



INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY  
ESTATE OFFICE, POWAI, MUMBAI, MAHARASHTRA – 400 076  
TEL. 022 2576 4995 E-mail : drestate@iitb.ac.in

IIT Bombay invites digitally signed Technical Bid & Financial Bid for following work from the contractors having **similar** experience in Central Government Departments / State Government Departments / Central or State Autonomous Bodies / State or Central Public Sector Undertakings & Large Private Organizations. The detail of work is given below:

Sr. No.	Name of Work	Estimated Cost (In Rs.) Incl. 18% GST	EMD (Rs.)	Time Limit	RFX No.
1.	Repair and retrofitting work of Northside wall of Main Building Annex and Interior works in various administrative offices in Nandan Nilekani Main Building. <b>EO/A/INFRA/WKS-61/25-26</b>	Rs.5,80,57,340/-	Rs.11,60,000/-	<b>06 months</b>	<b>6100002241</b>

Intending bidders needs to be register themselves on IIT Bombay portal i.e. <https://portal.iitb.ac.in/vrp/index.jsp> to get User ID and Password. **View the open tender on <https://ep.iitb.ac.in/irj/portal> Please visit [https://portal.iitb.ac.in/vrp/vrp\\_srm\\_docs.jsp](https://portal.iitb.ac.in/vrp/vrp_srm_docs.jsp) for configuration process and user manual.** Queries regarding to vendor registration please contact on **022 – 2159 3001(ASC Help-desk)** and queries regarding to online Bid submission please contact to **+91 82915 56277/6377 or mail us at [srm@iitb.ac.in](mailto:srm@iitb.ac.in)**

Date and time of submission of tender documents digitally are from 10.07.2025 to 01.08.2025 till 11:15 a.m. Date of opening of **Technical Bid will be 01.08.2025 at 11:30 a.m. and Financial Bid 06.08.2025 (Tentative)**

**\*Pre-bid meeting is scheduled on 17.07.2025 at 11:00 a.m.**

Interested contractors/agencies are requested to upload Technical bid and Financial bid on the SRM tendering portal of IIT Bombay.

**(A) All contractors/agencies** should upload technical bid with the following documents on SRM tendering portal, failing to which their tender will be summarily rejected from the tendering process:

- 1) i. Experience of having successfully completed works during the last 7 years ending last day of the month previous to the one in which applications are invited :  
Three **similar completed works** costing not less than the amount equal to **40%** of estimated cost put to tender,  
OR  
Two **similar completed works**, costing not less than the amount equal to **50%** of the estimated cost put to tender  
Or  
One **similar completed work** of aggregate cost not less than the amount equal to **80%** of the estimated cost.  
AND  
ii. One completed work of any nature (either part of (i) or a separate one) costing not less than the amount equal to 40% of the estimated cost put to tender with some Central Government Departments / State Government Departments / State or Central Autonomous Bodies / State or Central Public Sector undertakings.
- 2) Detail statement for work completed, work in hand including balance commitment of work should be enclosed for last three year commencing from 1<sup>st</sup> April and ended with 31<sup>st</sup> March and contractor should submit his details as per Annexure'A' format with support of xerox copies of work order and work completion certificates, otherwise the bid capacity will not be calculated and his technical bid will be summarily rejected, and no Financial Bid will be opened. (All contractors/agencies are hereby informed that they should upload Technical bid as per format of Annexure "A", changing in format is not allowed).
- 3) Upload a scan copy of the information in respect of **manpower/mandays** for above said work must be given **in undertaking** with official signature and seal/stamp, otherwise tender will be **rejected**.
- 4) Bank Solvency certificate 40% of estimated amount issued within one year from any Nationalized / Schedule Bank from the date of publishing of Tender.
- 5) P. F. registration certificate.
- 6) P. F. challans of last 12months.
- 7) (i) ESIC registration certificate and copies of ESIC challans of last 12months.  
OR  
(ii) Contractors' all risks insurance (CAR policy) / Medclaim policy.
- 8) PAN card.
- 9) GST registration certificate.
- 10) Income Tax Return for last 03 years i.e. of **2022-23, 2023-24 and 2024-25**.

- 11) List of Equipment's, Machinery, Tools.
- 12) List of Technical Staff with copies of their Degree/diploma certificate.
- 13) **Demand Draft / Pay Order for Rs.11,60,000/-(EMD amount) drawn in favour of "The Registrar, IIT Bombay" on online Tendering Portal.**
- 14) Power of Attorney, if any.
- 15) Proof of Constitution: An affidavit in case of Sole Proprietorship, Partnership Deed in case of Partnership Firm, Article of Association in case of Private / Public Limited Companies.
- 16) **Litigation history** of the agency is required to be submitted along with the application. A tender would not be awarded if any inquiry proceeding / criminal case is found pending against the agency.
- 17) Labour Licence obtained during last 03 years

**Note:**

The selected bidder should submit a **Performance Guarantee for 5% of the estimated cost**. The time allowed for submission of the Performance Guarantee from the date of issue of the **letter of acceptance is 14 days**.

**Those contractors who do not have documents mentioned above from Sr. No. 1 to 17 need not apply as it is mandatory documents to qualify in technical bids.**

Upload all your relevant documents in the serial order mentioned above. It is **advisable** not to make more than **03 folders of 5MB** while uploading documents.

The work will be executed with lowest bidder as per the terms and conditions of work order and tender documents signed by the lowest bidder. (All agencies are requested to upload a scan copy of Terms and Conditions with official signature and seal/stamp on SRM online tendering portal)

The validity of the bids will be valid for 6 months from the date of opening of tender.

If agency fails to submit the above mentioned documents by uploading to the online portal, their technical bid may be rejected.

Litigation history of the agency is required to be uploaded along with the application. Tender would not be awarded if any inquiry proceeding / criminal case is found pending against the agency.

No work will be subletted to third party. If found payment of final bill will not be processed and the contractor's name will removed from the enlistment without giving him further notice.

Contractor's/Agencies/Proprietor's are requested to give Power of Attorney to your representative to deal any matter with any Officers or Staff of IIT Bombay on behalf of you or your agency.

Rates of the estimate are based on CPWD DSR 2021, & rate analysis.

The contractor have to quote his own rates online against each item of work and need to select **N5 tax code** thereafter.

Scan and upload all the above mentioned documents in "**C folder**" of online SRM tendering portal.

IIT Bombay reserve its rights to reject any or all tenders without assigning any reason and without any reference.

**No queries will be entertained within 24 hours prior to the opening of the tender. We kindly request all contractors to upload their quotations well in advance of the submission deadline to ensure a smooth and timely process.**

**IIT Bombay reserves the right to request a detailed justification of the quoted rates from the lowest bidder, if deemed necessary by the Engineer-in-Charge. Should the justification provided by the bidder be considered unsatisfactory or unsubstantiated, the Engineer-in-Charge shall have full authority to reject the bid, irrespective of it being the lowest.**

*W. K. Kulkarni*  
25/09/2021  
Superintending Engineer (I/C)

*W. K. Kulkarni*  
25/09/2021  
8/7

**TO BE UPLOADED ON SRM TENDERING PORTAL WITH FINANCIAL BID**

**ANNEXURE 'A' (FORMAT)  
TECHNICAL BID**

File No. : EO/A/INFRA/WKS-61/25-26

Name of Work : Repair and Retrofitting of Northside wall of Main building Annex and Interior Works in various administrative offices in Nandan Nilekani Main Building.

Name of the Contractor -----

Sr. No.	Name of Client	Name of Works	2022-23 (In Lakhs)	2023-2024 (In Lakhs)	2024-2025 (In Lakhs)	2025-2026 (In Lakhs)	
						Completed	Balance
			-	-	-	-	-
			-	-	-	-	-
		Total Amount (In Lakhs)	-	-	-	-	-

Note : Contractor must submit his details as per Annexure 'A' with declaration stating that **he is possessing all the original copies of work orders and experience certificates, it will be produced as and when required to IIT Bombay.** However, if it is found false at later stage, the contractor will be debarred or blacklisted. Whereas, if information is not submitted as per Annexure 'A' format his bid capacity will not be calculated and his tender will be summarily rejected.

*M. Hapud  
08/07/2025*

Superintending Engineer (I/C)

*12/07/25  
ST*

Signature of Contractor  
Name & Address in full

## WORKS UNDERTAKING

EO/A/INFRA/WKS-61/25-26

To,  
Superintending Engineer (I/C)  
Indian Institute of Technology,  
Powai, Mumbai – 400 076.

Sub : Repair and Retrofitting work of Northside wall of Main building Annex & Interior Works in various administrative offices in Nandan Nilekani Building.

Dear Sir,

We are hereby quoting all the rates for the attached schedule of short tender of the above mentioned job.

We hereby accept & signed all the General Terms and Conditions and special Conditions of Contract.

The work will be completed within specified time limit of 06 months as mentioned in the notice inviting for short tenders.

The following information is required to be provided.

I / We agree to keep the tender open for One Hundred and Eighty (180) days from the due date of its opening / One Hundred and Eighty days from the date of opening of financial bid in case tenders are invited on 2/3 envelope system and not to make any modification in its terms and conditions.

	Male	Female
No. of Unskilled casual labour to be required per day.		
No. of Skilled casual labour to be required per day.		
Total Mandays required for completion of work.		

Thanking you,

Yours faithfully,

Signature of the Contractor  
With official Seal / Stamp of the firm

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY  
POWAI, MUMBAI - 76

EO/A/INFRA/WKS-61/25-26

ESTATE OFFICE

Name of work: Repair and Retrofitting work of Northside wall of Main building Annex & Interior Works in various administrative offices in Nandan Nilekani Main Building.

Sr. No.	Description of work	Qty	Unit
<b>1</b>	<b>Dismatling &amp; Removing works</b>		
1	Dismantling doors, windows and clerestory windows (steel or wood) shutter of any size and type including chowkhats, holdfasts etc. complete and stacking within 50 metres lead of area as per directions of Engineer-in-charge.	100.00	Nos
2	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. (Recovery of wood scrap will be done @ Rs. 25 per kg, aluminium scrap will be done @ Rs. 120 per kg and structural steel will be done @ Rs. 20 per kg from Item of work against actual weight if material taken outside campus)	50.00	m2
3	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)	100.00	Rmt
4	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.	100.00	Rmt
5	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 outside the campus etc. complete.	5.00	Nos
6	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.	5.00	Nos
7	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.	50.00	m3
8	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..	92.00	m3
9	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)	25.00	m2

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.	500.00	m2
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.	622.00	m2
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.	30.00	m3
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.	9.00	m3
14	Taking out old C.I. / PVC nahani trap with connecting pieces from floor carefully and taking out the same outside campus etc. complete.	5.00	Nos
15	Removing soling without dust nuisance including sorting out the stone chips and debris separately and stacking upto distance of 50 metres as directed.	10.00	m3
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.	10.00	Nos
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).	525.00	m3
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.	10.00	m3
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.	50.00	m3
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.	100.00	kg
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.	25.00	Rmt
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.	50.00	m2

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.	50.00	m2
24	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.	168.00	m3
<b>Concrete</b>			
25	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, scaffolding etc. completed as directed.	50.00	m3
26	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, scaffolding etc. completed as directed.	25.00	m3
27	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.	25.00	m3
28	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.	25.00	m3
29	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Foundations, footings, bases of columns, coping, raft etc.	50.00	m2
30	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
31	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	168.00	m2
32	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Lintels, beams, plinth beams, girders, bressumers and cantilevers	110.00	m2
33	Centering and shuttering including strutting, propping etc. and removal of form for all heights :Columns, Pillars, Piers, Abutments, Posts and Struts	80.00	m2

34	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
<b>Stonework</b>			
35	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.	30.00	m3
36	Laying dry trap / rubble stone soling of required thickness including hand packing and compacting etc. complete using IITB stone including transporting stone from various locations from IIT campus up to working site and cutting the stone, laying and compaction in required size as per requirement.	23.00	m3
37	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.	23.00	m3
38	Providing tuck-pointing with cement mortar 1:3 for stone masonry including removing existing tuck-pointing and curing etc, complete.	50.00	m2
<b>Brickwork</b>			
39	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.	92.00	m3
40	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 directed .	50.00	m2
41	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 Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	25.00	m3
<b>Granite, Marble, Kadappa</b>			
42	Providing and fixing not less than 16 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Granite for kitchen platforms, vanity counters, window sills, facias, flooring and similar locations of required size, approved shade, colour and texture laid over and including 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.	660.00	m2
43	Providing and fixing Kadappa stone slab for platform, shelves, vertical supprts 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.	10.00	m2

44	Providing flamed/ lapato/ sand blasting/hon Finish polishing to Granite Including transportation, site cleaning, washing, etc. complete as directed.	300.00	m2
<b>Building repairs</b>			
45	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.	1,900.00	m2
46	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.	900.00	Kg
47	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	50.00	Kg
48	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).	14,000.00	Kg
49	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 directed.	700.00	m2
50	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.	800.00	m2
51	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.	4,200.00	m2
52	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.	500.00	No

53	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).	70,000.00	KG
54	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.	4.00	per month
55	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. (Note:Payment for scaffolding will be done only once during the work)	3,750.00	m2
56	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.	300.00	m2
<b>Flooring</b>			
57	Providing and fixing 1st quality ceramic wall tiles conforming to as per relevant IS code of size 300mmx450mm and above 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 and including 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	100.00	m2
58	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 over and including 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.	100.00	m2
59	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 over and including 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.	100.00	m2
60	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 over and including 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.	100.00	m2
61	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	100.00	Sqm

62	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.	50.00	m2
63	Providing and fixing wooden flooring of 8 mm / 10 mm thk ( AC-4 Grade ) of approved make vista /armstrong/pergo in slat form including foam for levelling . Measurement will include the skirting and side/ floor profiles if any.	50.00	m2
64	Providing and laying not less than 16 mm thick Quartz Artificial Marble stone slab machine cut, polished Marble stone flooring,/Dado in required design and in patterns in combination with Quartz Artificial 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 16 mm thick stone slab laid over 20 mm (average) thick base of Roof wall white chemical and jointed with white cement slurry 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.	100.00	m2
<b>Wood work</b>			
65	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
66	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 aldop, other require fittings and fixtures etc. complete.	25.00	m2
67	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.	10.00	m2
68	Providing and fixing ISI marked and IITB approved make hydraulic door closer to door shutter including making proper adjustment for smooth operation etc. complete.	20.00	Nos
69	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
70	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.	5.00	m2
71	Providing and laying clear glass over table, table sides, table partitionsetc. of 10mm thick as per require shape with buffing, edge polishing, cutting etc. complete as directed.	20.00	Sqm

72	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.)	10.00	m2
73	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 .	25.00	m2
74	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 .	25.00	m2
75	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 .	25.00	m2
76	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 .	25.00	m2
77	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 .	25.00	m2
78	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 aluminium profile handle of approved shade and pattern 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.	50.00	m2
79	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.	100.00	m2
80	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.	25.00	m2
81	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 aluminium profile handle of approved colour and pattern for each shutter, magnet, lock, polish with including necessary edging ,moulding,buffering, autohinges, & other hardware required fitting etc. all complete as per drawing or as directed.	200.00	m2
82	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 ACP 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.	50.00	m2

83	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).	25.00	m2
84	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.	100.00	m2
85	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 all complete as directed.	10.00	m2
86	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 all complete as directed.	50.00	m2
87	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
88	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.	20.00	m2
89	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	25.00	m2
<b>Steel Work</b>			
90	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
91	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)	250.00	Kg
92	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.	500.00	Kg
93	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.).	200.00	Kg

94	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 coats of synthetic enamel paint.	1,500.00	kg
95	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.	100.00	m2
96	Add for extra weight or deduct for less weight over item of P/F MS grill 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
97	Providing and fixing in position collapsible steel shutters with vertical channels 20 x 10 x 2mm 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.	10.00	m2
98	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.	10.00	m2
99	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, pardijs, 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.	5,000.00	Kg
<b>Roofing</b>			
100	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 1/2" (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 1/2" ( 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.	200.00	m2
101	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.	200.00	m2
102	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 x 15 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 x 10 x 0.50mm 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	100.00	Rmt

103	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.	25.00	m2
104	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.	50.00	m2
105	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, specifacaton and direction of the Engineer in charge but excluding the cost of painting.	100.00	m2
106	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, specifacaton and direction of the Engineer in charge.	200.00	m2

107	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 etc. complete as directed.	50.00	m2
108	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 etc complete as directed.	10.00	Rmt
109	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 etc complete as directed.	10.00	Rmt
110	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 etc complete as directed.	10.00	Rmt
111	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 etc complete as directed.	10.00	Rmt
112	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 etc complete as directed.	10.00	Rmt
113	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
114	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..	50.00	m2
115	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.	100.00	Rmt

116	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.	25.00	m2
117	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 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	50.00	m2
118	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)	50.00	m2
119	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
120	Supplying and fixing in position sandwich roofing using color galvalume profile pre-coated 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, stitching 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.	25.00	m2
<b>Finishing</b>			
121	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.	1,500.00	m2
122	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 upto 3.5m height,instruments with clean plastic sheet as per manufactures specification (excluding priming coat) complete.	1,000.00	m2
123	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 upto 3.5m height,with clean plastic sheet during painting complete.	500.00	m2

124	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, step ladder, abro tape etc. all complete.	100.00	m2
125	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.	100.00	m2
126	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.	200.00	m2
127	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.	100.00	m2
128	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.	250.00	m2
129	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/ spray 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.	300.00	m2
130	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.	100.00	m2
131	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 make Air layer Thickness denoted as R or $SDCO_2 \geq 50m$ for breathability IITB approved make Air layer Thickness denoted as $SDH_2O$ shall be $\leq 4m$ 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% $\pm 3\%$ ) shall be approx. 400-450 gms/m <sup>2</sup> 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.	7,500.00	m2

	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)		
132	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..	50.00	m2
133	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	100.00	m2
134	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.	500.00	m2
135	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.	100.00	Nos
136	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 etc, complete all as directed by Engineer in charge.	3,000.00	m2
137	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.	5.00	m2
	<b>Sanitary</b>		
138	Providing & Fixing Sloan Make Chrome Finish Dual Flush, TruFlush Concealed Manual Water Closet Flushometer with Wall Plate including making necessary grooves on the wall for fixing the flush all complete as per manufacturers specifications.	3.00	No
139	Providing & Fixing Sloan make True Flush Manual Dual Flush Water Closet Flushometer for 32mm inlet size of 6/3 Lpf, Fixture Connection Rear Spud, Dual Flush, wall plate Inlet etc. including making necessary grooves on the wall for fixing the flush all complete as per manufacturers specifications.	6.00	No
140	Providing & Fixing Sloan make model SG-7019 Vitreous china rear inlet urinal of size L320 x W380 x H635, including fixing the urinal as per manufacturers specification all complete.	6.00	No

141	Providing & Fixing Sloan Make model - SGV 7910 with Polished Chrome Finish, Single Flush, Battery with Hardwired Option, Infrared, Front Accessible Wall Box, Concealed Sensor Urinal Flush Valve Wall Plate as per manufacturers specification.	6.00	No
142	Providing & Fixing Sloan make Fixture Connection Top or Rear Spud, Single flush, Battery with Hardwired option, Concealed Sensor Urinal Flush Valve assembly less wall plate. Inlet: 15 mm.	6.00	No
143	Providing & Fixing Transformer for Urinal Sensor for AC connection, 220VAC - 6VDC ADAPTOR compatible for urinal sensor of Sloan Make all complete.	6.00	No
144	Providing & Fixing Sloan Make Model - SBC- 2330, Box rim Wall hung Closet with UF Seat Cover, SS Rack Bolts, Inlet Outlet Washer. (L545 W345 H360), all complete as per manufacturers specification.	3.00	No
145	Providing & Fixing Sloan make Rectangular Under Counter Basin of size L410 x W535 x H180, including all required fittings and fixtures complete as per manufacturers specification.	3.00	No
146	Providing & Fixing Sloan Make, Model EAF 100 Mid Body Faucet including Plug Adapter Power Supply, Back Check Tee, Polished Chrome Finish, 1.9 Lpm, Aerated Spray, Infrared Sensor, Hardwired all complete as per manufacturers specifications.	3.00	No
147	Providing & Fixing Sloan make health faucet, chromium finish with flexible chrome plated 1.2m hose and mounting bracket all complete as per manufacturers specification.	3.00	No
148	Providing & Fixing Sloan make Chrome plated Brass Angle Valve with G 1/2" threads all complete as per manufacturers specifications.	6.00	No
149	Providing & Fixing Dolphy make Sliver Compact Hand Dryer with Brush Motor, SS 304 body of size 256x152x173mm all complete as per manufacturers specification.	1.00	No
150	Providing & Fixing Sloan make Model EAF-300, Deck mounted FORM SOAP Dispenser powered by Battery all complete as per manufactureres specification.	3.00	No
151	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.	5.00	Nos
152	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.	2.00	Nos
153	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.	300.00	Rmt

154	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.	100.00	Rmt
155	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)	2,000.00	Litre
156	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.	5,000.00	Per lit
157	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
158	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.	100.00	Rmt
159	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.	100.00	Rmt
160	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.	5.00	Nos
161	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.	2.00	Nos
162	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.	2.00	Nos
163	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.	1.00	Each

164	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
165	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
166	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
167	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.	25.00	Rmt
168	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
169	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
170	Providing and fixing stainless steel cockroach trap of approved pattern, quality and make with all required fittings and fixtures etc. completed as directed.	5.00	Nos
171	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.	100.00	Rmt
172	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.	2.00	Nos

173	Constructing chambers of internal clear dimensions 900mm x 600mm with 230mm thick brick masonry wall in cement mortar 1:6 over a bed 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.	2.00	Nos
174	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 by Engineer In charge.	10.00	No.
175	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.	2.00	Nos
	<b>Drainage</b>		
176	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 make etc. all complete as directed.	1.00	Each
177	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.	1.00	Each
178	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.	1.00	Each
179	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.	1.00	Each
180	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.	1.00	Each
181	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.	1.00	No.
182	Extra over item No. 181 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.	1.00	Rmt
183	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.	1.00	No.

Watersupply			
184	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.	20.00	Rmt
185	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.	10.00	Rmt
186	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.	5.00	Rmt
187	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.	5.00	Rmt
188	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.	5.00	Rmt
189	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.	5.00	Rmt
190	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.	50.00	Rmt
191	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.	25.00	Rmt
192	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
193	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.	25.00	Rmt

194	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.	25.00	Rmt
195	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.	25.00	Rmt
196	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.	5.00	Nos
197	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.	5.00	Nos
198	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.	2.00	Nos
199	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.	2.00	Nos
200	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.	2.00	Nos
201	Providing and fixing 15 mm dia nominal bore brass stop cock of approved quality with required fittings and fixtures etc. completed as directed.	2.00	Nos
202	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.	10.00	Nos
203	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.	5.00	Nos
204	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.	10.00	Nos
<b>Aluminium Work</b>			
205	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.	100.00	Rmt
206	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).	25.00	m2

207	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 x 18 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).	25.00	m2
208	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)	25.00	m2
209	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 requirement and 5mm thick clear plate glass fixed with glazing clips, rubber gasket etc. complete.	25.00	m2
210	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.	25.00	m2
211	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
212	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.	25.00	m2
213	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	25.00	m2

214	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
215	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.	50.00	m2
216	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
217	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
218	Providing and fixing reflective type sun control film of approved type of Garware make with cutting, fixing etc. complete as directed.	100.00	m2
219	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.	10.00	m2
220	Providing and fixing Aluminium LOUVRE Door sections using section 50mmx 38mm (not less than 1.393 kg/mtr) for vertical and horizontal, Door section of size 80mm x 40mm (not less than 0.65 kg/mtr & LOUVRE section of size 60mm Section (not less than 0.27 kg/mtr), flat patti of 35mm weight not less than 0.34 kg/mtr including fixing L Angle with Screw/Fastner including scaffolding etc. complete as directed by Engineer in charge. (Aluminium section anodizing )	10.00	m2
221	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)	25.00	m2
222	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).	25.00	m2

223	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.)	10.00	m2
224	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.	10.00	m2
225	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 ITB 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.)	25.00	m2
226	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 ITB 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.)	25.00	m2
227	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)	25.00	m2
228	Providing and fixing 25mm to 50mm wide vertical venetain blinds in aluminium or fabric strips of approved make and colour with all accessories etc. complete as directed	5.00	Sqm
229	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).	20.00	Sqm
230	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).	20.00	Sqm

231	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).	20.00	Sqm
232	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).	20.00	Sqm
233	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.	20.00	Sqm
234	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.	100.00	Rmt
235	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.	50.00	Sqm
236	Providing and fixing of Single glazed modular Profile Partition System VENUS-45 or IITB approved make with 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.	50.00	Sqm
237	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.	25.00	Sqm

238	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
<b>Waterproofing</b>			
239	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	50.00	m2
240	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
241	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.	20.00	m2
242	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.	250,00	m2

243	<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 &amp; 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>	100.00	m2
244	<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>	900.00	m2
245	<p>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.</p>	200.00	m2
246	<p>Providing and fixing machine moulded anodised aluminium sheet of not less than 1.0 mm thick of approved pattern &amp; 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.</p>	50.00	m2
<b>Hiring Charges</b>			
247	<p>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.</p>	16.00	Per Hr.


248	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.	10.00	Per day
<b>Special Items</b>			
249	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).	25.00	Rmt
250	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
251	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)	50.00	m3
252	Providing and fixing 12mm thick glass over table including cutting, polishing, edge rounding etc all complete.	10.00	m2
253	Providing and fixing 6mm thick carpet flooring woven or bonded on existng 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.	15.00	Sqm
254	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 (1:1 1/2:3) 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 syntetic 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 saperately under respective items.	200.00	Rmt
255	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.	50.00	Sqm
256	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.	50.00	Sqm
257	Providing & Fixing Display TV unit using 25mmx200mm Profile Box Section for size Frame ,25mmx50mm Aluminium Frame for Ply back frame ,12mm Waterproof Ply & Veneer With melamine finishing ,ventilation Grill etc completed	32.00	Sqm

258	Providing & fixing Brass stair nosing with anti-slip strip inserted on top including fixing with screws & adhesive material at bottom in straight and curved surface as per directed by In-charge. (Sample to be approved by Engineer In-charge)	150.00	Rmt
259	Providing Stone rubble masonry( Kadi Stone Work ) carefully Chipping Stone size as per shape & fixing in cement mortar 1:3 (Cement:sand/grit) including racking out joints when plastering is to be done, striking out joints, on outside exposed faces, including providing M-20 grade concrete block 1 header per sqm. to the full thickness of wall, providing weep holes etc. all complete as directed.	24.00	Sqm
260	Providing & Fixing Aluminium Ventilation Grill Size 12 x 12inch including fitting etc all complete. (Aluminium should be 15 micron anodized/ powder coated)	10.00	No
261	Providing & Fixing Trap Door For access panel size 450 x450 including cutting gypsum/calcium /Hilux board ceiling & fixing proper Line & Level including finishing etc completed.	15.00	No
262	Providing and fixing mirrors 6mm thick of approved Indian quality copper plated of any size and shape fixing mirror on wall with 45mm Slim Profil section etc. all complete as directed.	1.00	Sqm
263	Providing and fixing SS304 Floor drain Channel with cover of size 6 x 48 Inch including making required cutting in the floor, fixing the drain channel using screws and filling the joints with neat cement slurry all complete as directed.	2.00	No
264	Providing and fixing SS304 Floor drain Channel with cover of size 6 x 6 Inch including making required cutting in the floor, fixing the drain channel using screws and filling the joints with neat cement slurry all complete as directed.	3.00	No
265	Providing and fixing 12mm thick Toughen glass Partition including fixing the glass using heavy duty 6" inch patch fitting on wall etc all complete as directed.	4.00	Sqm
266	Providing and fixing Invisible grills of high-tensile stainless steel cables with a nylon or polymer coating including fixing on walls. column, beam etc as per manufacturer's specification and closing all the gaps all complete as directed by Engineer-in-Charge.	150.00	Sqm
267	Providing and fixing toilet partition of Make MERINO ATHENA LITE SERIES SS 2105MM as per following specification: Thickness of Compact Laminate : 12mm, Color of HPL Boards: Single Standard Compact Color Special Remarks For Customization : end panel with shoe box Size of Cubicle : As per Drawing (W) X (D) X 2105mm (H) - ENCLOSED UNIT Door Size : 1820mm (H) x 900-600mm (W), Divider Size : 1830mm (H) Overall Height Of Cubicle : 2105mm (Including bottom Gap of 150mm) Accessories: Standard - Merino Make Stainless Steel - 304 Grade accessories) a) SS "U" Channel, b) SS Door Stopper Channel ,c) Aluminum H Section Top Rail and MS Wall Bracket d) SS Coat Hook, e) SS Privacy Thumb turn c/w Occupancy Indicator, f) SS Door Knob, g) SS Spring Loaded Butt Hinges with Cover, h) Rubber Lining for Door Stopper, i) Screws & Wall Plugs NOTE - Anodized Parts Visual Inspection Criteria is "From 3 Meter Distance" As per EN STD. - 12373-1 SPECIAL NOTE - Warpage Criteria is 3.0 mm/1000mm for MRS panels as per EN standard- 438 all complete as per manufacturers specification.	3.00	No

268	<p>Providing and fixing urinal partition of make Merino FMRSUMPPNLZZSS00001 (HSN CODE: 48239019) URINAL MODESTY SS of following specification:          Thickness of Compact Laminate : 12mm, Color of HPL Boards: Single Standard and Plain Compact Color          Special Remarks For Customization : N/A , Size of UMP : 450mm (W) X 900mm (H)          Overall Height Of UMP : 1550mm (Including bottom Gap of 650mm)          Accessories: Standard - Merino Make Stainless Steel - 304 Grade accessories) - SS          a) SS Right Angle Brackets, b) Screws &amp; Wall Plugs          SPECIAL NOTE - Warpage Criteria is 3.0 mm/1000mm for MRS panels as per EN standard- 438 all complete as per manufacturers specification.</p>	6.00	No
269	<p>Providing &amp; erecting MS drum chute for debris removal till terrace including Fixing, &amp; removing the chute after completion of work &amp; Transportation all complete as directed.</p>	15.00	Rmt
270	<p>Providing and laying Double Layer colour veined granite slabs 18 to 20mm thick of approved quality colour and veins for Top of Parapet wall in Passages, on a bed of 1:4 cement mortar including rounding / moulding of nozzles / adjust, filling joints with Match colour of slab, etc. complete.</p>	150.00	Rmt
271	<p>Horizontal Net for safety of drive Horizontal Net for safety of drive ways &amp; cars: P/F safety Nets having openings not more than 50mm X 50mm, with adequate supports. As directed by the consultants, so as to protect the Surroundings, open-spaces around the building etc. complete as directed.</p>	240.00	Sqm
272	<p>P/F 12mm thick plywood fixing securely 12mm thick plywood for making temporary partition during execution of work at site, supported by Necessary Framework of Wood/ aluminium, and fixing the plywood sheets and removing the same after completion of work and taking out dismantled material out of IIT campus etc. completed as directed.</p>	960.00	Sqm
273	<p>Supplying, fabricating and fixing in position aluminium anodized single or double leaf openable door shutter using aluminum standard door section 80mm x 40mm (not less than 1.139kg/mtr) for verticals, top and bottom, providing and fixing aluminium perforated 15 micron anodized sheet having 16 gauge of approved pattern fixed with glazing clips, rubber gasket including using 3 nos stainless steel hinges 4" long for each shutter, 9" long handles 2 nos. for each shutter, lock, stainless steel tower bolt 8" long 1 no for each shutter, P/F 'U' channel for border etc. all complete as directed. (All aluminium sections should be 15 micron anodized/ powder coated)</p>	5.00	Sqm
274	<p>Providing/ applying Deco Paint of SD or ICI Paints or equivalent make on surface as detailed below 1) scrapping the surface with emery paper and wipe clean. 2) Applying Aster (primer) with Lambi coat &amp; scrapping with emery paper no. 150,180 ,200 and wipe clean. 3) Applying 2nd coat of Aster with Lambi. 4) Scrapping with emery paper no. 800 &amp; 1000 and wipe clean, 5) Applying 1st coat of Deco Paints of SD or ICI Paints or equivalent Spray machine and allow it to dry for 08 hours. 6) Applying 2nd coat of deco paint with spray and allow it to dry for 8 hours. 7) Apply top gloss coat/ final coat using Rubbing &amp; Polishing all complete as directed by Engineer-in-charge.</p>	12.00	Sqm
275	<p>Providing &amp; laying Vitrified Tiles INFINITY series Flooring with 1st quality homogeneous tiles of approved make &amp; size on an average bedding of 25mm thick Cement Mortar 1:4 in desired slope / with tile drop as per the Design Drawings. Rate to include for laying tiles to the pattern as per the Design. Tiles to be laid with spacers in between and joints/grooves to be filled with grout of Weber or equivalent make of approved shade &amp; color. Rate to include the cutting the tiles to size if there are any variations, cutouts for CP/Sanitary, Floor Drains etc. complete. as per the instructions of the Engineer In Charge. Basic Rate of the Tiles : Rs.88/Sqft Size : 1200mm x 600 mm MAKE Kajaria / Johnson/ Somany/ RAK/ Nitco/ Equivalent.</p>	200.00	Sqm

276	Providing & laying Vitrified Tiles INFINITY serious Flooring with 1st quality homogeneous tiles of approved make & size on an average bedding of 25mm thick Cement Mortar 1:4 in desired slope / with tile drop as per the Design Drawings. Rate to include for laying tiles to the pattern as per the Design. Tiles to be laid with spacers in between and joints/grooves to be filled with grout of Weber or equivalent make of approved shade & color. Rate to include the cutting the tiles to size if there are any variations, cutouts for CP/Sanitary, Floor Drains etc. complete. as per the instructions of the Engineer In Charge. Basic Rate of the Tiles : Rs.116/Sqft Size : 1200mm x 200 mm MAKE Kajaria / Johnson/ Somany/ RAK/ Nitco/ Equivalent.	100.00	Sqm
277	Providing and laying dry trap / rubble stone pitching to the sloping side in average 200 to 300mm thickness including capping, 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.	100.00	m2
278	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.	100.00	Kg
279	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.	200.00	Kg
280	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.	200.00	Nos

- 1) Note : This schedule of work is given for reference purpose only. Contractors are requested to quote your rates online in financial bid.
- 2) 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.
- 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 document a penalty of Rs.5,000/- per case will be recovered from the bills of the particular works, in case any such safety violations are noticed.
- 4) 01% amount will be deducted from the bills for safety related measures which will be reimburse along with the final bill.
- 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.

  
 Superintending Engineer (I/C)  
 Dil 12 7/7 8/7