INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
ESTATE OFFICE
NOTICE INVITING TENDER

Telephone No. 022 2576-4995,022-2159-6922 email id drestate@iitb.ac.in

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

Sr. No.	Name of Work	Estimated Cost (In Rs.)	EMD (Rs.)	Mode of Tender	Duration of contract
1	Term contract for repairs to residential vacant/occupied quarters at Lakeside Area. **EO/A/LAKESIDE/WKS-153/26-27**	Rs 97,15,897/- Incl.18% GST	Rs.1,95,000/-	**Item rate offline mode**	**01 YEAR Including monsoon**

Intending bidders need to register themselves on the IIT Bombay portal i.e. https://portal.iitb.ac.in/vrp/index.jsp to get User ID and Password. Please visit https://portal.iitb.ac.in/vrp/vrp_srm_docs.jsp for configuration process and user manual. For queries regarding vendor registration, and configuration process please contact on 022 - 2159 3001 (MDM Help-desk).

All tender documents, forms, etc are available online on https://www.iitb.ac.in/resources/vendors-tenders and Central Public Procurement Portal (CPPP) e-tender publishing portal of the Government of India.

Date of submission of technical and financial bids, in 2 separate envelopes is on 13.11.2026 from 09:15 a.m to 11:15 a.m. in the tender box at 1st floor, Conference room, Estate Office. **The date of opening the technical Bid will be 13.11.2026 at 11:30 a.m and the date of opening of financial bid is on 20.11.2026 (Tentative)**

Interested contractors/agencies are requested to submit Technical bid and Financial bid in the Tender Box of the Estate Office.All contractors/agencies should submit technical bid with the following documents, 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.

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) Submit a 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.

3) P. F. registration certificate.

4) P. F. challans of last 12months.

5) ESIC registration certificate and copies of ESIC challans of the last 12 months (as per the labourers engaged during a particular month).Contractor name should be mentioned in the challans else the agency will be disqualified.ORContractors' all risks insurance (CAR policy)

6) PAN card.

7) GST registration certificate.

8) Income Tax Return for **assessment year** i.e. of **2024-25 & 2025-26 & 2026-27.**

9) List of Equipment's, Machinery, Tools.

10) List of Technical Staff with copies of their Degree/diploma certificate.

11) Submit DD/FDR/BG of Rs. 1,95,000/- in the name of "The Registrar, IIT Bombay" in the Technical Bid Envelope.

12) Power of Attorney, if any.

13) 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.

14) **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.If there is no enquiry then undertaking has to be submitted in the format given.

15) Bank Solvency certificate 40% of estimated amount issued within one year from any Nationalized / Schedule Bank from the date of publishing of Tender.

16) Detail statement for work completed, work in hand including balance commitment of work should be enclosed for last three year commencing from 1st April and ended with 31st 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.

Terms & Conditions :

The documents listed above from Sr. No. 1 to 16 is mandatory for qualification in the technical bid evaluation process.

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.

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

No work will be subleted 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.

The rates is prepared from CPWD DSR 2023 & Market Rates.

Contractors are strictly prohibited from engaging in any correspondence related to tender documents with anyone other than the Tender Section. Any violation will result in disqualification from all future tenders.

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

Bids must be submitted between 09:15 a.m. and 11:15 a.m. on the tender opening date specified in the Notice Inviting Tender (NIT). Contractors are required to deposit their bids in the designated tender box located in the Conference Room on the first floor of the Estate Office.

The bid shall be submitted in a duly sealed envelope, clearly superscribed with the name of the work, work number, and type of bid enclosed (Technical Bid or Financial Bid) with company's name and signature on it. Envelopes secured with staples shall not be accepted, and bids submitted in such envelopes shall be rejected.

The Technical Bid shall include an index sheet, and all documents shall be properly numbered, arranged in the order specified in the index, and appropriately tagged with flags for easy identification and reference.

The contractor shall affix the company stamp and the authorized signatory's signature on each page of the bid documents. This requirement shall be strictly adhered to, particularly in respect of the Financial Bid.

sd/-
Dy. Superintending Engineer

TO BE UPLOADED ON SRM TENDERING PORTAL WITH FINANCIAL BID

ANNEXURE 'A' (FORMAT)
TECHNICAL BID

File No. : EO/A/LAKESIDE/WKS-153/26-27

Name of Work : Term contract for repairs to residential vacant/occupied quarters at Lakeside area.

Name of the Contractor ----------

Sr. No.	Name of Client	Name of Works	2023-24 (In Lakhs)	2024-2025 (In Lakhs)	2025-2026 (In Lakhs)	2026-2027 (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 been calculated and his tender will be summarily rejected.

24/10/26

Dy. Superintending Engineer

Deepak

20/10/26

23/10/2026

Signature of Contractor
Name & Address in full

WORKS UNDERTAKING

EO/A/LAKESIDE/WKS-153/26-27

To,
Dy. Superintending Engineer
Indian Institute of Technology,
Powai, Mumbai – 400 076.

Sub : Term contract for repairs to residential vacant/ occupied quarters at Lakeside area.

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 01 Year (Including Monsoon) 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

DECLARATION

(a) We are not involved in any litigation that may have an impact of affecting or compromising the works as required under this tender.

(b) We are not black-listed by any Central/State Government/Pubic Sector Undertaking in India.

(c) We hereby confirm and declare that M/s [Company Name] does not have any Litigation / Arbitration History with any Government department, Public Sector Undertaking (PSU), or Private Sector agency for works executed during the **last 5 years.**

(d) I/we undertake that the documents submitted are genuine/authentic and nothing material has been concealed therefrom and that I/we are not debarred by any Government organization and are competent to have the contract. I/we understand that the contract is liable to be cancelled, if found to be having obtained, through fraudulent means/concealment of information.

(Signature of Authorized Signatory)

Name of the bidder: _____

Complete Address: _____

Address (Works), if any: Contact Nos. _____

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

ESTATE OFFICE

Name of work :- Term contract for repairs to residential vacant / occupied quarters at Lakeside area.

Sr. No.	Schedule/Description of work	Qty.	Rates in figure & words	Unit	Amount
1) Repair work					
1.01	Carefully removing internal or External loose, damaged plaster in patches any height any length without damaging structure brickwork in the vicinity by using electric cutting tools including cutting a groove first to demarcate exact area of damage taken place stacking the debrises with in 50 meter, cleaning the site etc. complete with help of steel double scaffolding. Note:- a) No extra payment shall be made for extra thickness removed. b) Proper tools to be used for removal of concrete and it should be seen by contractor no damage on the other side / near by area will be taken place and if required other portions are to be checked by the contractors with respect to the damage before commencement of the work. c) The area in vertical/ horizontal plane shall be measured.(Note : For external work steel double scaffolding will be paid in respective item)	500.00		Sqm	
1.02	Removing the old cement concrete or any type of tiles from flooring manually at any floor including bedding levelling the surface, cleaning the site including sorting our serviceable tiles and lowering to ground level the debrises and stacking it upto a distance of 50 meters from building (as directed by Engineer Incharge)	500.00		Sqm	
1.03	Removing the any type of tiles manually from wall/ dado without damaging brick wall or any adjacent structure surface including removing plaster, levelling the vertical surface, cleaning the site including downloading the debrises & stacking the debrises upto 50 meters from building (as directed by Engineer Incharge)	50.00		sqm	
1.04	Chipping of unsound/weak internal or external concrete surfaces of any thickness material from slabs, beams, columns, lintels etc. with manual Chisel including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts, with the help of working platform / steel double scaffolding all complete as per direction of Engineer-In-Charge (Note : For external work steel double scaffolding will be paid in respective item)	500.00		Sqm	
1.05	Cleaning of reinforcement from the exposed reinforcement bars to give it a total rust free steel surface applying alkaline chemical rust remover of approved make with paint brush removing loose particles including with wire brush and thoroughly washing with water and allowing it to dry, with the help of working platform / steel double scaffolding all complete as per direction of Engineer-In-Charge. (Note : For external work steel double scaffolding will be paid in respective item)	10.00		per lit	
1.06	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 of as per manufacture instruction (Base hardner) by using brush in multiples of coat as required to accommodate the whole thickness of PMM wherever required including stepladder/ working platform wherever reqiired 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 (Note : For external work steel double scaffolding will be paid in respective item)	25.00		Kg	
1.07	Providing and Placing in position Readymix Polymer mortar manufactured by M/s.Krishna Conchem, Dr.Fixit, Roff or M.C. Bouchmey, Chembond by adding water in the proportion of 1:0.14(Polymer morter:water) at any floor over the prepared RCC surfaces in layers as directed (thickness of each layer shall not exceed 10 to 15mm) including mixing the polymer mortar with water using forced action mixer & with the help of steel double scaffolding / working platform wherever required mild curing will be done with water for 3 days etc complete.(payment will be paid for the actual quantity of polymer mortar used on weight basis.Challans of authorized dealer will be verified) (Note : For external work steel double scaffolding wil be paid in respective item)	40000.00		Kg	
1.08	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 with the help of steel double scaffolding and working platform wherever required on the surface of old concrete / repaired concrete Polymer (SBR) of approved manufacturer should have the following properties: · Suspended solid particles should not be less than 40% · Specific gravity should not be more than 1.01 · PH should not be less than 8.5 Note: The actual consumption of polymer shall be measured for payment on weight basis. Challans of authorized dealer will be verified. (Note : For external work steel double scaffolding will be paid in respective item)	500.00		Kg	

1.09	Providing and Placing in position Readymix Plaster manufactured by M/s. A. V. Conchem, Ultra-Tech Cement, Ready Plast, up to 20mm thick in one coat and adding water in the proportion of 1:0.17(Ready Mix Plaster : water) at any floor over the prepared Brick wall, Solid ,Hollow & AAC block work and Concrete RCC surfaces, as directed mixing the Readymix Plaster with water using forced action mixer including step ladder wherever required, mild curing will be done with water for 3-5 days etc complete. (Invoice of authorized dealer will be verified)	50.00		Sqm	
1.10	Dismantling R.C.C. work manually/ mechanically including breaking concrete by chiselling, wedging etc., cutting the reinforcement, lowering down debrises, stacking the serviceable materials and stacking the debris upto a distance of 50 metres or spreading as directed.	2.00		Cum	
1.11	Pulling down burnt brickmasonry (in cement mortar) with plaster including sorting out serviceable bricks lowering down at Ground level and stacking the same and debris separately up to a distance of 50 metres beyond building etc. complete.	2.00		Cum	
1.12	Providing sand face plaster externally to concrete stone or brick surface at any height using approved screened sand including preparing the base, watering and applying base coat of 15 to 20mm thick in cement mortar 1:4 using water proofing compound at the rate of 1 kilogram per cement bag and curing the same for not less than two days and making the surface of base coat rough to receive the sand faced treatment 8 to 10mm thick in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days etc. Complete with the help of steel double scaffolding.(Note : For external work steel double scaffolding will be paid in respective item)	50.00		Sqm	
1.13	Providing second class burnt brick masonry with conventional / I.S. Type bricks in cement mortar 1:6 in superstructure at any floor and any height including striking joints, racking out joints, watering wherever required etc. complete .(Note : For external work steel double scaffolding will be paid in respective item)	5.00		Cum	
1.14	Providing uncoursed rubble masonry of trap stones in cement morter 1:6 in foundation and plinth of inner wall including bailing out water by pumping with suitable pumps, striking joints on unexposed faces and watering complete, including providing header stones @ 1 header per sqm. to the full thickness of wall, providing weep holes, with 100mm dia A. C. pipes if required in walls etc. Complete	5.00		Cum	
1.15	Providing uncoursed rubble masonry (using IITB stones) of trap stones in cement mortar 1:6 (Cement:sand/grit) including racking out joints, striking out joints, watering and pointing with cement mortar 1:3 on outside exposed faces, including providing header stones @ 1 header per sqm. to the full thickness of wall, breaking and making/cutting stone/boulders in required size, lead and lift from any where in the campus etc. complete.	5.00		Cum	
1.16	Pulling down stone masonry in cement mortar with plaster/pointing without dust nuisance including sorting out stone chips and debris separately and stacking upto a distance of 50 metres or spreading the debris etc. Complete.	5.00		Cum	
1.17	Providing and fixing 18 mm thick gang saw cut, mirror polished granite , premoulded and prepolished, machine cut for kitchen platforms, vanity counters, doors and windows cladding , sills, shelf, facias and similar locations at any floor of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 fine sand) or in neat cement as required, 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. a) area of slab upto 0.5 m2	10.00		Sqm	
1.18	Providing and fixing 18 mm thick gang saw cut, mirror polished granite , premoulded and prepolished, machine cut for kitchen platforms, vanity counters, doors and windows cladding , sills, shelf, facias and similar locations at any floor of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 fine sand) or in neat cement as required, 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. b) area of slab over 0.5 m2	10.00		Sqm	
1.19	Providing and laying nonskid ceramic tiles at any floor of Johnson &Johnson /Nitco/ Kajaria/ Orient Bell/ Somani for flooring approved by IITB required size **upto 300mm x 300mm** quality, brand and shade as available in market on cement mortar 1:4 bedding using white cement pigments finished to levels slope or plumb as required including cutting of tiles. Curing, acid washing etc. all complete.	50.00		sqm	
1.20	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	50.00		Sqm	

1.21	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement 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 complete.	50.00		Sqm	
1.22	Providing and fixing Ist quality ceramic glazed wall tiles not less than 300 mm x 200 mm conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, including 12 mm thick bed of cement 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 complete.	50.00		sqm	
1.23	Providing and laying in position ready-mixed or machine batched and 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 IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	1.00		Cum	
1.24	Providing and laying in position ready-mixed or machine batched and machine mixed design mix M-25 (1:1:2) grade cement concrete (with minimum cement content 330Kg/Cum) for all work up to plinth level for reinforced cement concrete work, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	1.00		Cum	
1.25	Providing and laying in situ plain cement concrete **M-20** of trap metal for foundation and bedding including bailing out water manually, wherever reqired , formwork, compacting and curing.as directed.	5.00		Cum	
1.26	Disposing debris, loose stones, boulders, concrete pieces broken and dry leaves etc. collected and stacked as directed including loading in trucks, transporting out of IIT Campus including obtaining all approval of BMC competants authorities for disposing off on to their approved location. The debris are to be removed from site within 48 hours from stacking (30% voids will be deducted from actul stack measurement/ truck measurement for debrises, loose stones, boulders etc.).	20.00		Cum	
1.27	Removing excavated earth or debris including loading in trucks and conveying to approved dumping point in IITB campus unloading spreading etc. complete. The debris are to be removed from site within 24 hours from stacking (30% voids will be deducted from actul stack measurement/ truck measurement for debrises, loose stones, boulders etc.).	10.00		Cum	
1.28	Dismantling plain cement concrete work at any height & any floor including breaking concrete by chiselling, wedging etc., lowering down debrises, stacking the serviceable materials and stacking the debris upto a distance of 50 metres from building or spreading as directed.	5.00		Cum	
1.29	Providing second class burnt brick masonry at any height & any fllor with Conventional / I.S. Type bricks in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm diameter/2 hoop iron strips 25 mm X 1.6 mm at every third course properly bent and bonded at ends, scaffolding , racking out joints and watering etc. Complete.	5.00		Sqm	
1.30	Providing and fixing Kadappa stone slab for kitchen platform/clading/tank platform of 25 to 30 mm thick in cement mortar 1:4 including providing and fixing border patti on front edge, filling joints, curing, cleaning etc. Complete.	5.00		sqm	
1.31	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	400.00		Sq.m	
1.32	P/L vitrified tiles for flooring of size not less than 600x600mm (thickness to be specified by the manufacturer) of approved shade and pattern ,with required finish (mirror / Mat) and decorative type of approved make as available in market **Fixing with cement based high polymer modified quick set tile adhesive** like fevimate(water based) conforming to IS: 15477, using 5kg adhesive per sqm of tile area, in average 5mm thickness. 'white cement pigments finished to levels slope or plumb as required including cutting of tiles. Curing, acid washing etc. all complete as directed. (Floor tiles basic cost up to Rs. 70 per sft.)	100.00		Sq.m	

1.33	Providing and laying vitrified tiles for skirting / dado of approved shade and pattern with required finish and quality laid on a plaster surface with neat cement, filling joints, curing and clearing etc. complete as directed	50.00		Sq.m	
1.34	Excavation for foundation in earth, soil of all types, sand, gravel and soft mueum including removing the excavated materials upto a distance of 50 meters beyond the building area and lift upto 1.50 meters, stacking and spreading as directed including dewatering unless provided elsewhere, preparing the bed for the foundation and necessary back filling, ramming, watering complete excluding shoring and strutting.	2.00		Cum	
1.35	Excavation for foundation in earth, soil of all types, sand, gravel and soft mueum including removing the excavated materials upto a distance of 50 meters beyond the building area and lift upto 3 meters, stacking and spreading as directed including manual dewatering unless provided elsewhere, preparing the bed for the foundation and necessary back filling, ramming, watering complete including shoring and strutting.	2.00		cum	
1.36	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.	2.00		cum	
1.37	Providing dry trap/ rubble stone soling 150mm to 200 cm thick including hand packing and compacting etc complete.	2.00		cum	
1.38	Laying dry trap/ rubble stone soling of 230mm size thickness including hand packing and compacting using IITB stone including breaking and making/cutting stone/boulders in required size, lead and lift from any where in the campus etc. Complete.	5.00		Cum	
1.39	Mirror polishing on marble work/stone work wher ever required to give high gloss finish complete.	5.00		Sq.m	
1.40	Hand polishing to dado, skirting including cleaning, washing etc. complete as directed.	5.00		Sq.m	
1.41	Drilling straight and inclined holes upto 300mm depth and upto 20mm dia in concrete / masonry using electrically operated drilling machine and fixing nipple for grouting, conducting water test all complete etc. as directed	20.00		Nos	
1.42	Grouting existing RCC / brickwork structure as per following operations including sealing leak paths with lead wool, removing nipple, plugging the hole with neat cement paste by ram packing, cleaning etc. complete. 1) Add Sunplex powder 1.00 kg in one bag of cement of 50 kg with adequate water. 2) Using mechanical means of pressure grouting with the above mix. The pressure shall be 5-10 psi. 3) The grouting to be done into the cracks of ceiling , walls , columns, & beam if necessary. 4) After through grouting sealing the holes with cement slurry. (Note : For external work steel double scaffolding will be paid in respective item)	10.00		Kg	
1.43	Providing and sealing hairline / minor cracks in external plaster by Paste formed out of polymer (S.B.R.) and cement in the proportion of (1:1 by volume) & adding extra cement for workable hand filling mix, leveling with neat cement float, cleaning and wetting the surface, curing etc. including cutting, demarcating grooves at any height with electrically operated cutter machine for cracks on external wall, separation cracks etc. with the help of steel double scaffolding. (Note : For external work steel double scaffolding will be paid in respective item)	50.00		Rmt	
1.44	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 double scaffolding etc. Complete.	5.00		Rmt	
1.45	Providing and filling separation crack of 75mm width and 25mm deep with polymer modified cementatious mortar. a) Demarcating groove, removing plaster / concrete carefully, washing with potable water. b) Filling polymer modified cementatious mortar in layers of 20mm thick (applying bond coat at every layer) upto profile of concrete in vicinity (composition of mortar: cement 1Kg.: polymer (SBR) of approved manufacturer 15% by wt. of cement : 3Kg silica sand (grading IS 383, zone II, silt content = 0%) over a polymer + cement bond coat including applying making tape on both side of groove, cleaning, finishing to match the plaster in vicinity, disposing of debrises anywhere in IITB campus, cleaning as directed etc. complete. c) Proportion d) Bond coat e) SBR polymer + cement in the ratio 1:1 by volume f) Polymer modified cementitious mortar g) SBR polymer 150ml. h) Cement 1 Kg. i) Silica sand 3.0 kg. (Note: - Demarcating groove, breaking Plaster / concrete shall be paid under respective items). (Note : For external work steel double scaffolding will be paid in respective item)	10.00		Rmt	

1.46	Grouting in any RCC structure with low viscocity Monomor manufactured by M/s. CICO, SIKKA, MC Bouchmey, Sunanda Chemicals, Roffee etc. or any other approved brand epoxy based product of similar properties, as per manufacture's specification by providing suitable arrangement for grouting at pressure 2 to 3 kg / sqm. for all lift and leads. The grouting is to be done after cement grouting is completed etc. as directed.	5.00		Kg	
1.47	Providing and erecting steel tubular H Frame scaffolding with bracing to all height all around the building as directed by engineer in charge before commencement of work for multipurpose use including working platform wherever required, stiffened with wall supporting to be done with anchor & fastener for all types of work and removing the same after completion of all external work like chipping of plaster, structural repair if any, sand face plaster, curing, external painting, waterproof coating, SEP to grills, windows and cleaning the glasses etc. requiring double scaffolding.(payments will be made for elevational plain area once irrespective of duration or till completion of all external activities as directed no supporting will be done with window and window guard bars.)	100.00		Sqm	
1.48	Providing and laying white/colour veined marble slabs 18mm thick in one piece stone for claddings,platform,treads and risers of steps and stair cases with rounded nosing and grooves for the treads laid on bed/ plaster of cement mortar 1:4 including cement float, filling joints with neat cement slurry, curing , polishing and cleaning comlete.	1.00		Sq.m	
1.49	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 etc. all complete as directed by Engineer In-charge.	20.00		Nos	
1.50	Dismantling existing kitchen platform top and support carefully and lowering down the debrise at ground level and stacking up to 50 meaters beyond the building area for tacking out the same all complete as directed. (size approximately 3.5mt X 0.75 mt)	3.00		Job	
1.51	Providing & levelling the undulation/ sagging of floor with cement mortar 1:4 upto 30 thk to make proper base for floor tileing including levelling, curing, and cleaning etc. complete at any floor	10.00		Sqm	
1.52	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. The compressive strength of super fluid micro concrete should not be less than 20N/mm2. (reinforcement treatment coat shall be paid under respective items). (Consumption of weight of super fluid micro concrete powder shall be measured for payment ; Tax Inovice of authorized dealer will be verified) including stepladder etc. Complete. (Note : For external work steel double scaffolding will be paid in respective item)	500.00		kg	
1.53	Providing and laying super fluid micro concrete of approved manufacturer (Dr. Fixit, Ultratech, Chembond etc.,) at any floor after reinforcement treatment coat including mixing with 10mm to 5mm size quartz aggregate in ratio of 1 part to 0.75 part of quartz aggregate by weight providing marine plywood formwork in line and level,sealing the joints/ gaps with POP & cleaning ,curing etc .complete. The compressive strength of super fluid micro concrete should not be less than 20N/mm2. (reinforcement treatment coat shall be paid under respective items). (Consumption of weight of super fluid micro concrete powder shall be measured for payment ; Tax Inovice of authorized dealer will be verified) etc. Complete. (Note : For external work steel double scaffolding will be paid in respective item)	250.00		kg	
1.54	Providing internal cement plaster 12mm thick in a single coat in Cement mortar 1:4 without neeru finish to concrete or brick surface in all positions at any floor and at any height including stepladder/platform and curing complete.	10.00		Sq.m	
1.55	Providing internal cement plaster 20mm thick in Single coat in cement mortar 1:4 without neeru finish to concrete or brick surface in all positions at any floor and at any height including stepladder/platform curing complete.	50.00		Sqm	
1.56	Providing and fixing in position tor steel bar having grade Fe-500 or more for reinforcement of various diameters for R.C.C. footings, foundations, slabs, beams, columns, canopies, staircases, chajjas, lintels, pardies, coping, fins, dowel bars with sleeve, tie bar, any other required work etc. as per detailed designs, drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required completed as directed.	50.00		Kg	
1.57	Providing and fixing hand rail of using 'C' class G.I pipe approved size by welding etc. ladder, fencing pole, gate, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	25.00		kg	

1.58	Providing and fixing hand rail of using M.S. tubes approved size by welding etc. ladder, fencing pole, gate, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	25.00		kg	
1.59	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-incharge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	25.00		kg	
1.60	Providing erecting and dismantling (after completion of all related work) double bamboo scaffold with verticals @ 1.2 to 1.8m inner as well outer faces and horizontal and braces. The scaffolding should have strutted diagonally to prevent from buckling under the weight of men and materials, at comfort levels for the men to work which is 6" to 9"' away from the wall (Mode of measurement for scaffolding will be elevational area) Note : Prior approval is requred for execution of this item before commencement of work from authority.	5.00		Sqm	
1.61	Providing erecting and dismantling (after completion of work) single bamboo scaffold with verticals @ 1.2 to 1.8m from outer face of bldg as directed by Engineer In Charge(for payment the scaffold height will be measured elevational area. Note : Prior approval is requred for execution of this item before commencement of work from authority.	5.00		Sqm	
1.62	Pointing on stone work with cement morter 1:3 with raised & cut pointing as directed including working platform / stepledder all complete.	2.00		Sqm	
1.63	Providing & Applying external waterproof plaster using factory made ready mix polymer cement mortar plaster. 1) Providing and rendering the prepared surfaces with new sand faced cement plaster of minimum 20mm thick in two coats by using factory made ready mix polymer modified cement plaster waterproofing plaster of approved make (M/s Wall plast, M/s. Fare Matt) or equivalent. 2) The base coat of minimum 12mm thick using above ready mixed polymer modified mortar plaster to proper plumb level & line including making the plaster surface rough (all as per the manufacturer's specification) to receive the top finish coat 3)Applying top/finish coat plaster of minimum 8mm thickness with similar ready mix polymer cement mortar plaster finishing in perfect plumb. Line & level so as to obtain fine sand grain finish by using branded approved variety sponge or using machnised devise including adding additional required quantity of cement for managing richer mix preferable ordinary portland cement 43 grade variety of approved brand at no extra cost. Doing regular curing for minimum 7 days.	5.00		Sqm	
1.64	Providing and erecting arrester/safety net in double layer meshhaving first layer 4mm PP rope in 100mmx100mm and second layer with blue fish net with 18mm mesh supported by border rope and tie cord 12mm PP at terrace floor level (6th floor level) to prevent the debris from falling on ground during progress of work and keeping the same during the entire period.Removing after completed of work as directed by engineer incharge	10.00		Sq.m	
1.65	Providing and fixing Jute kantan (Tarat) screen to the scaffolding of external wall at any floor any height removing the same after the work is over etc. complete	20.00		Sqm	
1.66	Providing and applying acrylic synthetic plaster of IITB approved make manufacturer over existing cement plaster including removing existing paint/synthetic plaster to receive the acrylic synthetic plaster as per manufacturer specification at any floor including all the necessary tools & plants etc, complete all as directed by Engineer in charge.	5.00		SQM	
1.67	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 IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge including compacting, roughening the surface if special finish is to be provided, casting cubes and testing etc. completed as directed.	1.00		cum	

1.68	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after. The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge. The elevational area of the scaffolding shall be measured for payment purpose. The payment will be made once irrespective of duration of scaffolding. Note: - This item to be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.	10.00		sqm	
				Total Amount of Rs. (1)	

2) Extenal/Internal Painting work					
2.01	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	1000.00		Sq.m	
2.02	Providing and applying white cement based Birla make wall care putty with uniform thickness upto 1.5mm over the existing internal cement plaster in proper line / level including preparing the wall surface for the application of wall care putty etc. including scaffolding all complete as directed.	500.00		Sqm	
2.03	Providing and applying one coat of seal cement primer over the prepared surface of walls / ceiling, including stepladder / scaffolding and cleaning the surface as directed.	1000.00		Sq.m	
2.04	Distempering with 1st quality acrylic distemper (ready mixed) of one or more coats having VOC (Volatile Organic Compound) content less than 50 gram/ litre, of approved brand and manufacturer including applying additional coats wherever required to achieve even shade and colour	1000.00		Sqm	
2.05	Wall painting of two coats with acrylic emulsion paint , having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.	100.00		Sq.m	
2.06	Wall painting of one coats with acrylic emulsion paint , having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.	100.00		Sq.m	
2.07	Providing and applying two coats of synthetic enamel paint of IITB approved brand (Asian, Berger, ICI, Dulux, Jenson & Nicholson, Goodlass Nerolac) & desired shade to new structural steel work / grill work/ wood work with the help of steel double scaffolding if necessary. (Note : For external work steel double scaffolding will be paid in respective item)	100.00		Sqm	
2.08	Providing and applying zink priming coat over steel and other metal surfaces including preparing of the surface by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brushing, fine fire steel wool,and sand paper, scaffolding/stepladder etc. Complete.	100.00		Sqm	
2.09	Applying priming coats with primer of approved brand and manufacture, having low VOC Volatile Organic Compound) content, With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre	100.00		Sqm	
2.10	Providing and applying two coat of synthetic enamel paint of IITB approved brand (Asian, Berger, ICI, Jenson & Nicholson, Goodlass Nerolac) and shade to ceiling fans with the use of step ladder including scrapping cleaning etc. Complete.	100.00		Nos	
2.11	Providing and applying one coat of acrylic primer and two coats of pure Acrylic exterior paint of IITB approved manufacturer as per manufacturer's specification on old/new plastered surface/ stone work surface at any height & any floor , including cleaning the surface thoroughly with coir brush, watering the surface etc.,levelling the undulation if any with external wall care putty, covering with plasic sheets all complete as directed Engineer incharge.	100.00		Sqm	

2.12	Providing and applying exterior coating for walls of multistoried building including mechanical cleaning of the external surface and treating surface in sound, clean and free from dirt, oil and other loose material and may be done with vacuum cleaning if required. All surface cracks upto 5 mm width will be filled up with Dr. Fixit Crack X paste or similar material. The external surface will be primed with Dr. Fixit Primeseal (or equivalent BASF/ FOSROC/ STP) diluted with potable water in the ratio of 2:1 by volume prior to application of Dr. Fixit Raincoat waterproof coat. Allow it to dry for at least 2 to 3 hours and then apply Dr. Fixit Raincoat waterproof coat or equivalent (BASF/ FOSROC/ STP) having DFT of 100-120 micron DFT.Apply second coat of Dr. Fixit raincoat Select Top Coat with interval of 6-8 hours to achive DFT of 60-70 microns. Apply with roller or spray allow it to air cure for 7 days. Do not dilute Dr. Fixit Raincoat waterproof Select top coat by any means. Work includes cleaning the surface thoroughly, watering the surface etc. complete including covering the floor, window glass with plastic sheet, removing & refixing existing grill while work in progress and as directed by this office. and work shall be guaranteed for 3 years by the contractor on requisite stamp paper. The maerial having following technical properties : Elongation of >100% as per ASTMD 412; Tensile strength 2.50Mpa per ASTM D 412, passes water resistance as per SS500 standard, complies to anti carbonation test as per EN 1062 part 6. (Double steel scaffolding will be paid in respective item)	100.00		sqm	
2.13	Painting lettering of approved type on the name boards on any surface in English 12cm to 15cm (inclusive) height in synthetic enamel paint of approved quality and shade including surface painting as directed complete.	100.00		Per letter	
				Total Amount of Rs. (2)	

3) Waterproofing work					
3.01	Removing the existing loose damaged brick bat coba waterproofing treatment by manually / mechanical means from the top of the terrace /w.c/bath at any floor or sunk surface upto any thickness without making any damages to the roof slab with the use od sharp chisels,levelling and cleaning the roof surface for providing new specialised waterproofing treatment without causing dust nuisance stacking the debris upto 50m distance from building as directed.	5.00		Cum	
3.02	Lowering down the debris of the existing waterproofing treatment from the terrace by head load without causing dust nuisance and damages to structure, stacking the same upto 50m beyond the building area as and where directed including cleaning the site complete.	5.00		cum	
3.03	Providing waterproof plaster in w. c. bath, 20mm thick for dado at any floor in cement mortar 1:3 with neat finishing, floating using waterproofing compound at the rate of 1 kg per bag of cement of approved make and manufacturer and curing etc. complete.	50.00		Sqm	
3.04	Providing waterproofing in W.C. and bath including brickbat coba in all position at any floor including all lead ,lifts wherever required including providing and laying 12mm bedding in cement mortar 1:3 on concrete slab & sides of sunken portion with waterproofing compound @ 1kg/per bag of cement laying brick bat coba of required thickness in cm 1:5 with waterproofing compound 1 kg/bag of cement grouting and finishing the top layer with 20mm thick bedding in cm mortar 1:3 with waterproofing compound 1 kg/per bag of cemenr and testing the treated portion for 48 hours by pond test and covering ten years guarantee on requisite stamp paper etc. Complete.	20.00		Cum	
3.05	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 ten years' guarantee, on requisite stamp paper etc. complete.	50.00		Sq.m	
3.06	Providing waterproof bedding 25 mm thick for flooring of bath and W.C. at any floor, In cement mortar 1:3 using 1 kg of waterproofing compound of approved make and manufacturer per bag of cement including leveling curing etc. complete.	50.00		Sqm	
3.07	Providing and laying water proofing cement concrete flooring to terrace to average 50mm thick with 1:1.5:3 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, including all lead and lift wherever required etc. complete.	50.00		Sq.m	

3.08	Providing and applying three coats of Dr. Fixit Roof seal coating including preparing surface by pressure washing the surface to remove all algae, mould, dirt, dust, chalking and waste products. All visible hairline cracks more than 0.50mm and not giving hollow sound on the IPS/screed or at the junctions of flat roof & vertical parapet wall, pipe joints, should be cut and widen V shape with mechanical cutter in the size (6mm W x 6mm D) and fill with Dr. Fixit PU Sealant covering the entire area uniformly with suitable gun. Allow sealant to cure a minimum 24 hours. Apply minimum 50mm - 100 mm width 45 GSM Glass Fibre Mesh / non-woven geo textile fleece with the coat of Dr. Fixit Roofseal Select along the length of crack. Apply one coat of Dr. Fixit Primeseal primer dilute with water in the ratio 2:1. Allow it to dry for 2 to 3 hours. Apply 1st coat of Dr. Fixit Roofseal Select at the rate of 2.0 sqmt / litre / coat. An open 45 Gsm glass fibre mesh of 2.5 mm x 2.5 mm must be sandwiched between the first and second coat. While the 1st coat is still wet, place the fibre mesh on it. Allow the first coat to dry for 6-8 hours. Apply second coat of Dr. Fixit Roofseal Select with the same application coverage. Application direction of second coat should be perpendicular to that of the first coat. Allow second coat to dry for 6-8 hours. Apply third coat of Dr. Fixit Roofseal Select at an application direction that is perpendicular to that of the second coat with same application coverage rate. Check to see no void surface is left untreated / uncoated. Allow the system to air cure for 7 days minimum. A total thickness of 1 mm must be achieved when Dr. Fixit Roofseal Select is dry. Work Shall be got executed through certified applicator of the product manufacturing company only and work shall be guaranteed for 03 years by the contractor on requisite stamp paper including submitting written guarantee from said certified applicator.Contractor to submit re-counsillation statement along with challans for work done.	50.00		sqm	
3.09	Providing & levelling the exposed area on slab surface with ready mix polymer mortar upto 25mm thk layer including 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, mixing the polymer mortar with water using forced action mixer, mild curing will be done with water for 3 days etc complete to make proper base for applying waterprooging coating including levelling, curing, and cleaning etc. complete on the sloping roof of bungalow.	50.00		Sqm	
3.10	Removing the existing waterproofing sheet bitumen/ dongri cloth/ tarfelt layer coating etc, of any thickness from slopping roof of building without damages to structure,brick bat layer, using manual operated cutting tools, grinder, leveling and cleaning the surface for providing new waterproofing treatment, including lowering down removed material from roof by head load etc. all complete, (throwing down the APP/Tarfelt sheet from terrace will not be allowed)	50.00		Sqm	
3.11	Removing the loose/damaged cement concrete top layer/IPS layer/China chips layer of thickness upto 50mm, manually /by mechanical means without damages/ distubring to slab/ beam,column/ Brick bat coba/ any RCC members/ Structural including disposing of material within 50 meter lead as per the direction of Engineer-in-charge (throwing down the material from terrace will not be allowed). Note: This item will be considered for payment only for top layer removal i.e. IPS/China Chips above Brick Bat Coba	50.00		sqm	
3.12	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscocity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm.Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147.The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane including finishing surface with heat reflective bitumen based silver paint @0.10 ltr/sqm and covering the hole treatment with five years guarantee,on requisite stamp paper etc. complete	100.00		sqm	
3.13	Providing and applying one coat of solvent based bitumen primer as per IS 3384 on roof of the building @0.25 liters/sqm. Inculding cleaning and removing defective exting loose layer of membrane thoroughly with wire brush / coir brush rectification of all damages etc.completed as directed.	50.00		Sqm	
3.14	Providing and dammering to roof with one coat of bitumen 90/15 or 85/25 as per IS 73/ IS 702 @1.5 kg./sqm uniformly and providing dongri cloth including finishing surface with heat reflective bitumen based silver paint @0.10 ltr/sqm etc. Complete as directed and covering the bitumen treatment with the guarantee of 1 monsoon period,on requisite stamp paper etc.disel operated bitumen heating machine should be used for this activity (Wooden fuel is not allowed) complete as directed.	50.00		Sqm	
				Total Amount of Rs. (3)	

4) Plumbing and sanitory work					
4.01	Taking out C.I. / PVC nahani trap with connecting pieces from floor carefully and taking away the same out of IIT campus etc. Complete.	20.00		Nos	
4.02	Providing and fixing 100 mm PVC nahani trap with S.S grating, etc. complete.	10.00		Nos	

4.03	Providing and fixing 100 mm CI nahani trap with S.S grating, etc. complete.	10.00		Nos	
4.04	Providing and fixing ISI 1729/2002 grade 75mm dia. cast iron waste water pipes (Neco or equ.) with lugs 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 praportion and two coats of anti corrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens including removing the existing pipe if necessary and conveying and stacking taking away the same out of IIT campus , necessary complete or as directed. (Recovery of the removed damaged pipe will be done @ Rs. 20 per Rmt)	10.00		Rmt	
4.05	Providing and fixing ISI 1729/2002 grade 100 mm dia. cast iron soil pipes (Neco or equ.) 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 anti corrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens including removing the existing pipe if necessary and conveying and stacking taking away the same out of IIT campus complete or as directed. (Recovery of the damaged pipe will be done @ Rs. 25 per Rmt)	10.00		Rmt	
4.06	Providing & fixing 75mm dia. PVC temporary drain pipe line with fittings, necessary Coupling, bends, tees by supporting on scaffolding and maintaining the same from time to time till the new permanent drain pipes are laid and connected including removing the same after completion of work.	10.00		Rmt	
4.07	Providing & fixing 110 mm dia. PVC temporary drain pipe line with fittings, necessary Coupling, bends, tees by supporting on scaffolding and maintaining the same from time to time till the new permanent drain pipes are laid and connected.including removing the same after completion of work.	10.00		Rmt	
4.08	Providing and laying 15 mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.09	Providing and laying 20mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.10	Providing and laying 25mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.11	Providing and laying 32mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.12	Providing and laying 40mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.13	Providing and laying 50mm diameter I.S.I. make TATA / Jindal/ Zenith heavy type C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, backnuts, elbows, tees, reducers, enlargers, plugs, clamps/ GI clamp etc. including necessary drilling in holes in walls / slabs etc, connecting the lines with old / new pipe lines / fittings / fixtures etc as required and remaking good the demolished portion to restore the same in original condition neatly and applying Zinc primer and two coats of oil painting etc. or as directed Complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	

4.14	Providing and laying 25mm diameter I.S.I make heavy type C Class galvanized iron pipes of TATA / Jindal / Zenith make having weight as per IS specification in trenchs etc. with elbows, tees, reducers, enlargers, plugs, etc. including connecting the lines with old / new pipe lines / fittings / fixtures etc as required and filling trench with excavated soil and applying metal primer and two coats of oil painting including removing the existing pipe if necessary and as directed etc. complete.	10.00		Rmt	
4.15	Providing and laying 40mm diameter I.S.I make heavy type C Class galvanized iron pipes of TATA / Jindal / Zenith make having weight as per IS specification in trenchs etc. with elbows, tees, reducers, enlargers, plugs, etc. including connecting the lines with old / new pipe lines / fittings / fixtures etc as required and filling trench with excavated soil and applying metal primer and two coats of oil painting including removing the existing pipe if necessary and as directed etc. Complete.	10.00		Rmt	
4.16	Providing and laying 50mm diameter I.S.I make heavy type C Class galvanized iron pipes of TATA / Jindal / Zenith make having weight as per IS specification in trenchs etc. with elbows, tees, reducers, enlargers, plugs, etc. including connecting the lines with old / new pipe lines / fittings / fixtures etc as required and filling trench with excavated soil and applying metal primer and two coats of oil painting including removing the existing pipe if necessary and as directed etc. Complete.	10.00		Rmt	
4.17	Providing and fixing ISI approved heavy type 15 mm dia brass stop tap(seiko, techno make) including socket, union nut etc. Complete. Including removing the existing damaged tap. (5% cost will be deducted for taking away the removed material outside IIT campus)	20.00		each	
4.18	Providing and fixing ISI approved heavy type 20 mm dia brass stop tap(seiko, techno make) including socket, union nut etc. Complete. Including removing the existing damaged tap. (5% cost will be deducted for taking away the removed material outside IIT campus)	20.00		each	
4.19	Providing and fixing screw down 20mm gun metal Gate Valve of techno or uttam make bearing I.S.I. Mark including socket, union nut etc. including removing the old damaged gate valve & depositing Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		each	
4.20	Providing and fixing screw down 25mm gun metal Gate Valve of techno or uttam make bearing I.S.I. Mark including socket, union nut etc. including removing the old damaged gate valve & depositing Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		each	
4.21	Providing and fixing screw down 32mm gun metal Gate Valve of techno or uttam make bearing I.S.I. Mark including socket, union nut etc. including removing the old damaged gate valve & depositing Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		each	
4.22	Providing and fixing screw down 40mm gun metal Gate Valve of techno or uttam make bearing I.S.I. Mark including socket, union nut etc. including removing the old damaged gate valve & depositing Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		each	
4.23	Providing and fixing screw down 50mm gun metal Gate Valve of techno or uttam make bearing I.S.I. Mark including socket, union nut etc. including removing the old damaged gate valve & depositing Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		each	
4.24	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. ¼" Flexible pipe – 3 feet long	5.00		No	
4.25	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. ½" PVC connection 2 feet long	5.00		No	
4.26	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. ½" PVC connection 1½ feet long	5.00		nos	
4.27	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. ½" PVC connection 3 feet long	5.00		Nos	
4.28	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. S.S. Grating 4" dia	5.00		No	

4.29	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. S.S. Grating 5"dia	5.00		nos	
4.30	Providing and fixing new sanitary fittings with new fixtures , removing old broken fittings wherever existing. 1 1/4" Nirali Sink coupling set	5.00		Nos	
4.31	Providing and fixing 40 mm dia 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 removing old damaged pipe, jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Exposed on wall, (scaffolding will be paid in separate item if required) (5% cost will be deducted for taking away the removed material outside IIT campus)	10.00		Rmt	
4.32	Providing and fixing 25 mm dia 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 removing old damaged pipe, jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Exposed on wall, (scaffolding will be paid in separate item if required) (5% cost will be deducted for taking away the removed material outside IIT campus)	10.00		Rmt	
4.33	Providing and fixing 20 mm dia 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 removing old damaged pipe, jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Exposed on wall, (scaffolding will be paid in separate item if required) (5% cost will be deducted for taking away the removed material outside IIT campus)	1.00		Rmt	
4.34	Providing & fixing 40mm dia. PVC pipe for outlet of wash basin , sink etc. (heavy duty) with all fittings & fixtures making connection to old & new pipe line etc. complete as directed by Engineer.	10.00		Rmt	
4.35	Providing and fixing white glazed earthenware wash hand basin of approved brand (Hindware/Cera/ parryware) of 55cm x 40cm size including one cold water pillar tap of jaquar , brackets, rubber plugs and brass chain, stop tap of jaquar and necessary pipe connection including polyethylene waste water pipe and trap	5.00		No	
4.36	Providing and fixing white glazed earthenware wash hand basin of approved brand (Hindware/Cera/ parryware) of 45 x 30 cm size including one cold water pillar tap of jaquar , brackets, rubber plugs and brass chain, stop tap of jaquar and necessary pipe connection including polyethylene waste water pipe and trap	5.00		No	
4.37	Providing and fixing 100 mm dia chromium plated brass shower rose for Cera make brand to 15 mm dia. Supply pipe including necessary G.I. Bend and socket complete.	5.00		Nos	
4.38	Providing and fixing 150 mm dia chromium plated brass shower rose for Cera make brand to 15 mm dia. Supply pipe including necessary G.I. Bend and socket complete.	5.00		Nos	
4.39	Providing and fixing white solid plastic seat (Hindware/Cera/ parryware) with lid for european type W.C. pan complete with require fittings and fixtures etc. and including removing existing damaged plastic seat complete as directed.	5.00		each	
4.40	Providing and fixing Low / high level 10 liters capacity PVC flushing cistern of parryware / hindware / cera make with all fittings as inlet G.I. pipe with stop tap, brass chromium plated waste coupling and providing and fixing 32mm or required heavy duty PVC outlet bend pipe from flushing cistern upto the pan, 12mm dia PVC connection to the tank etc. all complete. as directed. (5% cost will be deducted from Item of work for material taken outside campus)	5.00		each	
4.41	providing and fixing Stainless Steel sink of size **485 x 410 x 215mm**(Approximate internal size of sink) of approved make and design(Nirali Make) including all connections of G.I. Supply and PVC waste outlet pipe and coupling , making good damaged surface etc. complete.	2.00		Nos	
4.42	providing and fixing Stainless Steel sink of size **615mm x 460mm x 255mm**(Approximate internal size of sink) of approved make and design(Nirali Make) including all connections of G.I. Supply and PVC waste outlet pipe and coupling , making good damaged surface etc. complete.	2.00		Nos	
4.43	Removing the old damaged / worn out plastic water storage tank of any size and capacity from the roof of the building carefully with out damaging any structural members of the building by using chainpulley arrangement and depositing in Estate stores etc. Complete. (5% cost will be deducted for old damaged tank from item of work)	6000.00		Ltr	
4.44	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-20 (1:1.5:3) 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		each	

4.45	Providing and laying temporary loop connection to main water supply inlet and outlet of water tank using 'C' class GI pipes of any dia. With all fittings like elbows, tees, reducers, plugs, clamps etc. including other connections and commissioning the water supply line and remaking to original connections after repair etc. complete. For H2 type building (G+1)	1.00		per job	
4.46	Providing and laying temporary loop connection to main water supply inlet and outlet of water tank using 'C' class GI pipes of any dia. With all fittings like elbows, tees, reducers, plugs, clamps etc. including other connections and commissioning the water supply line and remaking to original connections after repair etc. complete. For H1 type / Type 1 building upto (G+4)	1.00		per job	
4.47	Providing and laying temporary loop connection to main water supply inlet and outlet of water tank using 'C' class GI pipes of any dia. With all fittings like elbows, tees, reducers, plugs, clamps etc. including other connections and commissioning the water supply line and remaking to original connections after repair etc. complete. For type 2B building	1.00		per job	
4.48	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 brakets 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.	10.00		Rmt	
4.49	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 brakets 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.	10.00		Rmt	
4.50	Providing and fixing heavy duty P.V.C. waste water pipes of approved brand for 75mm outer dia. conforming to I.S. with P.V.C. plug bend, necessary fittings such as offsets, including fixing the pipe on wall using approved GI brakets projecting upto 50mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement. All the PVC fittings and additional two piece socket clips shall be got approved from engineer in charge complete. (scaffolding will be paid in separate item if required)	10.00		Rmt	
4.51	Arresting leakages from PVC / Plastic storage tank by making necessary welding to cracked portion with all tools and plants etc. completed as directed.	1.00		per job	
4.52	Providing and fixing 110mm(ID) dia.ISI approved HDPE pipes manufactured by ARHAM Engineering/ BERLIA /NOCIL / PIL with wall thickness of 6 mm to 8mm for taking sewage waste water with all required fittings such as bend, elbows etc. with proper line and gradient connecting all joints with fusion butt weilding by using suitable welding machine or hot plate, testing the line & joint as per manufacturer specification etc. all complete as directed by Engineer In-charge.	20.00		Per Rmt	
4.53	Providing and fixing 160mm(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.	10.00		Per Rmt	
4.54	Arresting leakage through HDPE pipe by welding/jointing the damaged member with required tools and tackles all complete as directed by Engineer-in-charge.	1.00		Job	
4.55	Providing and fixing health faucet jet spray set with SS tube upto 1.5m length of approved Jaquar make including necessary socket/ union etc. complete as directed.	5.00		No	
4.56	Providing hoisting and fixing in position MCGM approved 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.	10000.00		Ltr	
4.57	Remvoing & taking out the wash basin with connecting pieces from floor/wall carefully without disturbing base floor/wall and taking away the same out of IIT campus etc. Complete.	5.00		Nos	

4.58	Remvoing & taking out the European WC with connecting pieces from floor/wall carefully without disturbing base floor/wall and taking away the same out of IIT campus etc. Complete.	5.00		No	
4.59	Remvoing & taking out the Flush tank with connecting pieces from floor/wall carefully without disturbing base floor/wall and taking away the same out of IIT campus etc. Complete. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		No	
4.60	Removing the existing toilet fittings while the other cement related activities are in progress and refixing the same after the work gets completed. 1)Wash basin	5.00		Nos	
4.61	Removing the existing mirror & glsss shelf with screws while the other cement related activities are in progress and refixing the same with new coach screw after the work gets completed.	5.00		Nos	
4.62	Providing and fixing Orrisa type white glazed earthenware 580mm x 440 mm water closet pan of approved make and brand (Cera, Hindware or equivalent) including trap, cast iron soil and vent pipes upto the outside face of the wall including 100mm. diameter cast iron plug bend, cement concrete bedding, 10 litres capacity H.D.P.E. approved flushing cistern with fittings, inlet pipe with brass stop tap(Cico), brackets, 32mm. diameter galvanised iron heavy type flush pipe with fittings and clamps, painting to the exposed pipes and cutting and making good the walls and floors etc. complete. (excluding waterproof brick bat coba)	5.00		each	
4.63	Providing and fixing European type white glazed earthenware 580mm water closet pan of approved make and brand (Cera, Hindware or equivalent) with PVC seat and lid with chromium plated brass hinges and rubber buffers including cast iron soil and vent pipes upto the outside face of wall and 100mm. diameter cast iron plug bend, 10 litres approved low level white PVC flushing cistern with all fittings, pipes and stop tap, brackets for fixing the low level flushing cistern, 32mm dia galvanised iron / PVC heavy type flush pipe with fittings and clamps, 20mm dia. PVC galvanised iron overflow pipe with mosquito proof coupling, and exposed pipes and cutting and making good walls and floors etc. complete as directed.	5.00		each	
4.64	Providing & fixing Techno / Sicko bib tap (Min weight 400gm) with new fittings & new screws, removing old broken fittings & taps wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		nos	
4.65	Providing and fixing brass Eye glass of approved quality, peep hole type,make,size and shape etc to door shutter complete including removing existing damaged. Contractor will be allowed to take away old peep glass eye glass if available	5.00		No	
4.66	Carefully removing the existing G.I. pipe 12mm to 50mm diameter from floor / walls / slab etc. with out damaging the structures and Deposting to Estate store including scaffolding if required. (scaffolding will be paid in separate item if required) (5% cost will be deducted from Item of work for material taken outside campus)	50.00		Rmt	
4.67	Connection of pipe line which is newly laid outside to old GI pipe line in wall with required length of barrel piece, union, elbow etc. required fittings and fixtures including making hole carefully in wall without disturbing exisiting pipe line inside quarter, p/f new GI piece of existing dia remaking good the demolished portion from inside/outside to restore the same in original condition neatly, painting to pipe etc. complete. (scaffolding will be paid in respective item if required) a) 15mm dia	1.00		per job	
4.68	Connection of pipe line which is newly laid outside to old GI pipe line in wall with required length of barrel piece, union, elbow etc. required fittings and fixtures including making hole carefully in wall without disturbing exisiting pipe line inside quarter, p/f new GI piece of existing dia remaking good the demolished portion from inside/outside to restore the same in original condition neatly, painting to pipe etc. complete. (scaffolding will be paid in respective item if required) b) 20mm dia	1.00		per job	
4.69	Connection of pipe line which is newly laid outside to old GI pipe line in wall with required length of barrel piece, union, elbow etc. required fittings and fixtures including making hole carefully in wall without disturbing exisiting pipe line inside quarter, p/f new GI piece of existing dia remaking good the demolished portion from inside/outside to restore the same in original condition neatly, painting to pipe etc. complete. (scaffolding will be paid in respective item if required) C) 25mm dia	1.00		per job	
4.70	Connection of pipe line which is newly laid outside to old GI pipe line in wall with required length of CPVC brass FT, brass MT, CPVC union, CPVC elbow etc. required fittings and fixtures including making hole carefully in wall without disturbing exisiting pipe line inside quarter, p/f new GI piece/CPVC pipe of existing dia remaking good the demolished portion from inside/outside to restore the same in original condition neatly etc. complete. (scaffolding will be paid in respective item if required) 20mm or 25mm dia	1.00		per job	Rate A

4.71	P/F ISI approved heavy type ½" dia CP Washing Machine Tap of long bib body Techno/Sieko made including socket, union nut etc. Removing existing damaged tap complete as directed (5% cost will be deducted for taking away the removed material outside IIT campus)	2.00		Per Nos.	
4.72	Providing and constructing Brick Masonry Inspection Chamber 90 cm x 45 cm upto 90 cm in depth including cement concrete in M-20 100mm thick foundation with 100mm offset outside of wall , 23 cm thick channels, 230mm width brick masonry, 20mm thick floting plastering from inside surface in 1:3 and 20mm thick single coat plaster outside in 1:4 as required and airtight RCC cover medium duty manufactured by K.K.Manholes, Neco or equivalent as approved by Engineer with frame work fixed in cement concrete 1:1.5:3 etc all complete as directed by Engineer In-charge.	1.00		Nos	
4.73	Providing and constructing Brick Masonry Inspection Chamber 90 cm x 45 cm and 90 cm to 150 cm in depth including cement concrete in M-20 100mm thick foundation with 100mm offset outside of wall , making necessary channel in cement concrete 1:1.5:3 finished with a floating coat of neat cement, all complete as per standard design,, 230mm width brick masonry 1:6, 20mm thick floating plastering from inside surface in 1:3 and 20mm thick single coat plaster outside in 1:4 as required and airtight RCC cover with frame work fixed in cement concrete 1:1.5:3 etc all complete as directed by Engineer In-charge.	1.00		Nos	
4.74	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, Neco or equivalent 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		Nos	
4.75	Extra & above for manhole depth beyond 1500mm in cylindrical shape of 900mm diameter with 340mm thick brick masonry wall in cement mortar 1:6 providing and fixing C.I. steps, plastering, finishing, dewatering etc. Complete.	1.00		Rmt	
4.76	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 competed as directed by Engineer In-charge.	1.00		Nos	
4.77	Providing and fixing 560mm dia. Heavy duty ductile iron manhole covers with frame for inspection chamber / manhole and other required places manufactured by M/s.NECO or equivalent etc. all complete as directed.	1.00		Nos	
4.78	Providing and fixing 600mm x 450mm rectangular heavy duty ductile iron manhole covers with frame for inspection chamber / manhole / gulley trap and other required places of NECO or equivalent make etc. all complete as directed.	1.00		Nos	
4.79	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 equivalent make etc. all complete as directed.	1.00		Nos	
4.80	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 equivalent make etc. all complete as directed.	1.00		Nos	
4.81	Providing and fixing 900mm x 450mm rectangular Heavy duty FRP grating covers with frame for inspection chamber / manhole / gulley trap/ over storm water drain and other required places manufactured by M/s.KK or equivalent including closing the gaps between frame and surface with cement mortar all complete as directed.	1.00		Nos	
4.82	Providing and fixing 600mm diameter circular Heavy duty composite FRP manhole covers with frame for inspection chamber/ manhole and other required places manufactured by M/s.KK or equivalent etc. all complete as directed.	1.00		Nos	
4.83	Providing and fixing precast RCC slab for drain cover and chember cover of required size with M-25 grade concrete and reinforced with 10mm dia main steel bars (along shorter span) and 8mm. dia distribution bars (along longer span) at 100mm center to center including making steel form work, making temporary concrete platform for casting, compaction using surface vibrator, with two lifting hooks of 6mm dia / holes of 40mm dia PVC pipe 8 to 10 nos per cover finishing the surface with smooth cement finish curing, placing the precast slab in proper position etc. complete as directed.	1.00		m3	
4.84	Raising manhole cover and frame of any size slab to required level including dismantling existing slab and making good the damage as required (a) Rectangular manhole/ chamber of any size	1.00		each	

4.85	Raising manhole cover and frame of any size slab to required level including dismantling existing slab and making good the damage as required (b) Circular manhole of any size	1.00		each	
4.86	Providing and fixing 300 x 300 mm precast gully trap cover with frame for required places manufactured by approved brand etc. all complete as directed.	2.00		Nos	
4.87	Providing & fixing 15 mm of approved brand brass patti valve with new fittings, removing old broken valve wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.88	Providing & fixing 20 mm of approved brand brass patti valve with new fittings, removing old broken valve wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.89	Providing & fixing 25 mm of approved brand brass patti valve with new fittings, removing old broken valve wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.90	Providing & fixing 40 mm of approved brand brass patti valve with new fittings, removing old broken valve wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.91	Providing & fixing 15 mm of Satyam /Kohinoor brand brass ballcock & rod with new fittings, removing old broken ballcock wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.92	Providing & fixing 20 mm of Satyam /Kohinoor brand brass ballcock & rod with new fittings, removing old broken ballcock wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.93	Providing & fixing 25 mm of Satyam /Kohinoor brand brass ballcock & rod with new fittings, removing old broken ballcock wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
4.94	Providing & fixing 40 mm of Satyam /Kohinoor brand brass ballcock & rod with new fittings, removing old broken ballcock wherever existing. (5% cost will be deducted for taking away the removed material outside IIT campus)	5.00		Nos	
				Total Amount of Rs. (4)	

5) Wooden joinery / Aluminium / Roofing work					
5.01	Removing door and windows of any size and any height type with frame, mild steel / wrought iron grill work and stacking the same and depositing to Estate stores if required. (scaffolding will be paid in separate item if required) (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 agains actual weigth if material taken outside campus)	100.00		each	
5.02	Removing flush door and glazed windows shutters carefully without damaging wooden frame of any size and stacking the same and depositing to Estate stores if required. (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 agains actual weigth if material taken outside campus)	50.00		each	
5.03	Modification of existing door shutter by removing the door shutter and cutting the door shutter from bottom side up to 1/2" to 11/2" thick and refixing the same shutter after rectification with new beading patti, painting work with new brass hinges, screws etc. Complete.	10.00		each	
5.04	Providing and fixing M.S. grills of required pattern in frames of windows etc. fixed to openings /wooden frames with rawl plugs screws etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.	100.00		kg	
5.05	Providing and fabricating structural steel works in rolled sections like joints, channels, angles, tees etc. as per details designs & approved pattern including fixing in position with connecting plates, braces and welding, riveting, bolting as necessary including zinc primer coat & two coats of synthetic enamel paint etc. (scaffolding will be paid in separate item if required)	100.00		Kg	
5.06	Providing fabricating and fixing Steel work in built up tubular (round, square or rectangular hollow tubes,trusses etc.) in hot finished welded type tubes , including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. Complete.	100.00		kg	

5.07	Providing and fixing 35mm FRP door manufactured by M/s. Advance Company including brass hinges, both side brass handles, brass aldrop, tower bolt, brass tadi patti etc. complete at any location in residential building as directed.	5.00		Sqm	
5.08	Providing and fixing 3" Anchor Fastener wherever necessary etc. Complete.	10.00		nos	
5.09	Supplying fabricating and fixing in position fully glazed aluminium openable window using aluminium section 42 x 30 x 1.5mm (0.526/rmt) size aluminium single border outer frame of window shutter, 42 x 37 x 1.5mm size(0.724kg/rmt), aluminium Z section for window shutter, 28 x 14.5 x 1.5mm(0.286kg/rmt) size, aluminium clip for window shutter 45 x 45 x 1.5mm(0.762kg/rmt)(size, Z aluminium center patti for mullion & intermediate section, 37mm x 37mm (0.820kg/rmt) aluminium angles 2mm thick, 5mm thick plain or frosted glasses with rubber gasket, 3 Nos. S.S. Hinges 75mm size (heavy) on each window shutter, aluminium tower bolt 100mm size 1 Nos on each leaf, aluminium stay 200mm to 250mm long 1 No per leaf, aluminium handle 1 Nos per leaf, provision for fixing AC with teak wood members inside box, (if required).etc. Complete. (all aluminium section should be 15 micron anodized or as directed and of Jindal make.	5.00		Sq.m	
5.10	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 for outer frame and intermediate vertical members as directed including 5mm thick plain or frosted glass (Make Modi Guard/Saint-Gobain) 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 (Aluminium section anodized to 15 microns , Jindal make or as directed.	5.00		Sqm	
5.11	Providing and fixing in position fixed glazing using 63mm x 38mm x 1.65mm (0.942 kg/rmt) 15 micron / powder coated anodized aluminium partition section for frame with screws and providing 5mm thick clear plain glass (Make Modi Guard/Saint-Gobain) fixed to the above frame using glazing clip with rubber gaskets, filling all gaps with appropriate fillers etc. all complete. (Jindal Make)	5.00		sqm	
5.12	Providing and fixing in position two track aluminium sliding windows using track section of size 61mm x45mm x1.3mm(1.055kg/rmt) thick for bottom, section of size 61mmx31mmx1.3mm(0.659kg/rmt)for side &top .The shutter should be of bearing bottom of size 40mm x18mmx1.25mm (0.417kg/rmt)thick, top member of size 40mm x 18mm x 1.20mm(0.475kg/rmt) thick , Interlocking section of size 43mm x 27mm x 1.30mm (0.558kg/rmt)thick , handles section of size 43mm x 18mm x 1.30mm(0.424kg/rmt) thick including providing and fixing **SS304 grade flyproof mesh** in the shutter using aluminium U clip, approved quality minimum two nos. PVC rollers for each shutter,necessary locks,handles,PVC liningand other required fitting s etc. complete as directed by engineer incharge. (all aluminium section should be 15 micron anodized/ section of Jindal make or as directed.)	5.00		Sq.m	
5.13	Providing and fixing in position two track aluminium sliding windows using **rectangular box section** of size 63mmx38mmx2.00mm (1.054kg/mtr) for outer frame, bottom section of size 61 mm x 45 mm x 1.3 mm (1.055kg/mtr) thick for bottom, sections of size 61 mm x 31mm x 1.3 mm (0.659kg/mtr) thick for sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , top member of size 40 mm x 18 mm x 1.20 mm (0.475kg/mtr) thick, Interlocking section size of 43 mm x 27 mm x 1.30 mm (0.558kg/mtr) thick and handle section of size 43mm x 18 mm x 1.30 mm (0.424kg/mtr) thick including providing and fixing **S.S. 304 Jali flyproof mesh** in the shutter using u channel approved quality minimum two nos.PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings,shutter width should not be more than 0.6m etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized Jindal make or as directed).	5.00		Sq.m	

5.14	Providing and fixing in position two track aluminium sliding windows using **drain bottom section or equivalent** of size 61 mm x 45 mm x 1.3 mm(1.055kg/rmt) thick for bottom, sections of size 61 mm x 31mm x 1.3 mm (0.659kg/rmt)thick for sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25mm(0.417kg/rmt) thick , top member of size 40 mm x 18 mm x 1.20 mm (0.475kg/rmt)thick, Interlocking section size of 43 mm x 27 mm x 1.30 mm(0.558kg/rmt) thick and handle section of size 43mm x 18 mm x 1.30 mm(0.424kg/rmt) thick including providing and fixing **5mm thk. glass (plain or frosted) (Make Modi Guard/Saint-Gobain)**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 Jindal make or as directed).	5.00		Sq.m	
5.15	Providing & fixing in position extruded modular aluminium section two track sliding window mounted on **rectangular frame of size 63mm x 38mm x 2.00mm thick** (1.054 kg/Rmt) made up of two track drain bottom section of size 61mm x 45mm x 1.3mm thick (1.055 kg/Rmt) and top and sides sections of size 61mm x 31mm x 1.3mm thick (0.659 kg/Rmt) The shutter should be of bearing bottom of size 40mm x 18mm x 1.25 mm (0.417 kg/Rmt) top member of size 40mm x 18mm x 1.20mm thick (0.475 kg/Rmt) Interlocking section size of 43mm x 27mm x 1.30mm thick (0.558 kg/Rmt) and handle sectionof size 43mm x 18mm x 1.30 mm thick (0.424kg/Rmt),selected quality **5mm thick clear glass (plain or frosted) (Make Modi Guard/Saint-Gobain)** to be fixed in shutter with neoprene gasket with approved quality PVC rollers, necessary locks, handles PVC lining and wooden encasement wherever necessary etc. Complete. (All aluminium sections and fitting should be 15 micron anodized and Jindal make or as directed).	5.00		sqm	
5.16	Providing and fixing in position three track aluminium sliding windows using track sections of size 92 mm x 31mm x 1.3 mm (0.933kg/mtr) thick for bottom, sides and top. The shutter comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and fixing **S.S 304 grade flyproof mesh** in the shutter using aluminium U clip, 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 and of Jindal make)	5.00		Sq.m	
5.17	Providing and fixing in position three track aluminium sliding windows using **rectangular box section** of size 100mmx40mmx1.30mm (0.976kg/mtr) for outer frame, drain bottom section of size 92 mm x 45 mm x 1.05 mm (1.659kg/mtr) thick for bottom, sections of size 92 mm x 31mm x 1.3 mm (0.933kg/mtr) thick for sides and top. The shutter comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and fixing **S.S. 304 Jali flyproof mesh** in the shutter using u channel approved quality minimum two nos PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, shutter width should not be more than 0.6m etc. complete as directed by Engineer in charge.(Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)	5.00		Sq.m	
5.18	Providing & fixing in position extruded modular alluminium section three track sliding window made up of three track drain bottom section of size 92mm x 45mm x 1.05mm thick (1.659 kg/Rmt) three track and top and side sections of size 92mm x31mm x 1.30mm thick (0.933 kg/Rmt) The shutter comprising of bottom and top member of size 40mm x 18mm x 1.25mm thick (0.417 kg/Rmt) interlocking section of size 40mm x18mm x 1.10mm thick (0.469 kg/Rmt)handles section of size of 40mm x 18mm x1.25mm thick (0.417 kg/Rmt) with **5mm thick glass (plain or frosted) (Make Modi Guard/Saint-Gobain)** fixed in shutter with approved quality neoprene, gasket, P.V.C lining etc. Complete. (excluding frame.(Note: All aluminium sections and fitting are 15 micron anodized and Jindal make)	5.00		Sq.m	

5.19	Providing & fixing in position extruded modular aluminium section three track sliding window made up of **rectangular box section** of size 100mmx40mmx1.30mm (0.976kg/mtr) for outer frame, three track drain bottom section of size 92mm x 45mm x 1.05mm thick (1.659 kg/Rmt) three track and top and side sections of size 92mm x31mm x 1.30mm thick (0.933 kg/Rmt) The shutter comprising of bottom and top member of size 40mm x 18mm x 1.25mm thick (0.417 kg/Rmt) interlocking section of size 40mm x18mm x 1.10mm thick (0.469 kg/Rmt)handles section of size of 40mm x 18mm x1.25mm thick (0.417 kg/Rmt) with **5mm thick glass (plain or frosted)** (Make Modi Guard/Saint-Gobain) fixed in shutter with approved quality neoprene, gasket, P.V.C lining etc. Complete. (excluding frame.(Note: All aluminium sections and fitting are 15 micron anodized and Jindal make)	5.00		Sq.m	
5.20	Providing & fixing in position extruded modular aluminium section three track sliding window mounted on **rectangular frame** of size 100mm x 40mm x 1.30mm thick (wt 0.933 kg/Rmt) made up of three track drain bottom section of size 92mm x 45mm x 105mm thick (1.659 kg/Rmt) three track top and side of size 92mm x31mm x 1.3mm thick (0.933 kg/Rmt) The shutter comprising of bottom and top member of size 40mm x 18mm x 1.10mm thick (0.469 kg/Rmt)handle sides of size 40mm x18mm x 1.25mm thick (0.417 kg/Rmt)with 2 shutter of 5.0mm thick glass (plain or frosted) fixed in shutter with approved quality neoprene gasket, PVC rollers, locks, handles, PVC lining and one shutter with **S.S. 304 Jali flyproof mesh** in the shutter using u channel approved quality minimum two nos PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, shutter width should not be more than 0.6m etc. complete as directed wherever necessary etc. Complete. (Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)	5.00		Sq.m	
5.21	Providing & fixing in position extruded modular aluminium section three track sliding window made up of three track drain bottom section or equivalent of size 92mm x 45mm x 105mm thick (1.659 kg/Rmt) three track top and side of size 92mm x31mm x 1.3mm thick (0.933 kg/Rmt) The shutter comprising of bottom and top member of size 40mm x 18mm x 1.10mm thick (0.469 kg/Rmt)handle sides of size 40mm x18mm x 1.25mm thick (0.417 kg/Rmt)with 2 shutter of 5.0mm thick glass (plain or frosted) (Make Modi Guard/Saint-Gobain) fixed in shutter with approved quality neoprene gasket, PVC rollers, locks, handles, PVC lining and one shutter with **S.S. 304 Jali flyproof mesh** in the shutter using u channel approved quality minimum two nos PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, shutter width should not be more than 0.6m etc. complete as directed wherever necessary etc. Complete. (Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)	5.00		Sq.m	
5.22	Providing and fixing in position aluminium 15 micron anodized openable window with stainless steel flyproof mesh of 304 grade having aluminium powder coated " L" pipe section 38mm x 25mm (0.45kg/rmt) for frame and shutter frame of 38mm x 18mm (0.45kg/m) aluminium section and fixing the stainless steel mesh with U channel with screws including necessary fitting and fixtures such as two numbers stainless hinges, stainless steel handle one number and magnet one number or tower bolt etc. complete as directed. (All aluminium section of Jindal make)	5.00		Sq.m	
5.23	Providing and fixing openable shutter made up of aluminium anodized 15 micron handle section 38mm x 18mm(0.45kg/rmt) or near available sections on top, bottom and sides, P/F 4mm thick hardner sheet of Bckelite of desire shead and pattern, P/F stainless steel hinges 75mmx35mm(2 nos.) for each shutter,1nos. of S.S tower bolt on each shutter,1no handle(S.S) for each shutter, magnet etc. including fixing the shutter over the L pipe section of 38mmx25mmx1.5mm (45kg/rmt) with screws in line and level,rectification of all damages etc. complete as directed. (All aluminium section of Jindal make)	5.00		Sq.m	
5.24	Providing and fixing with 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 (if required) etc. completed as directed.	50.00		kg	
5.25	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality (Godrej make or equivelent) with necessary screws etc. Complete	5.00		each	

5.26	Providing and fixing 18mm thick commercial plywoods for drower, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	3.00		Sq.m	
5.27	Providing and fixing 18mm thick marine plywood for drower, panelling, shutters, partition and any other work with necessary fittings and fixtures etc. complete as per the directions of Engineer-in-charge .	3.00		Sq.m	
5.28	Providing & fixing 1mm thick designer laminate of approved brand and pattern wherever required including, making necessary groves wherever required as per standard practice with all required fittings and fixtures etc. complete as directed.	3.00		sq.m	
5.29	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete a) Triple strip vertical type	10.00		each	
5.30	Providing and fixing magnetic catcher of approved quality in cupboard / ward robe shutters, including fixing with necessary screws etc. complete b) Double strip (horizontal type)	10.00		each	
5.31	Providing and fixing mirrors 6mm thick of approved Indian quality copper plated with 10mm thick waterproof plywood backing, fixing mirror on wall with cup washer and screws etc. all complete as directed.	5.00		sq.m	
5.32	Providing and fixing 600 x 450mm x 6mm thk mirrors of approved Indian quality copper plated with 10mm (3/8") thick plywood backing, in the masonry etc. Make Modi Guard/Saint-Gobain etc. complete. contractor will be allowed to take away old mirror if available and for which 5% deduction will be made of schedule rate of this item.	10.00		each	
5.33	Providing and fixing 6mm thk Glass shelf 125mm (5") wide and 610mm (24") long with necessary chromium plated brackets providing teak wood gutties etc. Make Modi Guard/Saint-Gobain etc. complete. contractor will be allowed to take away old glass shelf if available and for which 5% deduction will be made of schedule rate of this item.	10.00		each	
5.34	Providing and fixing chromium plated SS towel rod 20 mm dia and 75 cm. in length including all accessories complete.	10.00		No	
5.35	Providing and fixing cement bonded wood particle board (bison panel) of 20mm thick to chajja at any floor, providing suitable hole for fixing nuts and bolts including making suitable groove in walls providing plaster and vatta with proper slope complete as directed. (scaffolding will be paid in separate item if required)	10.00		Sqm	
5.36	Providing and fixing 12mm thick cement bonded wood particle board (bison panel) for chajja, ceiling, staircase at any floor, providing suitable hole for fixing nuts and bolts including making suitable groove on walls, making vata at joint, P/F sheet in proper slope including double scaffolding wherever required complete as directed.	5.00		Sqm	
5.37	Providing Second class teak wood in wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately).	1.00		Cum	
5.38	Shifting all the material inside the flats to nearby location (vacant flat) in IITB campus & relocating the same to the original flats as per original arrangement , removing all fitting like Auqa gard, geyser and carpentry work and refixing the same in alternate as well as reallotted accomendation after reallotment etc., Complete as directed	5.00		per job	
5.39	Shifting all the material inside the flats to any where at the required location (vacant flat) in IITB campus & relocating the same to the original flats as per original arrangement , removing all fitting like Auqa gard, geyser and carpentry work and refixing the same in alternate as well as reallotted accomendation after reallotment including vehicle (tempo/truck) all Complete as directed	5.00		per job	

5.40	Providing and fixing solid core flush door in single or double leaf 35mm thick of commertial type of exterior grade, approved commertial plywood facing both side without glazing and venetians, all necessary beads, moulding and lipping, 300mm long 2 nos. decoretive type S.S handles for each shutters, 8" long stainless steel tower bolt 1 no for each shutter etc. complete (without frame). (fittings will be approved by Engineer in charge before fixing)	10.00		Sq.m	
5.41	Providing and fixing solid core flush door in single or double leaf 35 mm thick of commercial type of exterior grade, approved commercial plywood facing both side without glazing and venetians, all necessary beads, moulding and lipping, 300mm long 2 nos. decorative type S.S handles for each shutters, 8" long stainless steel tower bolt 1 no for each shutter, 6 lever Godrej mortise lock with triplicate keys and other required fittings etc. complete (without frame). (fittings will be approved by Engineer in charge before fixing)	10.00		Sq.m	
5.42	Providing and fixing country teakwood 2nd class fully glazed single / double leaf windows / ventilators rectangular in shape adopting section of 70mm x 32mm for styles and rails as per drawing including providing and fixing 5 mm thick plain / bajiri glass (Make Modi Guard/Saint-Gobain) with teakwood beading, fixing the window / ventilator shutters with 75mm size butt hinges (Brass oxidized) 2 Nos. for each shutter, aluminium towerbolt 100mm size one for each shutter, aluminium handle 125mm one for each shutter, hooks & eyes 200mm one for each shutter, applying two coats of synthetic enamel paint of approved brand and shade over a coat of wood primer including removing the existing shutter etc. Complete.	10.00		sqm	
5.43	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 stianless steel aldrop, other require fittings and fixtures etc. complete.	10.00		sqm	
5.44	Providing and fixing 16mm dia. mild steel round bars at 100mm c/c to windows / ventilators / fanlights, fixing mild steel Flats 40 x 6mm in frame, cutting a recess to fit the flat exactly including drilling the holes to flats to pass the bars through it 25mm inside in wooden frame including providing one central mild steel flat of 40 x 6mm by drilling holes (when bar length exceeds 75cm) etc. Complete.	50.00		kg	
5.45	Providing & replacing in position Godrej night latch without damaging door & frame with automatic locking arrangement, triplicate keys etc. complete as directed.	5.00		No	
5.46	Providing and Replacing 5 mm thick plain/bajri glass (Modi Guard/Saint-Gobain make)of doors and windows etc. including teakwood beading etc. Complete.	5.00		sqm	
5.47	Providing and fixing fly proof stainless steel mesh of approved quality SS 304 grade to windows, doors and any other location using teak wood or aluminium anodised section of require size with necessary fittings and fixtures etc. complete as directed.	5.00		Sq.m	
5.48	Making the wooden doors, windows etc. and all the fittings and fixtures in easily operational condition in all type of quarteres by providing necessary screws, oiling the fixtures, removing rust etc. from fittings plaining the frames etc. all complete as directed.	10.00		Jobs	
5.49	Easying the aluminium sliding windows by means of making freely operationable condition including cleaning the tracks, providing and fixing PVC rollers/ bearing (Heavy quality), concealed locks – 02 Nos etc. all required fittings for window of two track or three track etc. all complete as directed.	50.00		Per window	
5.50	Easying the aluminium sliding windows by means of making freely operationable condition including cleaning the tracks, providing and fixing PVC rollers/ bearing (Heavy quality), concealed locks – 04 Nos etc. all required fittings for window of four tracks and more etc. all complete as directed.	10.00		per window	
5.51	Removing the existing kitchen trolly & refixing existing sliding channels with oiling and greasing, welding existing broken SS round bars. Providing new screws after that refixing to orignal place including cleaning site etc. Complete	5.00		Per job.	

5.52	Providing and fixing colour coated Galvalume profile precoated sheet for roofing and cladding having thickness 0.50mm TCT of Jindal 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. (scaffolding will be paid in separate item if required)	10.00		Sq.m	
5.53	Providing and fixing colour coated Galvalume profile precoated sheet for roofing and cladding having thickness 0.80 mm TCT of Jindal 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. (scaffolding will be paid in separate item if required)	10.00		Sq.m	
5.54	P/F 25mm dia aluminum powder coted heavy duty (58.33gram/ft) approved draftery curtain rod with decorative side holders including required fittings and screws (**length upto 1.5m**) all complete	10.00		Rmt	
5.55	P/F 25mm dia aluminum powder coted heavy duty (58.33gram/ft)approved draftery curtain rod with decorative side holders and middle brackets including required fittings and screws(**length beyond 1.5m**) all complete	10.00		Rmt	
5.56	P/F Stainless steel SS grade 304, curtain rod 25 mm dia 1.20 mm thick upto 1.5 meter with Stainless steel SS grade 304, brackets (curtain rod) 25 mm dia 1.20 mm thick including required fittings and screws, all complete.	10.00		Rmt	
5.57	P/F Stainless steel SS grade 304, curtain rod 25 mm dia 1.20 mm thick more than 1.5 meter with Stainless steel SS grade 304, brackets (curtain rod) 25 mm dia 1.20 mm thick including required fittings and screws, all complete.	10.00		Rmt	
5.58	Providing ,Fabricating and fixing at all floors, locations and heights stainless steel storage / Service Units / kitchen trolleys below existing granite Kitchen Platform upto depth 24 " to 26" as required made with 304 S.S. (Food grade) Comprising of 19mm square pipes outer frame , sink unit with bottle and bin holders , bottle pull out , utensils and storage unit kit etc. as desired by Engineer incharge and as per approved design consisting of 6mm dia S.S. round bars and 5mm dia distribution S.S. round bars or 1 mm thick perforated S.S. sheet where ever required & fabricated as directed including cost of providing teakwood Frame work , Sliding channel, 18mm waterproof plywood with sunmica facia , handles , screws , nails, cost of materials , transporting , labour, wastage and testing etc complete as directed(weight of the trolly should not be less than 55kg/sqm of elevational area)	5.00		Rmt	
5.59	Supplying fabricating & fixing in position fully galzed aluminium single/double leaf **double glass window** using 15 micron anodized RZ section 46mm x 33mm x 2mm (0.38 kg//Rft)for window shutter , 46mm x 33mm x 2mm aluminium RZ single border outer frame , 21mm x 15mm x 2mm (0.38 kg//Rft) aluminum RZ clip , 60mm x 34mm x 2mm (0.4 kg/rft)aluminum RZ centre , aluminum angle , 5mm thick plain double glass with jambo rubber gasket, adjustable hinges 2 nos on each shutter, z handle 2nos, window stay 2 nos, P/F aluminium outer hollow box section of sixe 50mm x 25mmx 1.5mm (0.18 kg/rft) and fixing the shutter on aluminium outer frame etc. complete as directed(All aluminium section Jindhal make)	10.00		Sq.m	
5.60	Providing,making and fixing in position 19mm thick marine plywood cabinets (kitply/century make) above/below kitchen platform with using 2" x 1 1/2" finished size teak wood frame properly polished and finished and approved sunmica(Marine/greenlamp) of 1mm on both side, Each shutter shall be provided with 4" stainless steel hinges and 6" stainless steel handles of approved quality. The work shall be executed in all respects as directed by the Engineer-in-Charge, ensuring a neat, durable, and high-quality finish.	10.00		Sq.m	
5.61	Providing and fixing extra shutter of comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.469kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and **fixing S.S 304 grade flyproof mesh** in the shutter using aluminium U clip, 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 & Jindhal make).	10.00		Sq.m	

5.62	Providing and fixing extra shutter of comprising of bottom and top member of size 40 mm x18 mm x 1.25 mm (0.417kg/mtr) thick , interlocking section of size 40 mm x 18 mm x 1.10 mm (0.40kg/mtr) thick and handle section of size 40mm x 18 mm x 1.25 mm (0.417kg/mtr) thick including providing and **fixing 5 mm thick glass (Plain or frosted)** in the shutter using neoprene 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 & Jindhal make)	10.00		Sq.m	
5.63	Providing & fixing butt hinges heavy aluminium 100mm in brass with new screws, removing old broken hinges wherever existing.	10.00		Nos	
5.64	Providing & fixing butt hinges heavy aluminium 75mm in brass with new screws, removing old broken hinges wherever existing.	10.00		Nos	
5.65	Providing & fixing 150mm tower bolt in aluminium with new screws, removing old broken tower bolt wherever existing.	20.00		Nos	
5.66	Providing & fixing 100mm tower bolt in aluminium with new screws, removing old broken tower bolt wherever existing.	20.00		Nos	
5.67	Providing & fixing buffer stopper with new screws, removing old broken buffer stopper wherever existing.	10.00		Nos	
5.68	Providing and fixing 300mm long stainless steel heavy duty aldrop with require fittings and fixtures etc. Complete.	10.00		Nos	
5.69	Providing & fixing Sliding channel of kitchen trolley upto 20 inch long with new screws, removing old broken rusted kitchen trolley channel.	10.00		Per pair	
5.70	Providing & fixing PVC gasket/ rubber lining with with necessary fitting & fixtures new screws, removing old broken rubber gasket wherever existing.	50.00		Rmt	
5.71	Providing and fixing Galvanised Welded mesh 12mm x 12mm and (18 gauge) to teakwood frame work including fixing weld mesh with 37mm x 12mm teakwood bedding patti and necessary pocketing for opening for shutters with necessary screws , fitting as directed	15.00		Sq.m	
5.72	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 3.11Kg/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 including scaffolding etc. Panels should be covered under 10 years warranty against any manufacturing defects Note: Payment for flashing will be made in separate item.	5.00		Sqm	
5.73	Providing and fixing G. I. chain link fencing 50mm x 50mm x 8 guage thick and of desired height for fencing including welding the chain link fencing with G.I. pipes or M.S. angle frames / flats, applying one coat of metal primer and two coats of synthetic enamel paint of approved colour / brand etc. Complete.	5.00		sq.m	
5.74	Providing and laying Kotah stone for flooring, skirting, tread, riser of steps 25mm to 30mm thick of required size in plain / diamond pattern on a bed of 1:4 cement mortar (1 cement : 4 crush sand) or 20 mm thick plaster of cement mortar 1:3 (1 cement : 3 coarse sand) including cement float, filling joints with neat cement slurry, curing, polishing and cleaning complete.	5.00		Sq.m	
5.75	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 150mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	10.00		per rmt	

5.76	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 200mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	10.00		per rmt	
5.77	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT flashing having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	10.00		per rmt	
5.78	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT gutter having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	10.00		per rmt	
5.79	Providing fabricating and fixing in position required shape precoated Galvalume with 0.50 mm TCT ridge having 610mm width of Jindal make with required lapping for side of roofing sheet including cutting and fabricating in approved design,fixing the flashing properly as per manufacturers specification including scaffolding etc complete as directed.	10.00		per rmt	
5.80	Providing and fixing corrugated galvanized iron sheets of 0.63 mm thickness (24 B.W.G.), if required without wind ties including fastening with galvanized iron screws and nut bolts to the existing structural steel frame work etc complete. As directed by Engineer in charge.	10.00		sq.m	
5.81	Providing & fixing Z adjustable hinge with new screws, removing old broken Z adjustable hinge.	10.00		Per No	
5.82	Providing & fixing UV protected nylon rope of approved thickness for heavy duty SS ceiling cloth hanger.	10.00		per rmt	
5.83	Providing & fixing in position extruded modular aluminium section two track sliding window mounted on **rectangular frame of size 63mm x 38mm x 2.00mm thick** (1.054 kg/Rmt) made up of two track drain bottom section of size 61mm x 45mm x 1.3mm thick (1.055 kg/Rmt) and top and sides sections of size 61mm x 31mm x 1.3mm thick (0.659 kg/Rmt) The shutter should be of bearing bottom of size 40mm x 18mm x 1.25 mm (0.417 kg/Rmt) top member of size 40mm x 18mm x 1.20mm thick (0.475 kg/Rmt) Interlocking section size of 43mm x 27mm x 1.30mm thick (0.558 kg/Rmt) and handle sectionof size 43mm x 18mm x 1.30 mm thick (0.424kg/Rmt), selected quality **4mm thick ACP sheet of desire shead and pattern** to be fixed in shutter with neoprene gasket with approved quality PVC rollers, necessary locks, handles PVC lining and wooden encasement wherever necessary etc. Complete. (All aluminium sections and fitting should be 15 micron anodized and Jindal make or as directed).	5.00		Sqm	
5.84	Providing and fixing openable shutter made up of aluminium anodized 15 micron handle section 38mm x 18mm(0.45kg/rmt) or near available sections on top, bottom and sides, P/F 4mm thick ACP sheet of desire shead and pattern, P/F stainless steel butt hinges 75x47x1.8 mm IS: 12817 marked (2 nos.) for each shutter, 1nos. of Anodised Aluminium tower bolt on each shutter,1no handle(S.S) for each shutter, magnet etc. including fixing the shutter over the L pipe section of 38mmx25mmx1.5mm (45kg/rmt) with screws in line and level,rectification of all damages etc. complete as directed. (All aluminium section of Jindal make)	5.00		Sqm	
5.85	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)	5.00		Sqm	

5.86	Carefully cutting the kadappa shelf from existing kitchen platform with the help of electrical cutter, chisel, hammer etc., without damaging the vertical support including finishing with cement slurry for damaged kadappa supoort lowering down the debrise at ground level and taking away inside IITB campus at approved location daily, the debris should not be kept in building premises for more than 24 hrs of work. Including cleaning work and covering the kitchen utensils, cups, and dish units, also other belongings in resident kitchens should be covered with plastic sheets while doing work, approximately Kadapa shelf size 1.44m x 0.68 & 0.38 x 0.68 or 1.00m x 0.60, which is to be removed. (Temporary electric supply should be taken as shown and given by EMD for this work)	10.00		Nos	
5.87	Providing and fixing ready made 304 grade stainless steel Modular kitchen basket at all floors, locations, and heights stainless steel storage / Service Units/ kitchen trolleys below existing granite Kitchen Platform up to depth 30" as required made with 304 S.S. (Food grade) Comprising of 19mm square pipes outer frame, sink unit with bottle and bin holders, bottle pull out, utensils and storage unit kit, etc. as desired by Engineer in-charge and as per approved design consisting of 6mm dia S.S. round bars and 5mm dia distribution S.S. round bars or 1 mm thick perforated S.S. sheet where ever required & fabricated as directed including the cost of providing teakwood Frame work, Sliding telescopic channel, 19 mm thick prelaminated marine ply as per IS 710, SS handles, screws, nails, cost of materials, transporting, labour, wastage, and testing, etc complete as directed (weight of the trolly should not be less than 60 kg/sqm of elevational area)	15.00		Rmt	
5.88	Providing and fixing a cupboard shutter with a 19 mm thick one side decorative and the other side balancing lamination, factory pressed BWP grade marine ply as per IS 710 of approved brand, including 2 mm thick PVC edge banding tape with hot glue by edge bending machine, etc., with Soft closing stainless steel hinges & required fitting, etc, all complete as directed by the engineer in charge	10.00		Sqm	
5.89	P/F 12mm thick (minimum) Polycarbonate UV Insulated Sheets of Danpalon/ SABIC/ GE/Coxwell/ Tuflite 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 mechanisam, millfinish aluminium U profile end cap, required flashing at the junction of wall/concrete surface and sheets and other required fittings as per manufecturer specifications,including scaffolding etc.all complete as directed by Engineer In-charge.	10.00		Sqm	
				Total Amount of Rs. (5)	
				TOTAL AMOUNT OF Rs. (1+2+3+4+5)	
				Add :- 9% CGST	
				Add :- 9% SGST	
				TOTAL NET AMOUNT OF Rs.	
				SAY Rs.	

Amount in words _____

_____

Special Condition :

1. Recovery of scrap material will be done in respective item at the rates mention below -
   a) Wood scrap – Rs. 25.00/kg
   b) Aluminium scrap – Rs. 150.00/kg
   c) MS Steel / Tor steel & structural steel – Rs. 28.00/kg
   d) Kitchen trolley – Rs. 45.00/kg
   e) GI / CI Pipe – Rs. 20.00/kg
   f) Brass taps of all types – Rs. 120.00/kg
2. Existing passenger lifts should not be used for shifting construction materials or debrises.
3. Manufacturer & brand list for various items should be supplied as per approved list.
4. Safety precutions should be strictly followed while repair construction work.
5. Time required for attending each and every complaint or executing the job will be finalised by the Engineer Incaharge or his representative at the time of giving the job or handing over the complaint, compensation @Rs.250 per day per complaint / per job will be charged against if delayed for completion of item / job.
6. **Quanitity may vary from 0 to infinity**

Signature & Stamp of the contractor