requisite type of screening/ binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density etc. complete. (compacted thickness will be taken for payment)	10.00	m3	3,537.00	35,370.00
19.56	Construction of dry lean cement concrete over compacted granular sub base (GSB) with coarse and fine aggregate conforming to as per relevant IS code, the size of coarse aggregate not exceeding 26.5 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per MORTH, Table 600-1, cement content not to be less than 150 Kg/cum of concrete, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in- charge including collecting samples, testing and submitting reports etc. completed as directed. Specification, mix design, methodology and testing should be done as per IRC 15: 2017. (Note : The mix design with all relevant data to be submitted & prior approval is to be obtained from IIT Bombay. Compacted thickness will be taken for payment.)	10.00	m3	4,144.56	41,445.64
19.57	Providing and fixing 12mm thick glass over table including cutting, polishing, edge rounding etc all complete.	10.00	m2	4,444.00	44,440.00
19.58	Providing etching on 12mm thick glass over table including cutting, polishing, edge rounding etc all complete.	10.00	m2	7,491.00	74,910.00
19.59	P/F white writing board of 15"(W) x 30"(H) and fixing it on existing wall panelling using required adhesive all complete as directed.	10.00	Nos	3,563.00	35,630.00
19.60	Providing and fixing 4mm thick carpet flooring woven or bonded on existing surface/ flooring / granite over flat or sloping surface with approved color and design with direct stick good quality adhesive material, including cutting, wastage, turning etc all complete as per directed by Engineer-In-charge.	10.00	Sqm	1,906.00	19,060.00
19.61	Providing and fixing 6mm thick carpet flooring woven or bonded on existing surface/ flooring / granite over flat or sloping surface with approved color and design with direct stick good quality adhesive material, including cutting, wastage, turning etc all complete as per directed by Engineer-In-charge.	10.00	Sqm	1,980.00	19,800.00

19.62	P/f laminated, edge bedded, ESRG system raised access/false flooring of approved make i.e. Unitile or IITB approved make for server room, computer room, hub room, etc. of USF 800 Medium grade panels (600X600X33)mm, anti static high pressure laminate on top with finished floor with height 300mm fixed on rigid stud adjustable supports including loading unloading, transport charges etc. all complete as per directed by Engineer-In-Charge.	10.00	Sqm	4,226.00	42,260.00
19.63	P/f laminated, edge bedded, ESRG system raised access/false flooring of approved make i.e. Unitile or IITB approved make for server room, computer room, hub room, etc. of USF 800 Medium grade panels (600X600X33)mm, anti static high pressure laminate on top with finished floor with height 450mm fixed on rigid stud adjustable supports including loading unloading, transport charges etc. all complete as per directed by Engineer-In-Charge.	10.00	Sqm	4,614.00	46,140.00
19.64	Providing and fixing factory made kerbstone of size 500 x 400 x 150 mm in M-25 grade of concrete using design mix minimum cement content as per IS 456 for the moderate exposure condition excluding P.C.C (1:11/2:3) 100mm thick bedding, fixing the kerb stone over P.C.C bedding and grouting the joints with 1:3 cement mortar to the required line, level, curing, one coat of primer and two coat of synthetic enamel paint etc. complete (Rate excluding excavation) (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).NOTE:-Excavation and M-20 bed pcc for kerb stone will be paid separately under respective items.	40.00	Rmt	645.00	25,800.00
19.65	Providing & fixing acoustic fibreglass panels of make Danoline, Knauf, fabstretch or IITB approved make with good sound absorbent properties fixed over existing marine plywood with impaling clips in approved size, design and fabric shades etc complete as per directed by Engineer-in-Charge.	13.00	Sqm	8,349.00	1,08,537.00
19.66	Providing & fixing carpet flooring tiles of approved make, design and colour in 2'X2' pattern as per requirement of site including the adhesive, cutting, pasting, etc all complete as per directed by Engineer-in-charge.	30.00	Sqm	2,292.00	68,760.00
19.67	Providing and fixing aluminium stair nosing with anti-slip rubber/uPVC strip inserted on top including fixing with screws and adhesive material at bottom in straight and curved surface as per directed by In-charge. (Sample to be approved by Engineer In-charge)	30.00	Rmt	710.00	21,300.00

19.68	Providing and fixing FRP grills of approved brand, design and required size, manufactured by Ravalson FRP Industries or equivalent brand for multi storied building upto 16 th story high, work includes removing the existing damaged grills lowering down and stacking aside at ground floor, fixing the new grills in position (duct area) with all tools & required fixtures, bonding additive etc. (Scaffolding will be paid in respective item if required)	25.00	Sqm	3,548.00	88,700.00
Gross Total Amount Rs.					16,93,98,954.42
Say Rs.					16,93,98,954.00
At Par					
(In words. _____%) (In figures.....%) Above					
(In words. _____%) (In figures.....%) Below					
Gross Total Amount Rs.					
CGST 9%					
SGST 9%					
Net Total Amount Rs.					
Say Rs.					

(Rupees in words

_____))
(Rates for all items & net amount of total to be filled with figure and words, Percentage for above/below in words as well as in figures should be mention clear & correct. If it is not done, it will be assumed as incomplete tender & tender opening committee will reject your offer at the time of opening of tenders/quotations).

1) If you will engage labourer 20 or more any day, you have to get labour licence as per contract Regulation & Abolition Act 1970 Rule 1971, and also, you have to keep all such record for inspection to the Principal Employer. If you will engage labour up to 10 Nos. per day, you have to file returns after completion of work as per Building & Construction Act to the Office of Regional Labour Commissioner (Central), Sion, Mumbai.

2) This schedule of work is legal documents of Estate Office, IIT Bombay and directed to enlisted contractors to get the copy of schedule of work to fill the rates and can submit his offer. No changes in schedule of work is allowed i.e. item description, units, quantity, rates, etc. If noticed his offer will be rejected and the contractor will be blacklisted or any other strict action will be initiated against him.

3) This work is to be executed as per the the clauses mentioned in the tender document signed by you. In addition to the existing safety clause of the tender documents a penalty of Rs. 5,000/- (per case) will be recovered from the bills of the particular work, in case any safety violations are noticed.

4) Tender will be rejected if white ink applied for correction in the schedule of work.

5) Taxes as per government notification time to time.

6) Contractor must pay GST Taxes to concern authority within 30 days time limit after receipt of payment from IIT Bombay & said record must be submitted to IIT Bombay Accounts Section, otherwise action will be taken as deemed fit.

7) If any malpractices / fraud / negligent professional behaviour or any discrepancy / inconsistency / disparity / deviation / disagreement / dissimilarity / mismatch noticed, their contract will be terminated by issuing one month notice by following legal procedure and will be blacklisted and informed to all Government Authorities and Organisations.

Sd/-
Superintending Engineer (I/C)

Signature of the Contractor
Name & Address in full