



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

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

Sr. No.	Name of Work	Estimated Cost (In Rs.) Incl. 18% GST	EMD (Rs.)	Time Limit	RFX No.
1.	Term Contract for repairs, painting & civil works at residential quarters in the Lakeside area. EO/A/CENTRAL/WKS-39/24-25	Rs.98,39,861/-	Rs.1,96,700/-	01 YEAR	6100001758

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

Date and time of submission of tender documents digitally are from 30.05.2024 to 12.06.2024 till 11:15 a.m. Date of opening of **Technical Bid will be 12.06.2024 at 11.30 a.m. and and Financial Bid 19.06.2024 (Tentative)**

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

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

- 1) i. Experience of having successfully completed works during the last 7 years ending last day of the month previous to the one in which applications are invited :
Three **completed works** costing not less than the amount equal to 40% of estimated cost put to tender;
OR
Two **completed works**, costing not less than the amount equal to 60% of the estimated cost put to tender
Or
One **completed work** of aggregate cost not less than the amount equal to 80% of the estimated cost.
AND
ii. One completed work of any nature (either part of (i) or a separate one) costing not less than the amount equal to 40% of the estimated cost put to tender with some Central Government Departments / State Government Departments / State or Central Autonomous Bodies / State or Central Public Sector undertakings.
- 2) Detail statement for work completed, work in hand including balance commitment of work should be enclosed for last three year commencing from 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, and no Financial Bid will be opened. (All contractors/agencies are hereby informed that they should upload Technical bid as per format of Annexure "A", changing in format is not allowed).
- 3) Upload a scan copy of the information in respect of **manpower/mandays** for above said work must be given in **undertaking** with official signature and seal/stamp, otherwise tender will be **rejected**.
- 4) Bank Solvency certificate 40% of estimated amount issued within one year from any Nationalized / Schedule Bank from the date of publishing of Tender.
- 5) P. F. registration certificate.
- 6) P. F. challans of last 12months.
- 7) (i) ESIC registration certificate and copies of ESIC challans of last 12months.
OR
(ii) Contractors' all risks insurance (CAR policy) / Medclaim policy.
- 8) PAN card.
- 9) GST registration certificate.
- 10) Income Tax Return for last 03 years i.e. of 2021-22, 2022-23 and 2024-25.
- 11) List of Equipment's, Machinery, Tools.
- 12) List of Technical Staff with copies of their Degree/diploma certificate.
- 13) Labour Licence obtained during in 03 years.

Mr. AS/vr
29/5/24

- 14) The contractors who were empanelled under Estate Office under (2018-23) list need not have to upload Demand Draft. The contractors other than empanel list that are applying for tender need to upload a scan copy of Demand Draft / Pay Order for Rs.1,96,700/-(EMD amount) drawn in favour of "The Registrar, IIT Bombay" on online Tendering Portal.
- 15) Power of Attorney, if any.
- 16) 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.

Note:

Those contractors who do not have documents mentioned above from Sr. No. 1 to 16 need not apply as it is mandatory documents to qualify in technical bids.

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

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

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

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

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

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

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

Rates of an estimate are based on CPWD DSR 2021, and fair market rate analysis.

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

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

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

[Handwritten Signature]
Superintending Engineer (I/C)

[Handwritten Initials]
[Handwritten Initials]
[Handwritten Initials]
28/5

TO BE UPLOADED ON SRM TENDERING PORTAL WITH FINANCIAL BID

ANNEXURE 'A' (FORMAT)
TECHNICAL BID

File No. : EO/A/CENTRAL/WKS-39/24-25

Name of Work : Term contract for repairs, painting and civil works at residential quarters in the Lakeside area.

Name of the Contractor -----

Sr. No.	Name of Client	Name of Works	2021-22 (In Lakhs)	2022-2023 (In Lakhs)	2023-2024 (In Lakhs)	2024-2025 (In Lakhs)	
						Completed	Balance
			-	-	-	-	-
			-	-	-	-	-
Total Amount (In Lakhs)			-	-	-	-	-

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

Superintending Engineer (I/C)

M. K. Kulkarni
29/05/2024

Dr. Y. K.

Signature of Contractor
Name & Address in full

WORKS UNDERTAKING

EO/A/CENTRAL/WKS-39/24-25

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

Sub : Term contract for repairs, painting and civil works at residential quarters in the 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 as mentioned in the notice inviting for short tenders.

The following information is required to be provided. If fails to do so, the tender will be assumed incomplete and hence the same will be rejected.

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.

- 1) No. of Unskilled casual labour to be required per day. :
 - 2) No. of Skilled casual labour to be required per day. :
-

The Mandays required for completion of work. :

Thanking you,

Yours faithfully,

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

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
POWAI, MUMBAI – 400 076.

EO/A/CENTRAL/WKS-39/24-25

ESTATE OFFICE

Name of work:- Term contract for Repair, Painting, and Civil works at Residential Quarters in the Lakeside Area.

SCHEDULE OF WORK

Sr. No.	Description of work	Qty.	Unit
1	Chipping and exposing the damaged RCC members with chisel & hammer and cleaning the rusted reinforcement and exposed surface by wire brush or mechanical device or any other established method and applying rust convertor (Rustkill A) of approved make and quality with cotton waste swab to reinforcement and allowing to dry the same for 24 hour, brushing of loose particles and applying first coat of rust preventive coating of polymer and cement slurry in 1:1.5 proportion with soft brush without adding water including applying another coat of rust preventing after 4 hours allowing air curing for 48 hours etc. Including H frame scaffolding, covering with plastic as directed. Cleaning and unloading the debris upto ground level.	500.00	Sq.m
2	Providing and applying an effective bond coat of Epoxy bonding agent manufactured by M/s. Krishna conchem, Dr. Fixit , Roff , Chembond or M.C. Bouchmey and hardner in the proportion and mixing thoroughly base & hardner as per manufacture instruction (Base hardner) by using brush in multiples of coat as required to accommodate the whole thickness of PMM wherever required including double H frame scaffolding upto any height wherever required on the surface of old concrete/required concrete. Note- The actual consumption of Epoxy bonding coat shall be measured for payment on weight basis . Challans of authorized dealer will be verified	50.00	Kg
3	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 including H frame scaffolding 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.	350.00	Kg

4	Providing and Placing in position readymix polymer mortar manufacture by Dr. Fixit, Sunanda, Roff, MC Bouchmey, Chembond and adding water in the proportion of 1:0.14 (polymer mortar : water) in prepared grooves / cracks of the concrete court in layers as directed including mixing the polymer mortar with water using forced action mixer mild curing with water for 3 days and finishing the surface in all respect including H frame scaffolding etc. Complete. (Payment will be paid for the actual quantity of polymer mortar PX used on weight basis. Challans of authorised Dealer will be verified etc all complete as directed by Estate office).	30000	Kg
5	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.	50.00	Nos.
6	Providing and fixing in position tor steel bar having grade Fe-500D or more for reinforcement of various diameters for R.C.C. footings, foundations, slabs, beams, columns, canopies, staircases, chajjas, lintels, pardies, coping, fins, dowel bars with sleeve, tie bar, any other required work etc. as per detailed designs, drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required completed as directed.	100.00	Kg
7	Providing and fabricating structural steel works in rolled sections like joists, channels, angles, tees, hollow sections and any other required sections etc. as per detailed designs & drawings for supports, rafters, purlins, railing, staircase and any other work including fixing in position with connecting plates, braces and welding, riveting, bolting as necessary including one coat of redoxide priming coat, H frame scaffolding etc. complete.	100.00	Kg
8	Providing and fixing hand rail of using 'C' class G.I pipe approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	20.00	kg
9	Providing and fixing hand rail of using 'C' class M.S. tubes approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer and two cost of synthetic enamel paint.	100.00	kg
10	Providing and fixing mild steel grill work for window, ventilator, partition weighing 15 kg per sqm as per drawing including necessary welding and painting with one coat primer and two coats of anti-corrosive paint of approved shade etc. complete as directed.	5.00	m2

11	Add for extra weight or deduct for less weight over item no. 9 and 10 for fabricating such as cutting, shaping, riveting etc. mild steel for grill works including welding and painting with one coat of primer and two coats of anti-corrosive paint of approved shade etc. complete as directed.	20.00	kg
12	Scrapping the entire wall / ceiling surface throughly with patra & sand paper, filling the holes with lambi / POP, Providing and applying one coat of seal cement primer of IITB approved brand, applying the entire area with readymade wall putty, covering the floor, windows, instruments during priming coat as required etc. complete.	5000.0	Sq.m
13	Providing and applying Acrylic oil bound distemper of IITB approved manufacturer and of desired colour and shade to old / new surfaces in two or more coats including H frame scaffolding, preparing the surfaces (excluding priming coat), covering the floor, windows, instruments during painting including scaffolding complete.	5000.00	Sq.m
14	Providing and applying three coats of white wash on old / new plastered surface for walls and ceiling and asbestos sheet using step ladder/ H frame scaffolding upto 3mtr. height, scrapping and cleaning the surface by sand paper and brooming, adding Robbin blue as required, adding adhesives for bonding, cleaning the floor, filling all cracks, holes etc. with plaster of paris, covering the floor, windows, instruments during painting etc. complete.	200.00	Sq.m
15	Providing and applying one priming coat of IITB approved brand to wood and wood based surface, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter, sand papering including scaffolding etc.	150.00	Sq.m
16	Providing and applying one priming coat of IITB approved brand over steel and other metal surface, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter, sand papering including scaffolding etc.	150.00	Sq.m
17	Providing and applying two coats of synthetic enamel paint of IITB approved brand and shade to wood and steel work including H frame scaffolding Scrapping, cleaning, covering the floor, windows, instruments during painting, easing all fittings etc. complete.	200.00	Sq.m
18	Providing and applying two coat of synthetic enamel paint of IITB approved brand (Asian, Berger, ICI, Jenson & Nicholson, Goodlass Nerolac) and shade to tubelight and ceiling fans with the use of step ladder including scrapping cleaning etc. complete.	50.00	Nos.

19	Providing and applying white cement based Birla make wall care putty of average thickness 1mm, over plaster/ concrete surface in proper line / level to prepare surface even and smooth for including preparing the wall surface for the application of wall care putty etc. complete as directed.	500.00	Sq.m
20	Providing and fixing 20mm thick cement bonded wood particle board (bison panel) for chajja, ceiling, staircase at any floor, providing suitable hole for fixing nuts and bolts including making suitable groove on walls, making vata at joint, P/F sheet in proper slope including double scaffolding wherever required complete as directed.	10.00	Sq.m
21	Providing and sealing hairline / minor cracks in plaster by Paste formed out of polymer (S.B.R.) and cement in the proportion of 1:5 by volume, mixing with water for workable hand filling mix, cleaning and wetting the surface, curing and including cutting, demarcating grooves at any height with electrically operated cutter machine between sound and unsound plaster, cracks on external wall, separation cracks by using scaffolding ,	100.00	Rmt
22	Carefully removing internal or external plaster in patches or any length without damaging structure brickwork in the vicinity by using electric cutting tools including cutting a groove first to demarcate exact area of damage taken place stacking the debris with in 50 meter, cleaning the site etc. complete. including covering the furniture, floor, windows and partitions with plastic sheets while chipping including H frame 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 plane shall be measured.	250.00	Sq.m
23	Removing the old cement concrete or any type of tiles from floor / wall carefully including levelling the surface, cleaning the site, stacking the debris etc. complete.	500.00	Sq.m
24	Providing internal cement plaster 12mm thick in single coats in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions with the use of step ladder and curing complete	100.00	Sq.m
25	Providing internal cement plaster 20mm thick in a single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces in all positions with the use of step ladder and curing complete.	50.00	Sq.m

26	Providing and fixing 1st quality ceramic wall tiles conforming to IS: 15622 of size 300mmx450mm and 300mm x 600mm as directed by Engineer-in-charge having thickness not less than 5mm, of approved make, in all colours, shades of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement plaster /mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade	100.00	Sq.m
27	Providing and laying rectified Glazed Ceramic floor tiles conforming to IS: 15622 of size 300mm x 300mm as directed by Engineer-in-charge having thickness not less than 5mm, of 1st quality conforming to IS : 15622, of approved make, in all colours, shades including 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse san), jointing with grey cement slurry @ 3.3kg/sqm including pointing the joints with white cement and matching pigments etc., complete.	50.00	Sq.m
28	Providing and laying at any floor ceramic tiles Johnson & Johnson /Nitco/ Kajaria/ Bell/ somani for flooring approved by IITB of size 600x600mm quality, brand and shade as available in market on cement mortar 1:4 bedding using white cement pigments finished to levels slope as required including cutting of tiles. Curing, acid washing etc. all complete.	350.00	Sq.m
29	Providing and fixing not less than 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut Granite (area of slab above 0.50 m2) for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.	20.00	Sq.m
30	Providing second class burnt brick masonry with IS approved quality well burnt bricks having in cement mortar 1:6 in superstructure including striking joints, racking out joints, watering and H frame scaffolding complete	5.00	Cu.m
31	Providing sand face plaster externally using approved screened sand in all positions including base coat of 15mm thick in cement mortar 1:4 using water proofing compound per cement bag as per manufacturer specification and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment not to exceed 8mm thick in cement mortar 1:4 using water proofing compound per cement bag as per manufacturer specification as per manufacturer specification, finishing the surface by taking out grains and curing for 14 days, H frame scaffolding etc. complete.	100.00	m2

32	Providing and laying cement concrete 1:11/2: 3 (M-20) upto plinth level using sand as fine aggregate and graded stone aggregate 20mm maximum size for foundation, coping and bedding, levelling, dewatering by any means, compaction, finishing, curing etc. complete all as directed.	10.00	Cu.m
33	Removing existing waterproofing treatment from the WC up to the mother slab including tiles, plaster etc. of any thickness without damages to structure using electrically operated cutting tools, leveling and cleaning the surface for providing new specialist waterproofing treatment, including lowering down the debris and stacking the same at a distance of 50mtr etc. all complete as directed.	50.00	Sq.m
34	Providing & laying brickbat coba on terrace, chajjas & in w.c. and bath in all positions in cement mortar 1:5 with waterproofing compound at the rate of 2% by weight of cement and covering 10 years' guarantee including all leads, lifts including furnishing a guarantee on requisite judicial stamp paper etc. complete.	15.00	Cu.m
35	Providing waterproof bedding for flooring of bath and W.C. 25mm thick in cement mortar 1:3 using waterproofing compound 2% by weight of cement including levelling, curing etc.	50.00	Sq.m
36	Providing waterproof plaster in WC 20mm thick for in cement mortar 1:3 with neat finishing, floating using waterproofing compound at the rate of 2% by weight of cement	100.00	Sq.m
37	Providing and fixing White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot restswater closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required etc. completed as directed.	15.00	Nos.
38	Providing and fixing white vitreous china pedestal type Water closet (European type) with ISI marked solid plastic seat and lid, 10 liter low level white P.V.C. flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required etc. complete as directed.	10.00	Nos.
39	Taking out old C.I. / PVC nahani trap with connecting pieces from floor carefully and taking out the same outside campus etc. complete.	15.00	Nos.

40	Providing and fixing 10cm cast iron nahani trap with cast iron plug bend and piece of cast iron pipe upto plug bend etc. complete.	15.00	Nos.
41	Removing urinal pans or wash hand basins with brackets including disconnecting the sanitary and water supply connections, removing the same carefully and stacking the serviceable materials as and where directed including throwing the unserviceable materials outside the campus etc. complete.	10.00	Nos.
42	Removing w.c. pans including disconnecting the sanitary and water supply connections, removing and breaking flooring and bed concrete around pans and removing pan carefully and disposing the debris outside the campus etc. complete.	25.00	Nos.
43	Providing and fixing 2nd class country teakwood frame for doors, windows, ventilators by using wood of required size as per site condition including all moulding, rebating, hold fast and finishing with one coat of primer, applying coal tar on the external faces of frame etc. complete.	2.00	Cu.m
44	Removing door / windows / cupboard shutter & frame removing shutters & old fittings keeping them aside and taking out the old dilapidated frame out of campus, providing wroughting to shape & fixing C. P. Teakwood frame of same size & design as existing finished size (95mm x 70mm, 70mm x 32mm) applying one coat of coal tar to the backside of members fixing new M.S. Hold fasts 4 Nos. for windows and 6 Nos. for doors with screws fixing the frame in proper position on the wall refixing the removed shutters with all existing fittings for doors & windows or of same size & number as existing fittings including painting two coats of synthetic enamel paint over a coat of primer on all exposed surfaces of frame rectifying all defects to original specification all complete as directed	2.00	Cu.m
45	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 4mm thick plain / bajiri glass 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 etc. Complete.	30.00	Sq.m

46	Providing and fixing single leaf or double leaf panelled door shutters 35mm thick as per detailed drawings consisting of country cut teak wood styles, top rail, frieze rail of 95mm x 35mm, lock rail of 145mm x 35mm and bottom rail of 245mm x 35mm and insert panels of 12mm thick, marine plywood generally conforming to IS: 710 with heavy duty M.S. pressed butt hinges bright finished of required size with necessary screws, P/F 300mm long heavy duty stainless steel aldop, other require fittings and fixtures etc. complete.	10.00	Sq.m
47	Providing and fixing solid core flush door in single or double leaf 35 to 40mm thick of commercial type of exterior grade, approved commercial plywood facing both side without glazing and venetians, all necessary beads, moulding and lipping, 300mm long 2 nos. decorative type S.S handles for each shutters, 8" long stainless steel tower bolt 1 no for each shutter, 12" long stainless steel heavy duty aldop and other required fittings etc. complete (without frame). (fittings will be approved by Engineer in charge before fixing)	5.00	Sq.m
48	Carefully removing existing wooden doors of any size and type with/without frame without damaging and re-fixing the same after completion of repair works and required modification like cutting from bottom, fixing bedding patti, etc. with required necessary fixtures and fittings including screws/hinges, etc wherever required all complete as directed.	50.00	Nos.
49	Refixing aluminium/ wooden framed door and windows, grill, by making small modification with new screws and required fittings etc. complete as directed.	10.00	Nos
50	Removing door shutters and window shutters of any size and type with fittings (if available) and taking out the same outside IIT Campus etc. complete. (Recovery of wood scrap will be done @ Rs. 25 per kg, aluminium scrap will be done @ Rs. 120 per kg and structural steel will be done @ Rs. 20 per kg from Item of work againsts actual weighth if material taken outside campus)	50.00	Nos
51	Replacing by providing and fixing 5 mm thick plain/bajri glass of doors and windows etc. including teakwood beading etc. complete.	10.00	Sq.m
52	P/F single leaf FRP moulded shutter 35mm thk. of Advance FRP company in flush or depress panel design as approved. FRP thickness to be 2.00mm, including extra reeinforcement on sides and edges. The core of shutter to be Polyon Foam done in situ with wooden styles embedded for taking hinges, fixtures etc. Both side of shutter to be finish in Gel-Coat. Shutter to have recess to hinges. The whole shutter to be totally waterproff, resistance to mild acid/alkali. Colour as per choice including fixing of fittings such as 3 nos 4" heavy type stainless steel hinges for each shutter, 9" long tadi patti S.S, 2nos. 9" long S.S handles for each shutter etc. completed as directed.	10.00	Sq.m

53	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.	250.00	Kg
54	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	50.00	Sq.m
55	Providing and fixing fly proof stainless steel mesh of approved quality to windows, grills, doors and any other location using teak wood or aluminium anodised section of require size with necessary fittings and fixtures etc. complete as directed.	30.00	Sq.m
56	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.	10.00	Sq.m
57	Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	25.00	Each
58	Providing and fixing in position two track aluminium sliding windows frame box section of size 63x38x2 using drain bottom section of size 61 mm x 45 mm x 1.3 mm thick(1.055kg/Rmt) for bottom, sections of size 61 mm x 31mm x 1.3 mm thick(0.659Kg/Rmt) for sides and top. The shutter should be of bearing bottom of size 40 mm x18 mm x 1.25 mm thick(0.417Kg/Rmt) , top member of size 40 mm x 18 mm x 1.20 mm thick(0.475Kg/Rmt), Interlocking section size of 43 mm x 27 mm x 1.30 mm thick(0.558Kg/Rmt) and handle section of size 43mm x 18 mm x 1.30 mm thick(0.424Kg/Rmt) including providing and fixing 5mm thk. glass in the shutter using rubber gasket, approved quality minimum two nos.PVC rollers for each shutter, necessary locks, handles, PVC lining and other required fittings, etc. complete as directed by Engineer in charge. (Note: All aluminium sections and fitting are 15 micron anodized/ powder coated).	3.00	m2

59	<p>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 5.0mm thick glass (plain or frosted) fixed in shutter with approved quality neoprene gasket, PVC rollers, locks, handles, PVC lining wherever necessary etc. Complete. (Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)</p>	10.00	Sq.m
60	<p>Providing and fixing aluminium louvered ventilators using 50mm x 25mm x 16 gauge (not less than 0.593 kg/mtr) aluminium box frame anodized to 15 microns / powder coated for outer frame and intermediate vertical members as directed including 5mm thick plain or frosted glass 125mm wide for louvers at proper inclination including P/F glass on adjustable aluminium louvered of approved size and making provision of fixing exhaust fan etc. all complete.</p>	5.00	m2
61	<p>Providing and fixing in position aluminium 15 micron anodized openable window with stainless steel flyproof mesh of 304 grade having aluminium powder coated " L" pipe section 38mm x 25mm (0.45kg/rmt) for frame and shutter frame of 38mm x 18mm (0.45kg/m) aluminium section and fixing the stainless steel mesh with U channel with screws including necessary fitting and fixtures such as two numbers stainless hinges, stainless steel handle one number and magnet or tower bolt two numbers etc. complete as directed. (Note: All aluminium sections and fitting are 15 micron anodized and of Jindal make)</p>	2.00	m2
62	<p>Providing and fixing in position fixed glazing/ partition 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 plate glass fixed to the above frame using glazing clip with rubber gaskets, filling all gaps with appropriate fillers etc. all complete.(Jindal Make)</p>	5.00	m2
63	<p>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)</p>	20.00	Sq.m

64	Replacement of damaged wooden window frames with P/F aluminium outer hollow box frame anodized section of size 65mm x 30mm x 1.5mm (0.227 kg/rft) and removing the existing double glass shutter & damaged teak wood frame with making good base surface with neat cement mortar 1:4 and providing & fabricating aluminium frame of same size and including re-fixing the existing aluminium shutter on anodized aluminium frame with proper rubber gaskets and other fittings such as handle, screws, hinges etc. complete.	5.00	m2
65	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 H frame scaffolding etc all complete as directed by Engineer In-charge.	10.00	Rmt
66	Providing and fixing 3" Anchor Fastener wherever necessary etc. complete.	10.00	Nos.
67	Carefully removing the existing aluminium sliding window with frame and shutter and re-fixing the same with proper modification like cutting the frames, glass, fixing after window granite work including necessary fittings and fixtures, stepladder etc all complete as directed.	2.00	Nos.
68	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	20.00	Nos.
69	Providing and laying 15 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. complete.	50.00	Rmt.
70	Providing and laying 20 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. complete.	50.00	Rmt.

71	Providing and laying 25 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. Complete.	50.00	Rmt.
72	Providing and laying 32 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. Complete.	10.00	Rmt.
73	Providing and laying 40 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. complete.	10.00	Rmt.
74	Providing and laying 50 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipes having weight as per IS specification to walls, ceilings, floors etc. with screwed sockets, back nuts, elbows, tees, reducers, enlargers, plugs, clamps etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary H frame scaffolding etc. or as directed etc. complete.	10.00	Rmt.
75	Carefully removing the existing G.I. pipe 12mm to 50mm diameter from floor / walls / slab etc. with out damaging the structures and taking out the same outside campus including H frame scaffolding etc. completed as directed. (5% cost will be deducted from item of work for material taken outside IIT Campus)	100.00	Rmt
76	Providing and fixing 20mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	10.00	Nos
77	Providing and fixing 25mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	20.00	Nos

78	Providing and fixing 32mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	10.00	Nos
79	Providing and fixing 40mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	3.00	Nos
80	Providing and fixing 50mm dia. nominal bore gun metal gate valve with C.I. wheel of approved quality (screwed end) with required fittings and fixtures etc. completed as directed.	3.00	Nos
81	Providing and fixing 15 mm dia nominal bore brass stop cock of approved quality with required fittings and fixtures etc. completed as directed.	20.00	Nos
82	Providing and fixing 20 mm dia nominal bore brass stop cock of approved quality with required fittings and fixtures etc. completed as directed.	10.00	Nos
83	Providing and fixing 100mm dia. chromium plated brass shower rose of approved quality to 15 or 20 mm dia supply pipe including necessary bend and socket complete.	25.00	Nos
84	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 upto trap etc. completed as directed.	15.00	Nos.
85	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 upto trap etc. completed as directed.	10.00	Nos.
86	P/F ISI approved heavy type ½" dia CP Bib cock of Seiko made including socket, union nut etc. complete as directed	50.00	Nos.
87	P/F ISI approved heavy type ½" dia CP Pillar Tap of Techno/Sieko made including socket, union nut etc. complete as directed	25.00	Nos

88	Providing and fixing Angular Stop Cock with Wall Flange for wash basin, kitchen sink, etc. of jaquar make, as per existing model, heavy type including necessary fittings and fixtures, removing the old damaged stop cock and cleaning the site etc. all complete as directed by Engineer In-charge. (Note: The old dismantled taps should be deposited in Estate store and take certificate of it)	10.00	Nos.
89	Providing and fixing 2-way Bib Cock with Wall Flange for toilets, etc. of jaquar make, as per existing model, heavy type including necessary fittings and fixtures, removing the old damaged 2-way bib cock and cleaning the site etc. all complete as directed by Engineer In-charge. (Note: The old dismantled taps should be deposited in Estate store and take certificate of it)	15.00	Nos.
90	Providing and fixing PVC low/high level flushing cistern with all fittings as approved by IITB inlet G.I. pipe with stop tap, providing and fixing 32mm or required heavy duty PVC outlet bend pipe from flushing cistern upto the w.c. pan, 15mm dia PVC connection to the tank etc. Make Hindware/ CERA/ Slimline/ Hindustan/ Nycer etc . all complete. as directed.	15.00	Nos.
91	Providing and fixing stainless steel sink having bowl size 610 x460x254mm of nirali make inside platform with removing existing S. S. Sink and remaking with fixing granite surrounding or on brackets including UPVC waste flexible pipe up to outlet pipe, steel waste flexible etc. complete as directed.	1.00	Nos.
92	Providing and fixing stainless steel cockroach trap of approved pattern, quality and make with all required fittings and fixtures etc. completed as directed.	20.00	Nos.
93	Connection of pipe line which is newly laid to old pipe line in wall with 4" to 5" barrel piece, union, elbow & 14" barrel piece etc. required fittings and fixtures including making hole carefully in wall without disturbing existing pipe line, p/f new line of existing dia remaking good the demolished portion from outside to restore the same in original condition neatly, painting to pipe etc. complete. (extra pipe line will be paid in respective item) including H frame scaffolding. a) 15mm dia	5.00	Per job
94	Connection of pipe line which is newly laid to old pipe line in wall with 4" to 5" barrel piece, union, elbow & 14" barrel piece etc. required fittings and fixtures including making hole carefully in wall without disturbing existing pipe line, p/f new line of existing dia remaking good the demolished portion from outside to restore the same in original condition neatly, painting to pipe etc. complete. (extra pipe line will be paid in respective item) including H frame scaffolding. b) 20mm dia	5.00	Per job

95	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 including H frame scaffolding if required and remaking to original connections after repair etc. complete. A) H2 type building	2.00	Per job
96	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 including H frame scaffolding if required and remaking to original connections after repair etc. complete. B) H1 type building	2.00	Per job
97	Providing and laying temporary loop connection in type IIB type building 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 including H frame scaffolding if required and remaking to original connections after repair etc. complete.	2.00	Per job
98	Providing hoisting and fixing in position ISI mark plastic storage water tank of BMC approved plastic overhead tank on roof of buildings at any height with all fitting, fixtures 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 MCGB, using required fitting / fixtures as directed by Estate office.	150000.00	Per Litre
99	Providing and fixing solid plastic seat with lid for european type W.C. pan complete with require fittings and fixtures etc. complete as directed. a) White solid plastic seat with lid	10.00	Nos
100	Providing and fixing P.V.C. rain water pipes 150mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary H frame scaffolding, and 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

101	Providing and fixing P.V.C. rain water pipes 100mm outer dia. conforming to I.S. including proper rain water receiving recess with P.V.C. plug bend, necessary fittings such as offsets, shoes including fixing the pipe on wall using approved M.S brackets projecting 25mm to 40mm from face of wall & fixing with heavy duty PVC clips of approved quality & number, filling the joints using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary H frame scaffolding, and 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.	15.00	Rmt
102	Providing and laying in trenches 15 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt
103	Providing and laying in trenches 20 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt
104	Providing and laying in trenches 25 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt
105	Providing and laying in trenches 32 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt
106	Providing and laying in trenches 40 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt

107	Providing and laying in trenches 50 mm dia nominal bore I.S.I. approved 'C class galvanized iron pipe' having weight as per IS specification with screwed sockets, joints, and necessary galvanised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer including trenching and refilling etc. complete or as directed.	5.00	Rmt
108	P/F ISI approved heavy type ½" dia CP Washing Machine Tap of long bib body Techno/Sieko made including socket, union nut etc. complete as directed	10.00	Per Nos
109	Providing and fixing 1/2" dia CP push tap of Jaquar with wall flange with stainless steel pipe upto urinal pot including necessary fittings and fixtures etc. complete as directed.	10.00	No
110	Providing and fixing ISI 1729/2002 grade 75mm dia. cast iron waste water pipes with necessary fittings such as bends, tees, single junctions, double junctions, slotted vent, offsets on walls or in the ground including filling joints with cement mortar 1:2 and two coats of anticorrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens including necessary H frame scaffolding complete or as directed.	10.00	Rmt.
111	Providing and fixing ISI 1729/2002 grade 100mm dia. cast iron soil / waste water pipe with necessary fittings such as bends, tees, single junctions, double junctions, slotted vent, offsets on walls or in the ground including filling joints with cement mortar 1:2 and two coats of anticorrosive paint including fixing the pipe on walls by means of nails driven through lugs in wooden holders / battens including necessary H frame scaffolding complete or as directed.	10.00	Rmt.
112	Providing and constructing brick masonry inspection chamber 900mm x 450mm upto 900mm in depth including cement concrete in M-20 foundation, PCC 10 cm thick channels, brick masonry, plastering on inside and outside as required in cement mortar 1:6 and airtight heavy duty RCC cover with frame work fixed in cement concrete 1:2:4 etc all complete as directed bt Engineer In charge.	5.00	Nos.
113	Providing and fixing 150 mm inner diameter ISI approved HDPE pipes manufactured by ARHAM Engineering/BERLIA/NOCIL / PIL with wall thickness from 5 to 10mm for drainage pipe line with all required fittings etc. with proper line and gradient connecting all joints with fusion butt welding by using suitable welding machine or hot plate etc, testing the line & joints with smoke test method as per manufacturer specification or as per direction of Engineer In-charge etc. all complete as directed.	5.00	Rmt.

114	Providing and fixing 100mm(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.	5.00	Rmt.
115	Arresting leakage through HDPE pipe by welding/jointing the damaged member with required tools and tackles all complete as directed by Engineer-in-charge.	5.00	Job
116	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.	2.00	Each
117	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.	2.00	Each
118	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.	2.00	Each
119	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	Each
120	Providing and fixing precast RCC slab for drain cover and chamber cover of required size with M-25 grade concrete and reinforced with 10mm dia main steel bars (along shorter span) and 8mm. dia distribution bars (along longer span) at 100mm center to center including making steel form work, making temporary concrete platform for casting, compaction using surface vibrator, with two lifting hooks of 6mm dia / holes of 25mm dia finishing the surface with smooth cement finish curing, placing the precast slab in proper position etc. complete as directed.	1.00	m3

121	Constructing conical manhole of size 900mm internal diameter at bottom and 525mm internal diameter at top up to depth 1500 mm with brick masonry circular wall 340mm thick in cement mortar 1:6 over a bed of 230mm thick cement concrete M-20 (1:1½:3) foundation square shape in plan with 150mm minimum offset beyond masonry wall plastering with cement mortar 1:4, 20mm thick on internal, external and all exposed faces, finished with floating coat of neat cement, including necessary cement concrete M-20 (1:1½:3) for forming benching and channel, providing and fixing C.I. steps weighing not less than 3.50 Kg. fixing top one at 450mm from top level and remaining steps at 300mm vertical spacing in staggered fashion, including providing and fixing precast R.C.C. frame and cover of thickness 100/150mm, heavy duty, manufactured by K.K.Manholes or 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	No.
122	Extra over item No. 122 for 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. all as specified in item No. 8 above and as directed.	1.00	Rmt
123	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.	5.00	No.
124	Providing and fixing in position best quality salt glazed stone ware gully trap with 150mm x 150mm square inlet and 100 mm n.b. outlet conforming to IS 651 including embedding the trap in M-15 (1:2:4) cement concrete, construction of brick masonry chamber 300mm x 300mm internal in 230mm thick brick masonry, plastering, finishing with neat cement floating coat, providing and fixing C. I. cover and frame weighing not less than 7 kg. etc including removing the old damaged gully trap, connecting all old and new inlets and out let pipes including running lines, jointing etc. all complete as directed.	5.00	Nos.
125	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	3.00	No
126	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	3.00	No

127	Dismantling burnt brick masonry (in cement mortar) with plaster including sorting out serviceable bricks and lowering down debris, stacking the same and debris separately upto a distance of 50 meters or spreading the debris as directed.	5.00	Cu.m
128	Dismantling plain cement concrete work including breaking concrete by chiselling, wedging etc., and stacking the debris upto a distance of 50 metres or spreading as directed.	10.00	Cu.m
129	Dismantling Reinforced cement concrete work including breaking concrete by chiselling, wedging including H frame scaffolding, covering area with jute kantan to avoid spreading of dust etc., stacking the debris upto a distance of 50 metres as directed.	5.00	m3
130	Dismantling existing kitchen platform made of marble top and kadappa support carefully and lowering down the debris 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 0.6 mt)	2.00	Job
131	Disposing debris, loose stones, boulders, concrete pieces broken etc. collected and stacked as directed including loading in trucks, transporting out of IIT Campus including obtaining approval from Government/ private land owners for disposing off on to their approved location. The contractor will be solely responsible for disposing debris out of campus and the debris are to be removed from site within 72 hours from stacking (30% voids will be deducted from actual measurement for debris, loose stones, boulders, concrete pieces).	50.00	Cu.m
132	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)	50.00	m2

133	<p>Providing and applying three coats of Dr. Fixit Roofseal coat as per manufacture's specification on Building roofs / Terraces – Flat & slope. Over existing cementitious waterproofing treatments like brick-bat coba with IPS/ China mosaic top, concrete screeds, acrylic coatings, etc. and as per the method of surface preparation given below Dr. Fixit Newcoat (for horizontal surface/ terrace)</p> <p>Method of Application</p> <p>1)Cleaning the existing surface and filling the cracks by recommended crack filling material. Apply the first coat of Dr. Fixit roofseal at the rate of 2 m2 per litre and allow it to dry before taking up the second and third coats, the rate of application being the same.</p> <p>2) The sequence of colours viz-a-viz pink, green and grey can be decided depending on the desired top coat colour.</p> <p>3) In case only two colours are being used, ensure that the colour of the first and the third coat are the same.</p> <p>This would ensure correct consumption of material that will deliver a total DFT of 1 mm. Covering Guarantee period for 3 years on requisite stamp paper.</p> <p>(During defects liability period if any leakages are found and due to continuous rains if rectification work is not possible then it should be covered by tarpaulin sheet on urgent basis by the contractor and if not attended, the same will be done by IITB on risk and cost basis and necessary payment for the same will be deducted from security deposit amount / any other payments payable to the agency)</p>	50.00	m2
134	<p>Dismantling PCC, IPS layer of any thickness above brick bat coba(till naked slab if brickbat coba is absent) from terrace floor/chajjas of building carefully without damaging the existing brickbat(if present), levelling the surface, cleaning the site, stacking the debris outside at designated spot etc. complete.</p>	5.00	m3
135	<p>Providing and laying water proofing cement concrete flooring to terrace to average 50mm thick with 1:2:3 cement concrete laid to proper level and slope using silt free clear river sand including compaction, filling joints, adding recommended waterproofing admixtures @ 2% by weight of cement, marking lines to give appearances of tiles of 30cm x 30cm or other approved size laid diagonally / square, finishing with extra cement in any colour as directed, testing the roof by ponding with water for 14 days, providing waterproofing guarantee for 7 (seven) years in requisite non judicial stamp paper in favour of IITB including all lead and lift etc. complete.</p>	20.00	m2

136	Providing and fixing colour coated Galvalume profile pre-coated 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 including H frame scaffolding etc. complete as directed.	50.00	m2
137	Providing and erecting steel tubular H Frame double 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 for all types of work and removing the same after completion of all external work requiring double scaffolding.(payments will be made once irrespective of duration upto max of 6 month for the scaffolding)	50.00	m2
138	Providing and laying super fluid micro concrete of approved manufacturer(Ultratech, Dr.Fixit or Pidilite) at any floor after reinforcement treatment coat including mixing with 10mm to 5mm size quartz aggregate in ratio of 1 part of Pidilite/Dr. Fixit make to 0.75 part of quartz aggregate by weight providing marine plywood formwork in line and level,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 SFMC powder in Kg shall be measured for payment ; challans of authorized dealer will be verified) including scaffolding etc. complete.	1000.00	kg
139	Laying dry trap / rubble stone soling of required thickness including hand packing and compacting etc. complete using IITB stone including trasporting stone from various locations from IIT campus up to working site and cutting the stone in required size as per requirement.	100.00	m3
140	Providing uncoursed rubble masonry (using IITB stones) of trap stones in cement mortar 1:6 (Cement:sand/grit) including racking out joints when plastering is to be done, striking out joints, watering and pointing with cement mortar 1:3 on outside exposed faces, including providing M-20 grade concrete block header @ 1 header per sqm. to the full thickness of wall, providing weep holes, with 100mm dia P.V.C pipes including collecting and transporting stone form various locations from IIT Campus upto working site, cutting stones/ bouldres in piceses as per requirement, scaffolding etc. complete as directed.	25.00	m3

141	Shifting for alternate quarter till repair work including all belongings, cupboards as directed by engineer in-charge to nearby vacant quarter in lakeside area.	10.00	Per job
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Note :- Time required for attending each and every complaint or executing the job will be finalised by the Engineer Incharge 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 delay in completion of complaint / job, if the delay is from contractor's side.

1) This schedule of work is given for reference purpose only. Contractors are requested to quote your rates online in financial bid.

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

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

4) 01% amount will be deducted from the bills for safety related measures which will be reimburse along with the final bill.

5) Taxes as per government notification time to time.

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

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

R. Chavhan
29/05/2014
Superintending Engineer (I/C)

A. K.
28/05/14

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28/5