



**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008 (ODISHA)**

Sealed Tenders are invited from reputed civil contractors for Tender Notice No - CT-15/2013-14 and from leading Manufacturers/suppliers of Kitchen equipment for Halls of Residence, Vide Tender Notice No. CT-18, 2013-14 and CT-19/2013-14 for the following tenders in NIT Rourkela.

(Construction of Common Dining Hall Including Internal Electrical Works for KMS Hall of Residence, in NIT, Rourkela).

TENDER NOTICE NO – CT-15/2013-14. Date: 09.11.2013

(Supply, Installation and commissioning of Kitchen Equipment for Vikram Sarabhai & C.V. Raman Hall of Residence, in NIT, Rourkela)

TENDER NOTICE NO CT-18/2013-14 Date: 09.11.2013

(Supply, Installation and commissioning of Kitchen Equipment for GD Birla – Vishveshwarya Hall & D. Ambani-M Swaminatthan Hall of Residence in NIT, Rourkela)

TENDER NOTICE NO CT-19/2013-14 Date: 09.11.2013

Last date & time of submission for all: **05/12/2013 by 3.00 PM**

Open on : **05/12/2013 by 3.30 PM**

For details, visit www.nitrkl.ac.in

Contact: Prof. S. K. Das, PIC (Civil Construction)

Phone:0661-2462315, **Email:** sarat@nitrkl.ac.in

**Sd/-
REGISTRAR**



**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008, ORISSA
(TENDER NOTICE NO – CT-15/2013-14)**

(CONSTRUCTION OF COMMON DINING HALL INCLUDING INTERNAL ELECTRICAL WORKS FOR KMS HALL OF RESIDENCE, IN NIT, ROURKELA)

Sealed tenders are invited from reputed civil contractors of appropriate class having valid registration with PWD (Orissa State) / CPWD / PSUs / NITR having sound financial status, machinery, resources and experience in execution of similar works.

<u>Name of Work</u>	<u>Estimated Cost (Lakhs)</u>	<u>EMD (Lakhs)</u>	<u>Time of Completion</u>
Construction of common Dining Hall for KMS Hall of Residence.	Civil- Rs. 315.89 Electrical-Rs.27.35 Total = 343.24	Rs. 6.86	12 months

Interested firms who have executed similar types of works at least one work of Rs. 275 lakhs cost or two works of Rs.172 Lakhs or three works of Rs.137 Lakh each, during last 5 years are requested to apply for the above mentioned job with credentials / information / testimonials addressed to the Registrar, NIT, Rourkela-769008, in three parts (**1st Part : EMD & Tender cost, 2nd Part : Techno commercial bids including prequalification requirement of tenders and 3rd part : Price bid**) in separate sealed covers for the work as mentioned above, superscribing on the top of the envelope:

**CONSTRUCTION OF COMMON DINING HALL
INCLUDING INTERNAL ELECTRICAL WORKS FOR
KMS HALL OF RESIDENCE, IN NIT, ROURKELA
(TENDER NOTICE NO- CT-15/2013-14)
DUE DATE: 05.12.2013.UP TO 3.00 PM**

The similar work shall mean Civil Construction works including internal Electrical works. The firm should have electrical license from Central/ State Govt or should have consortium for doing electrical work. Sealed tenders on overall cost plus/minus percentage basis are invited in the prescribed form.

The Earnest Money may be deposited in the form of Demand Draft of a Nationalized Bank (Payable at Rourkela in favour of Director, National Institute of Technology, Rourkela).

A part of earnest money is acceptable in the form of bank guarantee also. In such case, Rs.3.43 Lakhs will have to be deposited in the shape of Demand Draft and balance amount in shape of Bank Guarantee of any Nationalized bank having branch at Rourkela. The intending bidder has to fill all the details such as Banker's name, Demand Draft, Bank Guarantee number, amount and date. The Bank Guarantee submitted as a part of Earnest Money shall be valid for a period of six months or more from the date of submission of the tender.

The tender papers may be downloaded from NIT website (i.e. www.nitrkl.ac.in). However, payment of Rs.500/- (non-refundable) towards price of Tender Documents plus Rs.25/- towards VAT in the form of a separate Bank Draft of a Nationalized bank payable at Rourkela in favour of Director, National Institute of Technology, Rourkela shall be submitted along with EMD.

The prequalification shall be based on an objective evaluation of details regarding past performance in specific job areas, technical and financial capabilities and resources of the contractors and with proven track record and will be evaluated by the NIT. Bidders are advised to enclose details of their experience organization etc.

The time of completion is firm, and penalty under liquidated damage clause will be charged for any delay in work.

The validity of the tender shall be 120 days from the date of opening of the bids.

Details including our prescribed format for prequalification, BOQ, General Conditions and Special Conditions of Contracts etc are available in our website at <http://www.nitrkl.ac.in/tender.asp>. **NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.**

(REGISTRAR)
NIT, Rourkela
Fax No- 0661-2462022
Ph. No -0661-2476773

CHECK LIST FOR PRE-QUALIFICATION

Forms to be filled in properly.

1. Form-A: This form (check list)
2. Form-B: Letter of Transmits
3. Form-C
4. Form-D
5. Photocopy of documents to be attached.
 - a) Valid license
 - b) Work orders executed of last 3 years.
 - c) Vat Clearance Certificate & PAN Card
 - d) Performance report from authority/officer having rank not below Executive Engineer with specific mention about the project components, scheduled and actual time of completion, final project value etc. to be submitted.

(Signature of the Agency)

PRE-QUALIFICATION INFORMATION

LETTER OF TRANSMITTAL

(To be typed on the Agency's Letterhead)

To

THE REGISTRAR

**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-769008.**

**SUB: CONSTRUCTION OF COMMON DINING HALL INCLUDING INTERNAL
ELECTRICAL WORKS FOR KMS HALL IN NIT, ROURKELA**

Sir,

Having examined the details of pre-qualification document, I hereby submit the pre-qualification documents and other relevant information.

1. I hereby certify that all the statements made and information supplied in the enclosed forms A to D and accompanying statements are true and correct to the best of my knowledge. I understand that if any information found incorrect, the application is liable to be cancelled.
2. I have furnished all information and details necessary for pre-qualification and have no further pertinent information to supply.
3. I certify that my firm is not **blacklisted/banned** from business by any organization.
4. I hereby accept the rules and procedures of the Institute for pre-qualification of Contractor and agree that the Institute has the right to accept or reject any application without assigning a reason thereto.

(Signature of the Agency)

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

APPLICATION FOR PRE-QUALIFICATION

1. **Name of Agency/Firm :-** _____

2. **Address:-** _____

3. **FAX/Telephone Number: -** _____

4. **Special Qualification for technical Person** _____

5. **Details of Registration** _____

6. **Volume of business in last three financial years.**

2010-11 Rs _____

2011-12 Rs _____

2012-13 Rs _____

7. **Important jobs executed in Govt./PSU including specifications, materials used etc.**

8. **Field of Specialization.**

9. **Valid Income Tax clearance certificate (ITCC).**

10. **Any other information regarding technical capability.**

(Signature of the Agency)

Annexure to application for pre-qualification

WORKS COMPLETED AND IN PROGRESS DURING THE LAST 5 YEARS (INCLUDING ALL WORKS AWARDED)

{ADD ADDITIONAL SHEETS, IF NECESSARY}

Sl. No.	Name of Work & Agreement No	Date of start	Date of Completion		Work Order Value	Complete address of the Authority for whom the Work was done
			Stipulated	Actual		

PRICE BID

(To be submitted in the Letter Pad of firm)

To

The Registrar
National Institute of Technology
Rourkela – 769008.

**SUB: CONSTRUCTION OF COMMON DINING HALL FOR KMS HALL INCLUDING
INTERNAL ELECTRICAL WORKS IN NIT, ROURKELA.**

Dear Sir,

We are hereby submitting the price bid for the above mentioned work.

**Our quoted price is as given below from the schedule part- A&B, provided by NIT
for the above mentioned work.**

_____ %	[-----]	<u>BELOW</u>
(In figure)		
OR		
_____ %	[-----]	<u>ABOVE</u>
(In figure)		

The same percentage will be applicable to all the items of the schedule part- A&B.

Signed in the capacity of duly authorized to sign tenders for and behalf of

Name of Firm

Signature

Name & Address **Telephone No.**

..... **Mobile No.**

Date:

ABSTRACT OF SCHEDULE

Name of The Works:-Construction of Common Dining Hall including Internal

Electrical Works for KMS Hall of Residence, In NIT Rourkela.

PART-A: - Civil Work:- Rs. 3,15,88,978.78

PART-B: - Electrical Work: - Rs. 27,34,844.00

Total: - Rs. 3,43,23,822.78

PART-A
ESTIMATE FOR THE CIVIL
CONSTRUCTION WORKS

ESTIMATE OF DINNING HALL	
OF (BLOCKS A , B & C - D) OF K.M.SHAW HALL OF RESIDENCE	
FOR	
NATIONAL INSTITUTE OF TECHNOLOGY.	
ROURKELA.	
ODISHA	
	CONSULTANT.
	M/S Design Techno
	PLOT NO-N-6 /515, IRC. VILLAGE
	Bhubaneswar-15

ABSTRACT		
PART - I (CIVIL WORK.)		
SL.NO		ESTIMATE COST
SECTION-I EARTHWORK IN EXCAVATION	Rs.	850826.05
SECTION-II PLAIN/REINFORCED CEMENT CONCRETE WORK	Rs.	18649247.88
SECTION-III BRICK WORK	Rs.	1990725.40
SECTION-IV WOOD WORK	Rs.	288957.29
SECTION-V STEEL WORK	Rs.	851821.43
SECTION-VI FLOORING	Rs.	4444175.35
SECTION-VII PLASTERING	Rs.	738831.54
SECTION-VIII ALLUMINIUM WORK	Rs.	979645.90
SECTION-IX FINISHING	Rs.	638447.32
SECTION-X WATER PROOFING	Rs.	520328.87
PART -II (SANITARY , P.H & WATER SUPPLY)		
SECTION-I SANITARY & PLUMBING WORK	Rs.	273590.77
SECTION-II WATER SUPPLY	Rs.	97679.69
SECTION-III DRAINAGE	Rs.	761549.68
SECTION-IV DISMANTLING WORK	Rs.	503151.61
PART -III (ELECTRICAL WORK)		
INTERNAL E. I. WORKS		2734800.00
GRAND TOTAL	Rs.	34323778.78
SAYS	RS.	34323800.00
RUPEES THREE CRORE FOURTY THREE LAKH TWENTY THREE THOUSAND EIGHT HUNDRED ONLY.		

PART - I (CIVIL WORK)					
SECTION - I					
EARTHWORK IN EXCAVATION					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Surface dressing of the ground including, removing vegetation and inequalities not exceeding 15cm depth and disposal of rubbish , lead upto 50mtr & lift upto 1.5 mtr.In all kinds of soil.	2000.00	Sqm	5.64	11280.00
2	Earth work in excavation by mechanical means(Hydraulic excavator)/manual means over areas (Exceedeing 30Cm in depth 1.5m in width as well as 10sqm on plan)including disposal of excavted earth lead upto 50m and lift upto 1.5m disposed earth to be levelled and neatly dressed(All kind of soil.)	1144.00	Cum	116.41	133173.04
3	Earth work in excavation in foundation trenches in Ordinary rocks i.e. Disintegrated rock (blasting prohibited) by crowbar, pick axe etc. within initial lift 1.50 mtr , rough dressing to the sides of trench , getting out the excavated rock & disposal of surplus excavated material within 50 mtr of lead including cost of dewatering, shoring, labour T & P tax etc complete in all respect as per the direction of the Engineer -in-charge.	200.00	Cum	182.81	36562.00
4	Extra for every additional lift of 1.5m or part there of.				
a	All kind of soil.	10.00	Cum	29.11	291.06
b	Ordinary or hard soil.	10.00	Cum	52.13	521.29
5	Back filling in all positions and height and descent in foundation pits, pipe trench sewer line around foundation and structure in plinth etc. with approved excavated material obtained from a lead of 50mtr & lift 1.5mtr.including reclaiming from spoils heaps at all height or reclaiming from dumps at all depth cost includes transporting, depositing, filling, in layers of 200mm thick dressing watering and ramming complete with tools , plant & labour.	888.00	Cum	50.77	45083.76
6	Foundation & Plinth filling in layers of 150mm thick good quality river sand including watering and consolidating by mechanical means as per direction of engineer.	985.00	Cum	273.14	269042.90

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
7	Providing and injecting Chemical emulsion chloropyrophos 20% E.C./Biflex or Equivalent for pre-constructional anti-termite treatment and creating chemical barriers as per I.S. 6313 Part-C (of latest edition) in wall trenches, foundation, top surface of plinth, filling, junction of walls and floors along the external perimeter of the building, surrounding of pipes etc complete . The work shall be executed through approved agency/agencies and with guarantee of 10 years. The rate shall be as per plinth area including as directed below.				
	a) Using Chemical Emulsion @ 7.5 Ltr/sqm for				
	i. Back filling immediate contact with masonry foundation. masonry foundation.				
	ii. Junction of walls and floors.				
	iii External perimeter of building.				
	b) Using Chemical Emulsion @ 5.0 Ltr/sqm				
	i. Bottom of side trenches.				
	ii. Top surface plinth filling.	1712.00	Sqm	206.20	353014.40
8	Providing and injecting Chemical emulsion chloropyrophos 20% E.C. for post-constructional anti-termite treatment and creating chemical barriers as per I.S. 6313 Part-C (of latest edition) in wall trenches, foundation, top surface of plinth, filling, junction of walls and floors along the external perimeter of the building, surrounding of pipes etc complete . The work shall be execute through approved agency/agencies and with guarantee of 10 years. The rate shall be as per plinth area .	10.00	Sqm	185.76	1857.60
	using chemical emulsion @2.25 liters along external wall below concrete or masonry apron including drilling and plugging holes.				
	using chemical emulsion @1 liter/hole 300mm c/c below existing floor or masonry apron including drilling 12mm diameter hole and plugging holes.				
	using chemical emulsion @1 liter/hole 300mm c/c below existing masonry including drilling 12mm diameter holes at 45degree and plugging holes full depth with cement mortar (1:2)				
	Using chemical emulsion in kerosene) @ 0.5 liter / hole 150mm c/c at 45degree downward angle to wood work. below existing masonry including drilling 6mm diameter holes at points of contact of wood work and plugging holes full depth with cement mortar (1:2)				
			TOTAL		850826.05

**SECTION - II
PLAIN/REINFORCED CEMENT CONCRETE WORK**

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Supplying, laying and compacting plain cement concrete of following graded aggregate in all foundation, floor, roof screening etc. and at all heights and depth above and below finished plinth level to required levels, slope etc. including curing but excluding the cost of shuttering all as per drawing and direction of engineer, with all material, tools plant and labour.				
a	Below finished plinth level 1:4:8 with 40mm down graded aggregate.	310.00	Cum	3077.31	953966.10
b	Above finished plinth level 1:2:4 with 20mm down graded aggregate.	6.00	Cum	3970.04	23820.24
2	Plinth protection:-Providing and making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 part sand : 6 part 40mm down size aggregate) over 75mm thick bed of dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	215.00	Sqm	267.13	57432.95
3	Providing, laying in position nominal mix(1:1.25:2.5) cement concrete for reinforced cement concrete work including carrying of concrete to site of laying but excluding cost of centering, shuttering , reinforcement , including admixtures in setting of concrete , improve workability without impairing strength and durability as per the direction of Engineer in charge,for all work up to floor V level.				
	R.C.C work as defined by the latest IS 456 in all members like foundation,superstructure,slab,column,beam,lintel,chajja,shelves,windows sills, facia, floor/roof slab, fins, stair, footing, drains, encasing of pipe line etc. including curing but excluding form work and reinforcement. All as per drawing and direction of engineer, all materials ,tools plant and labour complete, in plumb line & level with plastering in cement mortar 1 cement : 3 coarse sand at no extra cost as required.				
a	Up to plinth level (1:1.25:2.5) concrete with 20mm down graded aggregate.	419.00	Cum	4722.54	1978744.26
b	Above finished plinth level (1:1.25:2.5) grade concrete with 20mm down graded aggregate upto floor five level.	600.00	Cum	5713.26	3427956.00

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
4	Supplying and fixing ply and /or steel shuttering for all type of R.C.C work at any location in provision with necessary centering, bracing proping staging (if required) etc. and striking including curved shuttering fin and facia for all plain & reinforced cement concrete works including all chamfer splays, filler keys, wedges proof, mails ,bracing bracket, cutting holes for embedment etc. and applying shuttering oil on shuttering surface in contact with concrete all as per drawing and direction of engineer in charge, all tools plant and labour complete. Rate including providing and laying plastic sheet to make water tight shuttering and removing the same for all type of R.C.C work.				
a	At all depth & any location up to plinth level.	2667.00	Sqm	110.23	293983.41
b	At all heights & any location up to floor V Level ,(with 12mm water proof ply.)	7098.00	Sqm	325.89	2313167.22
5	Providing Precast cement concrete slab with 1:2:4(1cement :2 coarse sand :4 graded stone aggregate 6mm nominal size.)reinforced with 6mm dia mild steel including centering and shuttering ,roughening and cleaning ,cutting cheses in brick masonary /concrete ,fixing and finishing in cement mortar 1:3(1cement : 3coarse sand) etc complete excluding plastering of jambs sills and soffits.				
i)	50mm thick before finishing .	50.00	Sqm	707.76	35388.00
ii)	25mm thick before finishing .	54.00	Sqm	505.55	27299.70
6	Supplying , loading , unloading transporting , straightening, decoiling, cutting, bending ,cranking ,tack welding as necessary placing and fixing in position steel reinforcement including angle /pins provided for approved welded joints at all level above and below finished G.L. for R.C.C and precast R.C.C work including supplying approved 20 SW annealed black binding wire, cover block etc. including all as per drawing and direction of engineer , all material,tools, plants and labour complete.(TMT of TATA/ SAIL)	149.00	M.T	64010.00	9537490.00
			TOTAL		18649247.88

SECTION - III BRICK WORK					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Supplying and construction brick work at any location using best quality locally available bricks with cement sand mortar (1:6) in foundation, superstructure , main hole, duct, drain etc. including fiar cutting, wastage, bounding, plumbing line level, flushing , racking joint, scaffolding and curing all as per drg. and as per direction of the engineer, in charge, with all material, tools, plant, labour complete. all upto floor V level.				
a	At all depth up to finished plinth level.	12.00	Cum	2963.50	35562.00
b	At all heights above finished plinth level up to floor V level.	50.00	Cum	3318.10	165905.00
2	Supplying and construction Fly ash cement bricks(23cmx11cmx7.5cm) work at any location using best quality locally available bricks with cement sand mortar (1:6) in foundation, superstructure, main hole, duct, drain etc. including fiar cutting, wastage, bounding, plumbing line level, flushing, racking joint, scaffolding and curing all as per drg. and as per direction of the Engineer in charge, with all material, tools, plant, labour complete. all up to floor V level.				
a	At all depth up to plinth level	180.00	Cum	2725.58	490604.40
b	At all heights above finished plinth level up to floor V level	410.00	Cum	3060.68	1254878.80
3	Brick work at any location in 1:4 cement mortar in 115mm thick wall with locally available bricks at any location including supplying and placing of two Nos.6mm dia. M.S. bar at every third layer.	10.00	Sqm	371.98	3719.80
4	Fly ash cement brick work at any location in 1:4 cement mortar in 115mm thick wall with locally available bricks at any location including supplying and placing of two Nos. 6mm dia. M.S bar at every third layer	60.00	Sqm	472.89	28373.40
5	Providing and laying 75mm thick brick work in cement motar 1:3(1 cement: 3 coarse sand) in plain or curved wall etc complete in all respects including laying 1 no 6 mm bar at every alternate layers in all floors and heights as per drawing and specification complete.(Reinforcement cost included.)	5.00	Sqm	395.09	11682.00
				Total	1990725.40

SECTION-IV WOOD WORK					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing & fixing in position at any location well dressed naturally well seasoned sal wood of finished cross section (65mm x 125mm), rebated frame to door including 2 coats of hot bitumen applied to rear of frame in contact of masonry / concrete surface, all materials, labour, lead, royalty, T & P etc. complete in all respect as per the direction of Engineer in charge.	0.10	Cum	48600.30	4860.03
2	Providing and fixing 35mm thick flush door shutter , ISI 2200 part-I marked non decorative type solid block board construction with frame of first class hard wood and well matched 3ply commercial veneering with vertical grains or cross bands on both faces of shutter with 1.5mm thick laminate (teak wood) on both side and 35x6mm thick lipping on all exposed side as per specifications mentioned in drawing. Total thickness of 38mm.	58.00	Sqm	3026.77	175552.66
3	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete. second class teak wood 50x20 mm.	160.00	Rmt	142.68	22828.80
4	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15 cm 1:3: 6mix (1 cement: 3 coarse sand: 6 graded stone aggregate 20mm nominal size)	150.00	Each	78.15	11722.50
5	Providing and fixing bright finished IS 12817 marked S.S butt hinges with necessary screws etc Complete 125 x 64 x 2.5 mm (heavy type) welded to door frame where required (approved make and quality)	75.00	Each	41.78	3133.50
6	Providing and fixing 50 mm bright finished stainless steel cup board or ward robe knob with necessary screws (approved make and quality).	50.00	Each	73.10	3655.00
7	Providing and fixing stainless steel handles 150 mm x 16 mm conforming to IS: 4992 with necessary screws. etc complete.	50.00	Nos	74.27	3713.50
8	Providing and fixing 75mm special quality bright finished stainless steel cupboard or wardrobe locks with four levers including necessary screws etc. complete	75.00	Each	120.50	9037.50
9	Providing and fixing bright finished aluminium hanging type floor double door stopper with necessary screws etc. Complete	25.00	Each	80.16	2004.00
10	Providing and fixing bright finished Aluminium hydraulic door closer (Best make of approved quality) with necessary accessories and screws etc. Complete	2.00	Each	2362.68	4725.36
11	Providing and fixing stainless steel tower bolt with necessary screws etc. complete				
a	150 x 10 mm	5.00	Each	98.10	490.50
b	300 x 10 mm	50.00	Each	160.92	8046.00

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
12	Providing and fixing bright finished brass 100mm Mortise latch and lock with six levers and pair of lever handles with necessary screws etc complete (Best make of approved quality) for alluminium door.	1.00	Each	440.37	440.37
13	Providing and fixing PTMT door catcher of length 72mm and ia.of 42mm with suitable washer weighing not less than 33Gms.	25.00	Each	33.70	842.50
14	Providing and fixing curtain rod 20 mm dia of 1.25 mm thick made of chromium plated stainless steel plate with M.S brackets fixed to the wall with stainless steel screw all complete.	10.00	Mtr	203.85	2038.50
15	Providing and fixing factory made UPVC door frame made of UPVC extruded, section having an overall dimension,as below (tolerence \pm 1mm) with all thickness 2mm \pm 0.2mm .Corners of the door frame to be jointed with galvanized brackets and stainless steel screws, jointed and mitred and plastic wilded.The hinge side vertical of the frame reinforced by galvanised M.S tube of size 19mmx19mm and 1mm \pm 0.1mm wall thickness and 3 nos stainless stell hinges fixed to the frame complete as per manufacture specification and direction of Engineer in charge.(Extruded section profile size 42x50mm)	15.00	Mtr	449.19	6737.85
16	Providing and fixing 30mm thick factory made panel UPVC door shutter made of styles and rails of a UPVC hollow section of size 30x60mm and thickness 2mm \pm 0.2mm with inbuilt edging on both sides.The styles and rails mitred and jointed at the corners by means of M.S galvanised/plastic brackets of size 75x220mm having wall thickness 1.0mm and stainless steel screws.The styles of the shutter reinforced by inserting galvanised M.S tubes of size 20x20mm and 1mm \pm 0.1mm wall thickness.The lock rail made up of H section, a UPVC hollow section of size 100x30mm and 2mm \pm 0.2mm wall thickness fixed to the shutter styles by means of plastic /galvanised M.S.U cleats.				
	The shutter frame filled with UPVC multichambered single panel of size not less than 620mm ,having over all thickness of 20mm and 1mm \pm 0.1mm wall thickness with 20mm panel beading of suitable size/glass(4mm thick)/louver section ,louver frame of the suitable size.the panels filled vertically and tie bar at two places by inserting horizontally 6mm galvanised M.S.rod and fastened with nutsand washers complete as per manufacture's specification and direction of Engineer in charge.	4.00	Sqm	2403.21	9612.84

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
17	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS 6315 marked for doors including cost of cutting floors as required embedding in floors and cover plates with brass pivots and single piece M.S Sheet outer box with side plate etc.complete as per direction of Engineer in charge.with S.S cover plate	6.00	Each	2217.23	13303.38
18	Providing and fixing stainless steel aldrop ISI marked of size 250x 16mm fixed to wooden/pvc doors with necessary nuts and screws etc complete	25.00	Each	248.50	6212.50
				Total	288957.29

SECTION-V STEEL WORK					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing & fixing pressed steel door frames conforming to 4351 manufactured from commercial mild steel sheet of 1.25mm thickness including hinges ,jamb,lock jamb,bead and if required angle threshold of mild steel angle section of 50x25mm or base tie of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means adjustable lugs with split end tail to each jamb including steel butt hinges 125mmX64mmx2.5mm thick with mortar guards ,lock strike plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer in charge.				
i	Profile ' B' Confirming IS 4351	201.00	Rmt	345.58	69461.58
2	Providing and fixing ISI marked steel glazed doors, Windows and ventilators of standard rolled steel section(as per IS 1038 with Z or L section) joints mitred and welded with 15x3mm lugs, 10 cm. Long, embedded in cement concrete blocks 15 x 10 x 10 cm of cement concrete 1:3:6 (1cement : 3 coarse sand : 6 graded aggregate20mm nominal size) or with wooden plugs and screws or rawl plug and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of 4mm thick glass panes plain/pin headed with glazing clips & special metal sash putty of approved make complete , including two point nose handle of approved pattern with applying priming coat of approved steel primer, and also including oxidized m.s casement stays (straight peg type) with necessary screws etc(300mm weighing not less than 200 gms.)all complete excluding cost of metal beaing as per direction of engineer in charge(Windows- side hung/fixed glazing)..	30.00	Sqm	1927.21	19272.10
3	Providing and fixing M.S grill of required pattern in frames of windows etc.with M.S flat ,square or round bars etc,all complete. In all floors.				
i	Fixed to steel windows by welding .	3000.00	Kg	74.22	222660.00
ii	Fixed to wall openings with rawl plugs screw etc/ clamp of 150mm long and embeded in c.c(1:3:6)	3000.00	Kg	80.86	242580.00
4	Providing and replacing damaged steel window members with 'Z' or 'L' section or with box or "D" hinges including taking out shutter with frame and refixing the same after repairing including painting the window (cost of replacing glass panes and new fittings such as handle stay etc. to be paid separately) complete as per direction of Engineer in charge.	10.00	Sqm	613.84	6138.40

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
5	Supplying, fitting and fixing of Stainless steel of 302 grade in hand railing using 50mm dia of 2mm thick circular pipe with Balustrade of size 32mm x 32mm solidsquare bar @ 0.90mtr. C/C and square bar bracing of size 32mm x 32mm in stair case as per approved design and specification, buffing, polishing etc with cost, conveyance, taxes of all materials, labour, T&P etc. required for the complete in all respect. (Cost includes S.S. railing only ,cost of balustrads will be paid extra) only length of railing will be taken for payment.	75.00	Mtr	1303.95	97796.25
6	Providing & fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20 x 5 mm size with top and bottom rail of T-iron 40 x 40 x 6mm with 40mm dia. Steel pulleys complete with bolts, nuts locking arrangement, stoppers handles, including applying a priming coat of approved steel primer.	20.00	Sqm	3322.83	66456.60
7	Providing & fixing openable and foldable grill gates / shutter for entrances made of flats, square or round with m.s. handle, locking system (sliding bolt and floor bolt), necessary screws and hinges, fixed to walls by welding with 15x3mm lugs, 10cms long in P.C.C.1:3:6(1 cement:3 coarse sand : 6 graded stone aggregate20 mm nominal size), necessary nuts & m.s. parliament hinge or pivots as required complete including applying priming coat of approved steel	50.00	Sqm	1950.34	97517.00
8	Providing and fixing 1.25mm thick G.I sheet door with frame of 40x40x6mm angle iron and 3mm M.S gusset plates at the junction and corners,all necessary fittings complete,including applying a priming coat of approved steel primer.	12.00	Sqm	1950.00	23400.00
9	Steel work in built up Box trusses including cutting , hoisting fixing in position and applying a priming coat of approved steel primer welded and bolted including special shaped washers etc complete(Hot finished welded type tubes)	5.00	Kg	98.46	492.30
10	Providing and fixing UV stabilised fiberglass reinforced plastic sheet roofing up to any pitch including fixing with polymer coated 'J' or 'L' hooks,bolts & nuts 8mm dia.G.I plain / bitumen washers complete but excluding the cost of purlins ,rafters,trusses etc.The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3 % Ultra -voilet stabiliser in resin system under approximately 2400 psi and hot cured.They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866 .The sheet shall be opaque or translucent ,clear or pigmented,textured or smooth as specified.(2mm thick corrugated (2.5" or4.2" or 6") or step - down (2"or3"or6")as specified.	5.00	Sqm	1209.44	6047.20
				TOTAL	851821.43

SECTION-VI FLOORING					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	cement concrete flooring 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement slurry, but excluding the cost of nosing of steps and cost of glass strip fixing , complete 40mm thick with 20 mm nominal size stone aggregate.	335.00	Sqm	237.98	79723.30
2	Cement plaster skirting (up to 30 cm height) with cement mortar 1:4 (1 cement: 4 coarse sand) finished with a floating coat of neat cement (18 mm thick).	30.00	Sqm	189.16	5674.80
3	Supplying, laying and fixing anti-skid ceramic tiles (300mm x 300mm) size first quality conforming to IS15622 in toilet floors at all heights, to floor surface conforming to drawings and designs set in 20mm thick cement mortar of proportion 1:4 to proper line and slope including cutting to required size and shape and fixing at corners etc. and the joints are to be properly finished with epoxy grout of matching colour and curing complete with cost of all labour, materials, taxes, T&P, conveyance etc. as directed by the Engineer.(All Colours except burgundy, black & bottle green) Basic cost of tile minimum Rs 400.00/sqm.	459.00	Sqm	802.67	368425.53
4	Providing & fixing ceramic glazed tile (300x200mm) size of approved make, conforming , to IS :15622 of approved shade & quality to dado at all heights over a base course of 12mm thick cement mortar (1cement : 3 coarse sand) jointing with grey cement slurry @3.3kg per sqm,pointing with epoxy grout of matching colour and approved manufacture etc. as specified & directed, laid to proper line and plumb, cutting in required size to corners, cost includes all labours, materials, T & P, lead, royalty, tax, curing etc. complete in all respects as per direction of Engineer in charge (Any colour excluding bottlegreen,burgundy,black)Basic cost of tile minimum Rs 389.00/sqm.	509.00	Sqm	735.92	374583.28
5 a)	Kota stone slab flooring over 25 mm thick C.M. 1:4 (1 Cement : 4 Coarse sand) base and jointed with grey cement slurry mixed with pigment to match the including rubbing and polishing complete.. (550 mm x 550 mmx25mm minimum thick, as per design & direction of architect.	1339.00	Sqm	970.73	1299807.47
b)	Kota stone in skirting/dado over 12mm C.M.(1:3)	40.00	Sqm	917.30	36692.00
6	Kota stone slabs 20mm thick in risers and treads of steps on 25mm (average) thick cement mortar 1: 3 (1cement : 3coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing & polishing complete(Single piece of size1800mm x 300mm and 1800 mm x150mm).	470.00	Sqm	917.30	431131.00
a)	Extra for prefinished nosing in treads of steps.	250.00	Mtr	43.21	10802.50

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
7	Supplying & Fixing concrete designer's tile of ultra make polka shade over 20mm thick cement mortar (1 cement : 4 coarse sand) including pointing the joints with white cement and matched pigment in ratio (1:1) complete in all respect including all material, labour, tool plant, tax, lead etc. as per the direction of Engineer in charge.	67.00	Sqm	605.21	40549.07
8	Providing and fixing 40 mm wide and 4 mm thick plain glass strips in joints of flooring with cement mortar 1:3 complete in all respects as per drawing.	500.00	Mtr	37.89	18945.00
9	Providing & laying minim. 16 to 18mm thick plain marble strip border of approved design & quality laid in conjunction with kota stone flooring over a bed of 20mm(minimum) thick sand cement mortar 1:4 (1 cement: 4coarse sand) including pointing with white cement mortar 1:2(1cement : 2marble dust) / (adding pigment where required) rubbing & polishing complete as per pattern shown in drawings and direction complete in all respects. .Approx 50mm to 100mm wide border.				
a)	Rajnagar white plain marble	300.00	Sqm	1166.38	349914.00
10	Supplying , fixing vitrified tile in flooring of size 600mm x600mm, 10mm thick water absorption less than 0.08% confirming to IS :15622 of approved colour & make (V.C Shield) at all heights laid over cement mortar 20mm thick of proportion (1 cement : 4 coarse sand). The joints shall be filled with grout matching the colour of tile .Cost includes all labour, material, Tools plants, curing etc. complete in all respects as per direction of Enginee in charge.	40.00	Sqm	997.73	39909.20
11	Supplying fixing vitrified tile in skirting / dado using 600mm x 600mm, 10mm thick tile, water absorption less than 0.08% confirming to IS :15622 of approved colour & make (V.C Shield) at all heights laid over cement mortar 12mm thick of proportion (1 cement : 3 coarse sand). The joints shall be filled with grout of matching colour of tile .Cost includes all labour, material, Tools plants ,curing etc. complete in all respects as per direction of Engineer in charge .	10.00	Sqm	1459.35	14593.50
12	cement concrete paving with 50mm to 100mmthick cement concrete 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate)with glass strips as separet Recron 3Striangular fiber (cost of glass and fiber will be paid separetly)including finishing complete.	110.00	Cum	4118.57	453042.70
13	Marble stone flooring with 18mm thick marble stone (sample of marble shall be approved by the Engineer in Charge. Over 20mm (average) thick base of cement mortar 1:4 (1 cement : 4 sand) laid and joined with grey cement slurry including rubbing and polishing complete .				
	Makrana white second Quality	200.00	Sqm	1780.81	356162.00

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
14	Providing minimum 20 m.m thick Granite Slab Flooring using approved quality, shade and size of Granite Slab above 0.40sqm specially in KITCHEN PLATFORM ,floors, treads on steps and landings in all floors at all height on 25 m.m thick bed of cement mortar of mix (1:3) laid in proper slope and gradient with screened & washed sharp river sand for mortar and grouted with neat white cement slurry joining the Granite Tile with neat white cement slurry mixed with required quantities of pigments of approved marks to match the shades of the Granite Tile if required including cost, conveyance, loading, unloading, stacking, royalties and taxes of all Materials, cost of all Labour, Sundries, T&P required for the work , Watering,Curing for required days including rubbing mechanically and wax polishing etc. complete in all respect as directed by the Engineer-in-charge.				
	Grinite stone of any colour 8mm thick (mirror polished and machine cut edge.	250.00	Sqm	2237.48	559370.00
15	Providing and mixing RECRON 3S triangular fibre of 6-12mm cut length in pouches of 125mm gram each for mixing in cement concrete / cement plaster as per manufacturers specification as directed by Engineer in Charge.	100.00	Each	48.50	4850.00
			TOTAL		4444175.35

SECTION-VII PLASTERING					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Inside plaster:-Providing 15mm thick cement plaster at any location in cement sand mortar proportion (1 cement: 6 coarse sand) after racking out of joints, roughening the concrete surface, filling porturated surface, fixing wire mesh 200mm wide in case of concrete & brick work joints such that half on each surface fixed by help of nails cost includes of all materials, labour, lead, royalty, T & P, scaffolding, curing etc. complete in all respect as per the direction of Engineer in charge.	2898.00	Sqm	84.69	245431.62
2	External plaster:-Providing 12mm thick Cement plaster at any location in cement sand mortar proportion (1 cement:4coarse sand) racking out joints, roughening the concrete surface, filling porturated surface, fixing wire mesh 200mm wide in case of concrete & brick work joints such that half on each surface fixed by help of nails cost includes of all materials, labour lead royalty T & P scaffolding labour, lead, royalty, T & P, scaffolding, curing, etc. complete in all respect as per the direction of Engineer in charge.	2779.00	Sqm	84.84	235770.36
3	Providing 6mm thick plaster at any location cement plaster in cement sand mortar in proportion (1 cement : 3 fine sand) to ceiling of roof, beams, columns , chajja, soffit of stair case etc. after roughening the surface by proper chiseling ,surface preparation, filling porturated surface etc. cost includes of all materials, labour, lead, royalty, T & P, scaffolding, curing etc. complete in all respect as per the direction of Engineer in charge.	3004.00	Sqm	68.54	205894.16
4	18mm thick cement plaster in two coats under layer of 12mm thick cement plaster (1:5) 1 cement : 5 sand and top layer of 6mm thick cement plaster 1:3 (1 cement : 3 sand) finishing rough with spange	440.00	Sqm	96.31	42376.40
5	Providing and forming drip course of 30 mm wide x 12 mm. Projection in plaster to soffit of projected slab like chajja etc. in all floors at edges with cement mortar 1 : 4 complete as directed for completion of work .	100.00	Rmt	5.47	547.00
6	Providing & mixing integral water proofing compound conforming to IS -2645 to the out side cement plaster work as per manufacturers Specification.for outside plastering (payment will be made after producing invoice of materials).	80.00	Per bag of 50kg	110.15	8812.00
			TOTAL		738831.54

SECTION-VIII ALLUMINIUM WORK					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing and fixing aluminium work for doors and windows ventilators and partitions with extruded builtup standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS 733 and IS 1285 fixed with rawl plug and screw or with fixing clips or with expansion holdfasteners including necessary filling up of gaps at jnction at top and bottom and sides with required PVC /neoprene fit etc aluminium sections shall be smooth rust free straight mitred and jointed mechanically wherever required including cleat angles , Aluminium snap beading for glazing /panelling CP brass /stainless steel screws all complete as per architectural drawings and direction of Engineer in Charge (glazing and panelling to be paid separately):				
i)	Anodize aluminium (anodised transparent or dyed to required shade according to IS 1868,minimum anodic coating of grade AC15)For fixed portion.	200.00	Kg	606.55	121310.00
ii)	For shutters of doors , windows & ventilators including providing and fixing of hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC/neoprene gasket required (fitting shall be paid separately)	10	Kg	653.26	6532.60
iii)	Providing and fixing of glazing in aluminium door window ventilator shutters and partition etc with PVC /neoprene gaskets etc complete as per architectural drawing and the direction of the Engineer in Charge (Cost of aluminium snap beading shall be paid in basic item)With float glass panes of 5.5 mm thickness.	60.00	Sqm	968.73	58123.80
iv)	Providing and fixing aluminium work Fully glazed with 5.0 mm thick glass pane for Sliding windows ventilators (Subframe) (anodised transparent or dyed to required shade according to IS 1868 minimum anodic coating of grade AC15) subframe for windows and ventilators with extruded builtup standard tubular sections of approved make conforming to IS 733 and IS 1285 fixed with rawl plugs and stainless steel screws etc.with rawl plug and screw or with fixing clips or with expansion holdfasteners including necessary filling up of gaps at jnction at top and bottom and sides with required PVC /neoprene fillet etc aluminium sections shall be smooth rust free straight mitred and jointed mechanically wherever required including cleat angles , Aluminium snap beading for glazing /panelling CP brass /stainless steel screws all complete as per architectural drawings and direction of Engineer in Charge (all fittings such as hinges handle and beading etc all are included and measured in Sq.M)	60.00	Sqm	3817.68	229060.80

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
2	Providing and fixing aluminium work Fully glazed with 8mm thick glass pane for doors and windows ventilators and partitions with extruded builtup standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS 733 and IS 1285 fixed with rawl plug and screw or with fixing clips or with expansion holdfasteners including necessary filling up of gaps at junction at top and bottom and sides with required PVC /neoprene fillet etc aluminium sections shall be smooth rust free straight mitred and jointed mechanically wherever required including cleat angles , Aluminium snap beading for glazing /panelling CP brass /stainless steel screws all complete as per architectural drawings and direction of Engineer in Charge (all fittings such as hinges handle and beading etc all are included and measured in Sq.M)				
i)	For Fixed portion only	2.50	Sqm	4974.16	12435.40
ii)	For Openable portion only.	10.00	Sqm	3914.11	39141.10
3	Providing and fixing of Alluminium Composite panel using of 4mm thick exterior Alluminium Composite panel (Alstone /Alcobond /Equivalent brand using 50mm x 25mm aluminium tube,baker rod,silicon sealant ,60mm fastener pressure tape,angle screw vivid and good quality structural silicon tube as per manufacture's specification including cost of conveyance , taxes, of all material ,labour T & P etc .complete in all respects in all floors.	100.00	Sqm	5130.42	513042.20
			TOTAL		979645.90

SECTION-IX FINISHING					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing and laying white cement based wall putty of 1.5mm thickness over a plastered surface to prepare the surface even and smooth complete (Birla, JK, Sika).	1500.00	Sqm	105.79	158685.00
2	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface and even and smooth complete	10.00	Sqm	71.06	710.60
3	White washing with lime to give an even shade New work (three or more coats) mixed with approved adhesive complete to the satisfaction of engineer-in-charge	10.00	Sqm	10.01	100.10
4	Painting two and more coats at any location with Acrylic distemper of Asian/ Nerolac , of approved shade to get an even shade over plastered wall & ceilings over one coat of primer (cost excluded) as per manufacturers specification at any location cost includes all material ,repairing cracks, scaffolding , lead, T&P etc. complete in all respect as per the direction of the Engineer , at all heights and any location of new work.	5400.00	Sqm	32.73	176742.00
5	Applying one coat of cement primer of approved quality and manufacture on wall surface.	10.00	Sqm	26.91	269.10
6	Finishing walls with water proofing cement paint of approved brand & manufacture and of required make to give an even shade new work (three coats) @ 3.84 Kg /10 Sqm(snowcem plus or equivalent complete up to the satisfaction of Engineer-in-charge.	10.00	Sqm	36.13	361.30
7	Applying priming coat with ready mixed zinc chromate yellow primer of proved brand and manufacture on steel / galvanised steel works.	366.00	Sqm	23.36	8549.76
8	Applying ready mixed pink or grey primer of approved and manufacture on wood work (hard and soft wood)	10.00	Sqm	25.33	253.30
9	Painting with ready mixed synthetic enamel paint of approved brand manufacture in all shades to give an even shade. All complete up to the satisfaction of engineer in charge.				
a)	steel work(two coats)	366.00	Sqm	48.96	17919.36
b)	wood work(two coats)	10.00	Sqm	48.96	489.60
c)	Over wall	10.00	Sqm	48.96	489.6
10	Providing and applying two coats of premium quality exterior acrylic emulsion paint 'weather shield max' of ICI India Ltd./Apex Ultima or equivalent of approved shade over a coat of approved primer of same manufacturer at all levels including sand papering, cleaning and preparation of surface.	3000.00	Sqm	91.00	273000.00
11	Providing and applying Acrylic emulsion paint two coats of approved brand and manufacturer over a coat of primer(cost of primer &labour will be paid in separate item) as required to wall ceiling etc. in all floors and heights complete to satisfaction of Engineer in charge.	10.00	Sqm	87.76	877.60
				TOTAL	638447.32

SECTION-X WATER PROOFING					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roof, balconies, terraces etc consisting of following operation:				
1a)	Applying a slurry coat of neat cement using 2.75kg /sqm. Of cement admixed with water proffing compound conforming to IS. 2645 and approved by Engineer -in-charge. Over the RCC slab including adjoining walls upto 300mm height including cleaning the surface befour treatment.				
1b)	Laying brick bats with mortar using broken brichs / brick bats 25mm to 115 mm size with 50% of cement mortar1:5(1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS. 2645 and over 20mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS. 2645 and approved by Engineer -in -charge to required slope and treating similarly the adjoining walls upto 300mm height including rounding of junctions of walls and slabs.				
1c)	After two days of proper curing applying a second coat of cement slurry using 2.75 kg / sqm. Of cement admixed with water proffing compound conforming to IS. 2645 and approved by Engineer-in -charge.				
1d)	Finishing the surfase with 20mm thick jointless cement mortar of mix 1:4 (1 cement : 4course sand) admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge including laying glass fiber cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300mm square 3mm deep.				
1e)	The whole terrace so finished shall be flooder with water for a minimum period of two weeks for curing and for final test.All above operations to be done in order and as directed and specified by the Engineer-in-charge. With average thickness of 120mm &minimum thickness at khura as 65mm.	542.00	Sqm	826.06	447724.52
2	Providing and Filling the Expansion joint with joint sealing compound on polyeurathane based or equivalent including a backup material like Thermocole/Celatex board inside the groove of expansion joints.The width to depth ratio of sealant should be 2:1	30.00	Rmt	1370.72	41121.60
3	Providing and fixing of sheet covering over expansion joints with iron screw as per design to match the colour /shade of wall treatment Aluminium fluted strips 3.15mm thicks 200mm wide.	30.00	Rmt	567.34	17020.20

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
4	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C ,kitchen and the like consisting of.				
4i)	Ist course of applying cement slurry @ 4.4kg/sqm mixed with water proffing compound conforming to IS.2645 in recommended proportions including rounding off junction of vertical and horizontal surface.				
4ii)	IIInd course of 20mm cement plaster 1:3 (1 cement :3 course sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.				
4iii)	IIIrd course of applying blown or residual bitumen applied hot at 1.7Kg per sqm of area.				
4iv)	4th course of 400 micron thick PVC sheet.(Overlaps at joints of PVC sheet should be 100mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm	27.00	sqm	419.65	11330.55
5)	Making khurras 45x45cm with average minimum thickness of 5cm cement concrete 1:2:4 (1 cement : 2coarse sand :4 graded stone aggregate of 20mm nominal size) over P.V.C sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement: 3coarse sand) and a coat of neat cement rounding the edge and making and finishing the outlet complete.	10.00	each	166.32	3132.00
	Notes-All the water profing work should be carried out through specilised application agency)				520328.87

PART-I I (SANITARY , P.H WORK & WATER SUPPLY)					
SECTION-I (SANITARY & PLUMBING WORK)					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Providing, Supplying & Fixing Indian type water closet I.S.I. Marked (confirming to IS : 7231) at all heights of (Parryware/ Cera) make with integral foot rest white vitreous ware with P / S trap (PVC) with 10.0 Ltr capacity low level flushing cistern in white plastic manually controlled device (handle lever) of approved make /shade with all internal fittings etc. & fixtures including making good the damages, cost of all materials, labour, tax, T&P, lead, royalty etc. complete in all respects as per direction of Engineer. White vitreous china Orissa pattern WC pan size (580x440mm) with integral type footrest, 32mm dia flush pipe Eqv. to-Cat no-2092 Orissa pan of Cera. & Prima, cat no 2690 , Flushing Cistern of Cera.				
i)	White Vitreous china Long pan pattern W.C pan of size 580 mm. .	1.00	Each	3469.19	3469.19
2	Providing, Supplying & Fixing European type water closet (EWC) I.S.I. Marked (confirming to IS : 7231) at all heights of Parryware/ Cera make with seat & cover with P / S trap (PVC) with 10.0 Ltr capacity low level flushing cistern in white plastic manually controlled device (handle lever) of approved make /shade with all internal fitting. etc. with all fittings & fixtures including making good the damages , cost of all materials, labour, tax, T&P, lead, royalty etc. complete in all respects as per direction of Engineer. with 32mm dia flush pipe. (Eqv.. to Cat no-2080, Camellia EWC with "P" of Cera)				
i)	W.C. Pan with ISI marked black solid plastic seat and lid.	2.00	Each	3701.49	7402.98
3	Providing and fixing white vitreous china wash basin of approved make with C.I. /M.S. brackets, 15 mm C.P. brass pillar taps 32mm C.P brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required				
i)	Flat back wash basin size 630x450 mm .	1.00	Each	2796.30	2796.30
4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 / 340x410x265mm sizes respectively with 15mm dia P.T.M.T push cock with standard P.V.C. connection pipe and PTMT spreaders with brass unions and G.I. clamps complete. (as per design and drawing) including painting of fittings and brackets, cutting and making good the walls and floors wherever required.	4.00	Each	3338.13	13352.52
5	Providing & fixing 6mm thick beveled edged sheet glass mirror(600x450)mm of approved make with 6mm BWR grade ply backing & teak wood beading four sides ,CP mirror round clamps and making good the damages as per drawing including cost of all materials, labour, lead, T&P, tax, royalty etc. complete in all respects as per direction of Engineer.	2.00	Each	1057.20	2114.40

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
6	Providing and fixing white vitreous china flat type squatting urinal with standard P.V.C. connection pipe and PTMT spreaders with brass unions and G.I. clamps complete, (as per design and drawing) including painting of fittings and brackets, cutting and making good the walls and floors wherever required.	2.00	Each	1500.00	3000.00
7	Providing and fixing 300 x 150 mm Acrylic shelf as per drawing with edges rounded off and fixed to the wall finishing all complete.	1.00	Each	524.45	524.45
8	Providing and fixing PTMT Robe hook with stainless steel screws fixed to wooden door/brick wall all complete.	2.00	Each	100.25	200.50
9	Providing and fixing of following PTMT fixtures complete (fixed to wooden cleats with S.S screws).				
i)	Providing and fixing of PTMT towel rail complete with bracket fixed to wooden cleats with CVp brass screw with concealed arrangement of approved make and brand and quality.600mm x20mm ia CP brass.	6.00	Each	429.12	2574.72
ii)	Providing and fixing of PTMT towel ring Circular shape 200mm dia with a minimum distance of 37mm from wall face with concealed fitting arrangement of approved quality.	2.00	Each	186.17	372.34
10	Supplying & laying of the PVC (SWR) and rigid PVC soil waste and vent pipes of Finolex /Prince/Supreme make of Selffit type/ring fit type as per requirement, on the wall surface and below ground and floor level. The rates includes fixing the pipes on wall surface with the PVC clips/clamps, all necessary fittings, including jointing with rubber ring, rubber lubricant, gasket for PVC (SWR) pipes / solvent cement for rigid PVC pipes to required length.				
	Testing as per the specifications of manufacturer,necessary earthwork in excavation and filling of the pipeline trenches, providing staging and scaffolding as per requirement at site all complete as per direction of Engineer-in-charge are all inclusive in the rate. The rate also includes all labour, material, transportation, lead, lift, ascent, descent, taxes, royalty etc excluding PCC below pipe & encasing etc if required & will be paid in separate item.				
i	110 mm dia PVC (SWR) pipe Class 'A' (with wall thick of 2.20 mm to 2.70 mm)	15.00	Mtr	302.61	4539.15
ii)	75 mm dia PVC (SWR) Pipe Class 'A' (wall thickness of 1.8 mm to 2.20 mm).	15.00	Mtr	189.62	2844.30
iii)	50 mm dia PVC (SWR) Pipe Class 'A' .	5.00	Mtr	137.86	689.30
iv)	150mm dia PVC (SWR) pipe class "A" (with wall thickness of 2.70mm to 3.20mm)	30.00	Mtr	438.83	13164.90
11	Providing and laying 150 mm thick cement concrete 1:5:10 (1 cement:5 fine sand:10 graded stone aggregate 40mm nominal size) around the PVC/ SWR pipes including 150 mm thick bed concrete as per approved design.				
i)	150 mm. dia .	10.00	Each	511.01	5110.10

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
12	Supplying and fixing of rigid PVC fittings of (Finolex / Prince/ Supreme make) in the pipe line both below and above wall/ground with all necessary fittings and earthwork in execution etc. complete as per manufacturer specification. The rate is inclusive of all labour, material, transportation lead, lift, ascent, descent, taxes, royalty etc.				
i)	Nahani trap with jali 110mm x 110mm PVC (SWR/Nabivi) trap as per requirement).	20.00	Each	394.21	7884.20
ii)	Nahani trap with jali 110mm x 75mm PVC (SWR/Nabivi trap as per requirement).	1.00	Each	204.96	204.96
13	Providing and fixing on wall face unplasticised PVC moulded fittings and accessories along with on unplasticised PVC rain water pipes (Finolex/ Prince / Supreme) Class-A conforming to IS : 13592 (Type-A) including jointing with seal ring conforming to IS : 5382 leaving 10mm gap for thermal expansion.				
i)	100mm dia	530.00	Mtr	317.80	168434.00
ii)	Fittings for pipe.110mm dia	176.00	Each	177.15	31178.40
14	Providing & fixing pre polished white marble partition of size 750 x450x 20mm thick with all edges moulded round fix to wall with necessary cutting and making good the damages fix at required height complete.	1.00	Each	938.69	938.69
15	Cutting chases in brick masonry walls for following diameter UPVC pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand).				
i)	75 mm. dia.	1.00	Each	125.74	125.74
ii)	110 mm. dia.	1.00	Each	176.10	176.10
16	Providing and fixing PTMT jali (grating) of approved quality with or without hole for waste pipe for floor.				
i)	100mm To 150mm dia.	20.00	Each	86.14	1722.80
17	Providing & fixing PTMT soap dish holder having length of 138mm , breadth 102mm , height of 75mm with concealed fitting arrangements. Weighting not less than 106gms.	10.00	Each	65.40	654.00
18	Providing and fixing of PTMT waste coupling of approved make and manufacture 31mm.dia. 79mm.long & 62mm breadth as per Engineer in Charge or Architect.	1.00	Each	116.73	116.73
			TOTAL		273590.77

SECTION-II WATER SUPPLY					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	PIPES (TATA MEDIUM) AND FITTINGS :-				
	i) Providing and fixing G.I. Pipes (TATA medium or equivalent) complete with G.I. Fittings in pumps, including cutting and making good the walls painting one coat of enamel paint over a coat of metal primer etc. (internal work).Exposed on wall.				
	a) 25 mm. dia. Nominal bore.	20.00	Mtr	350.98	7019.60
	b) 32 mm. dia. Nominal bore.	20.00	Mtr	403.73	8074.60
	c) 40 mm. dia. Nominal bore.	1.00	Mtr	462.21	462.21
	d) 50 mm. dia. Nominal bore.	1.00	Mtr	608.45	608.45
	ii) Concealed pipe including painting with anticorrosive bit mastic paint, cutting chases and making good the wall.				
	a) 15 mm. dia. Nominal bore.	5.00	Mtr	283.40	1417.00
	b) 20 mm. dia. Nominal bore.	54.00	Mtr	315.03	17011.62
	c) 25 mm. dia. Nominal bore.	16.00	Mtr	404.77	6476.32
	iii) External under ground laying including painting with bit mastic paint necessary earth cutting and filling the trench with sand complete with watering and compaction.				
	a) 32mm.dia Nominal bore.	5.00	Mtr	410.11	2050.55
	b) 40 mm dia Nominal bore.	5.00	Mtr	461.38	2306.90
2	Providing and fixing gun metal gate valve (with ISI mark) with C.I. Wheel of approved quality (screwed end).zolota brand				
	i) 25 mm. dia. Nominal bore.	1.00	Each	825.58	825.58
	ii) 32 mm. dia. Nominal bore.	1.00	Each	1291.84	1291.84
	iii) 40 mm. dia. Nominal bore.	1.00	Each	1676.65	1676.65
	iv) 50 mm. dia. Nominal bore.	1.00	Each	2514.44	2514.44
	vi) 80 mm. dia. Nominal bore.	1.00	Each	6410.14	6410.14
3	Providing and fixing C.I. Sluice valves (with cap) complete with bolts, nuts, rubber insertions etc (the tail pieces if required will be paid separately).				
	i) 80 mm. diameter.	2.00	Each	6300.44	12600.88
4	Providing and fixing PTMT bib cock (long body) of approved quality conforming to IS:8931				
	i) 15 mm. dia. Nominal bore.bibcock (long body/short body)	10.00	Each	773.85	7738.50
5	Providing and fixing PTMT angle stop cock for cistern, basin mixer and geyser points of approved quality conforming to IS:8931				
	i) 15 mm. dia. Nominal bore.	10.00	Each	160.36	1603.60
6	Providing and fixing PTMT extension nipple of (15mm dia)approved make.				
		4.00	Each	59.68	238.72

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
7	Providing and fixing shower set comprising of 1 no.PTMT rainshower 200mm dia. , wall mixer with L bend.etc complete.	8.00	Each	1511.00	12088.00
8	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete. Semi rigid pipe.				
i)	32 mm. dia.	10.00	Each	255.86	2558.60
9	Providing and fixing PTMT connection pipe for sink, wash basin, cistern with c.p. brass nuts(15mm dia) complete.(45cm long)	12.00	Each	70.15	841.76
10	Providing and fixing PTMT push cock 15mm nominal bore,98mm long (weight 100gm minimum) for urinal	4.00	Each	113.90	455.60
11	Providing making connection of G.I distribution branch with G.I main of following size by providing and fixing tees including cutting and threading the pipes complete.(50 to 80mm dia.)	1.00	Each	651.73	651.73
12	Supplying and fixing of HDPE water storage tank including hoisting and placing in proper position,complete as per direction of Engineer -in-charge. (50 to 80 mm nominal bore)	28.00	Liter	7.01	196.28
13	Providing & Fixing PTMT ball cock of approved quality, colour & make complete with epoxy coated aluminium rod with L.P/S.P.H.D Plastic ball, 25 mm nominal bore 125 mm long weighing not less then 440 gm.	1.00	Each	560.12	560.12
			TOTAL		97679.69

SECTION-III DRAINAGE					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	STONE WARE PIPES AND FITTINGS				
	Providing laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement:1fine sand) including testing of joints etc. complete.				
i)	230 mm. dia.	5.00	Mtr	965.61	4828.05
ii)	150 mm. dia.	5.00	Mtr	507.21	2536.05
2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) upto haunches of S.W. / P.V.C. pipes including bed concrete as per standard design.				
i)	230 mm. dia.	5.00	Mtr	652.17	3260.85
ii)	150 mm. dia.	5.00	Mtr	511.01	2555.05
3	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with bricks of class designation 75 and water tight C.I. cover with frame of (300mm x 300 mm) size the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design including necessary excavation, dewatering, refilling, watering, ramming and removing the surplus excavated material and making good the same complete as required.				
i)	180 x 150 mm size P type with class 75 bricks.	20.00	Each	1873.90	37478.00
4	Constructing brick masonry inspection chamber of the following sizes in brick work of class 75 in cement mortar 1:4 (1 cement: 4course sand), R.C.C. top slab 150mm thick with 1:2:4 mix (1cement : 2 coarse sand : 4 graded stone aggregate 20mm. nominal size), foundation concrete 200mm thick 1:4:8 mix (1 cement : 4 coarse sand stone aggregate 40 mm nominal size), inside plastering 12mm thick 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement & making channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement , proper water proofing to ensure no ground water seepage in the manhole, PVC foot rests at 300 mm spacing, benching , including necessary centering and shuttering, reinforcement, excavation in all kinds of soil, back filling , dewatering, curing,watering, ramming and removing the surplus excavated earth, making good the same complete as required.				
i)	Inside size (90 x 80)cm and 45cm deep including C.I. cover with frame(light duty) 455 x 610 mm internal dimensions total weight of cover and frame to be not less than 38 Kg (weight of cover23kg & weight of frame15 kg).	5.00	Each	4562.49	22812.45
ii)	Inside size 120 x 90 cm and 90 cm deep including C.I. Cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg).	1.00	Each	7914.41	7914.41

SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
5	Extra for depth for manholes with F.P.S. brick class designation 75.				
i)	Size (80X90)cm	1.00	Mtr	4120.91	4120.91
ii)	Size (120X90)cm	1.00	Mtr	4932.44	4932.44
6	Providing and laying non-pressure NP2 class(light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1 : 2 (1 cement : 2 fine sand) including testing of joints etc. complete.				
i)	250mm dia R.C.C pipe	10.00	Mtr	705.04	7050.40
ii)	150mm dia R.C.C pipe	5.00	Mtr	506.81	2534.05
7	Providing and fixing in position precast FRP manhole cover and frame of required shape and approved quality.				
i)	Circular shape 560 mm internal diameters.	2.00	Each	876.59	1753.18
8	Providing and constructing brick drain as per standard slope and design with a layer of 10cm thick and 75cm wide cement concrete 1:4:8 and K.B Brick work in cement motar (1:6),23cm width on either sies with depth 7.5cm to 30cm including cement plaster (1:6) with cement punning .(Section of Drain 250X300mm)etc complete in all respect as per direction of Engineer In charge.	800.00	Mtr	748.37	598696.00
9	Providing M.S footrests with anticorrosive bit mastic including fixing in manholes with 20x20x10cm cement concrete blocks 1:3:6 (1 cement : 3 sand : 6 coarse aggregate) as per standard design.	15.00	Nos.	129.39	1940.85
10	Making soakpit 2.5mtr diametr 3.0mtr deep with 45x45cm dry brick honey comb shaft with bricks of class designation 75 and SW drain pipe 100mm diameter 1.8mtr long complete as per standard design. (with 75mm thick R.C.C precast cover slab)	3.00	Nos.	19712.33	59136.99
				Total	761549.68

SECTION-IV DISMANTLING WORK					
SL.NO	DESCRIPTIONS OF ITEM	QTY	UNIT	RATE Rs.	AMOUNT Rs.
1	Dismantling of existing plinth protection/AS flooring in all floors including costs of all labour T.P complete with removal of debris from site up to a lead of 100mtr & stacking the necessary materials as per instruction of site Engineer-in-charge/Architect.	3400.00	Sqm.	29.59	100606.00
2	Dismantling of existing R.C.C work at all height in all floors including cost of all labour T & P complete with removal of debris from site up to lead of 100mtr and stacking the necessary materials as per instruction of site Engineer-in-charge/Architect..	22.00	Cum.	591.38	13010.36
3	Dismanting of existing plaster, raking out the joints in all floors including cost of all scaffolding T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials.	4125.00	Sqm.	8.99	37083.75
4	Dismantling of existing brick work in all floors including costs of all labour T.P complete with removal of debris from site up to a lead of 100mtr & stacking the necessary materials as per instruction of site Engineer-in-charge/Architect.	150.00	Cum.	342.07	51310.50
5	Transportations of earth debris construction materials by mechanical means including loading unloading & leveling at specific location up to lead 5Km beyond initial lead.	440.00	Cum.	85.00	37400.00
6	Dismantling of existing P.C.C (1:4:8) in all floors including cost of all scaffolding & labour T & P complete with removal of debris from site up to lead of 100 mtr and stacking the necessary materials as per instruction of site Engineer/Architect.	50.00	Cum.	249.75	12487.50
7	Removal of old paints/flakes of paint from the surface with wire brush for application of new paint complete to the satisfaction of engineer-in-charge/Architect	16500	Sqm.	4.93	81345
8	Removal of old paints from wood/iron work by using sand paper to make the surface ready to for application of new paint complete to the satisfaction of engineer-in-charge/Architect	3300.00	Sqm.	6.55	21615.00
9	Removal of existing iron doors windows grills etc. complete including cost of all labour & material ,making good the damages.	50.00	Each	69.57	3478.50
10	Dismantling of existing tile flooring & dado in all floors including cost of all scaffolding & labour T & P complete with removal of debris from site up to lead of 100 mtr and stacking the necessary materials as per instruction of site Engineer/Architect.	1100.00	Sqm.	17.01	18711.00
11	Dismantling and removing of 2.5cm thick grading concrete from roof slab cleaning the surface lowering and removing debris with in 50mtr lead.	3400.00	Sqm.	29.59	100606.00
11	Removing of old tarfelt from roof slab cleaning the surface , lowering and removing the debris with in 50mtr lead	1100.00	Sqm.	23.18	25498.00
				TOTAL	503151.61

Approved List Manufacturers/ Brand for Civil Works

Approved List to be used in works shall conform to Indian Standards Specification as published from time to time (and in the absence thereof as approved by Engineer – in –charge) in general the mode of measurement of Civil engineering works shall be guided by I.S.I CODE No- 1964 (Revised) for Indian standard Method of measurement of building work.

SL.NO	DESCRIPTION	APPROVED MAKE
1	Grey Cement : (43 grade or 53 grade) ,	Konark (OCL), Ultratech.
2	White Cement Putty.	Birla White,Birla White putty.
3	Steel :	TATA/SAIL
4	Clay Brick: common brunt building bricks.	Reputed brand approved by project Engineer -in charge and Architect.
5	Pressed Steel frames for Doors	Approved by Architect / Consultant & Engineer-in-Charge.
6	Flush Door Shutter	Green Ply,Century, Archid ply,Duro,Bhutan Board & Equivalent.
7	Particle Boards /Block Boards(Ward robe Shutters and Kitchen	Novapan,Bhutan Board & Equivalent.
8	Glass (Plain / Pin Headed)	Modi Float.
9	Aluminium Hardware / Fittings	Argent /Classic (ISI marked anodic coating not less than grade AC as per IS 1868) heavy type.
10	Brass Mortice Lock & Latches	Godrej or equivalent.
11	Floor type Hydraulic door closer (Floor spring)	Everite / Hyper
12	Aluminum door ,windows and ventilator sections.	Jindal /Indal /Hindalco
13	Water proofing material /compound	CICO -I / Sikaflex /Sikalatex / Dr.fixit /Plastocrete Plus /Fairmate.
14	Ceramic Glazed tile.	Kajaria / Somany /Nitco /Euro/Johnson/Equivalent.
15	Ceramic Tile(Non -Skid)	Kajaria / Somany /Nitco /Euro/Johnson/Equivalent.
17	Cement Concrete (Chequered) Tile	Nitco / Bharat /Equivalent.
18	Synthetic Enamel paint	Berger / Asian / Equivalent.
19	Oil Bound Distemper	Berger / Asian / Equivalent.
20	Plastic Paint	Berger / Asian / Equivalent.
21	Vitrified Tiles	Kajaria / Somany /Nitco /Equivalent.
22	Interlocking Grass pavers	Nitco /Equivalent.
23	Any Other Item	On Approval of Architect / Consultant or Engineer -in charge.

Approved List Manufacturers/ Brand for P.H. Works			
1	Vitreous china sanitary wares	Parryware / Cera /Hindware	
2	C.P fittings /mixtures	MARC / Plumber	
3	Urinal / W.C flushing system	MARC / Plumber	
4	Fire clay sink	Sanfire /Johnson pedder /Parryware/Hindware	
5	Stainless steel sink(Saleam steel)	Nirali / /Parry/Frake	
6	Ballvalves / NRV / Strainer / PRV	CIM /Leader / Audco / Zaloto	
7	C.I Pipes -IS -1239	JINDAL(HISSAR) /Prakash -Surya /Tata (medium)	
8	G.I Fittings -IS -1239	Unco/R brand /Unik /Zaloto/Tata /Bansal	
9	C.I pipes (Class La/A/B) -IS -1536	Electrosteel/Keshoram /Hindustan /Neco	
10	D.I pipes -IS -8329	Electrosteel/Jindal/Equivalent	
11	C.I pipes(Centrifugal Cast) -IS -8329	Neco/Equivalent	
12	S.W pipes /Gully Traps -IS -651	Burn / Perfect or I.S.I marked / Equivalent	
13	EWC plastic seat cover	Parryware / Cera / Hindware / Commander	
14	Over head tanks	Sintex / Equivalent	
15	S.S Floor Gratings / Clamps	Chilly / Equivalent	
16	S.S liquid soap dispensor / Hand drier	Impulse / Toshi /Utec / Equivalent	
17	Sluice/ Butterfly / Nonreturn Valves	Kilosker / Leader / CIM /Jalot/ Equivalent	
18	R.C.C Pipes -IS 458	Indian hume pipe / Jain spun /Daya spun/ Equivalent	
19	Submersible pump for water supply	Ksb / Grundfoss / Crompton Graves / Equivalent	
20	Monoblock pump for water supply	Kilosker / Crompton Graves / Equivalent	
21	Any other items	On Approval of Architect / Consultantor Engineer in charge.	
22	U.P.V.C Pipes (S / W /R)	Prince /Supreme /Finolux	
23	Gunmetal valves (Fullway ,Check &Globe)	Leader /Zuloto (with ISI Mark) Sant	
24	Mirrors	Float glass (Modiguard /AGI /Equivalent.	

Approved List Manufacturers/ Brand for P.H. Works					
25	C.I manhole covers				Neco /Silc /Equivalent
26	Concrete manhole covers SFRC				CICO /Equivalent
27	Chemical doser.				Asialmi /Prominent /Ion Exchange /Equivalent
28	PVC Fittings				Prayag /Equivalent
29	Rressure gauge				H.Guru
30	Level indicator				RM or Equivalent approved make
31	Level indicator				RM or Equivalent approved make
32	Air relief valves				RB / Zoloto
33	Water meter				Dasmesh /Capsstain
34	PVC Encapsulated footrest				KKM /Equivalent
35	C.I Butterfly Valve				Key stone /Kiloskar / Castle
The choice of the final makes shall be made by the owner / consultant					
The samples or cat. No.of all type of sanitary fixtures, C.P fitting &pumps should be approved before execution.					

PART-B
ESTIMATE FOR THE INTERNAL
ELECTRICAL WORKS

PART -III (ELECTRICAL WORK)					
Estimate for the Internal E.I. Works of Dinning of KMS Hall of Residence, NIT at Rourkela					
SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
A	Internal Electrification				
1	Wiring				
1.1	Wiring to light, with 1.5sqmm FR PVC insulated 1100 volt grade multistranded copper conductor wire for phase, neutral and earth continuity conductor from switch board upto points including circuit wiring with 2(1x2.5)+1(1x1.5) from BDB to Switch Board run inside 2mm thick PVC conduit pipe of rquired sizes recessed in wall/ column/ ceiling of the building including supply of materials such as flush type piano switches, GI concealed box, wire, ceiling rose, angle / batten holder, m.s. junction box, pull box, PVC conduit accessories, etc as per technical specifications complete with making good the damages caused as required and as per direction of Engineer-in-charge.				
(a)	Single light point or first light point of group control controlled by one 5A switch	181.00	Nos	610.00	1,10,410.00
(b)	Subsequent light point for the group of lights	57.00	Nos	580.00	33,060.00
(c)	Ceiling fan point including flush type stepped fan regulator & fan hook made out of 12mm plain round steel .	152.00	Nos	940.00	1,42,880.00
(d)	Exhaust fan point	10.00	Nos	610.00	6,100.00
(e)	5A plug on same board	39.00	Nos	202.00	7,878.00
(f)	5A plug on separate board	12.00	Nos	658.00	7,896.00
1.2	Supply, delivery, installation & testing of 5 / 15 ampere plug boards consisting of a 15 amp flush type piano switch with indicator and a 5/15 amp flush type piano plug socket fixed on GI concealed box including interconnections and making good the damages caused complete as required and as per direction of Engineer-in-charge.				
(a)	1no. 15A plug point in a separate board (For PPs)	40.00	Nos	515.00	20,600.00
1.3	Supply, delivery, installation & testing of 20A Industrial socket board consisting of 1 No 20-A SP MCB and 1 No 20A SPN metal clad industrial plug socket mounted on a ms board with hinged door including interconnections and making good the damages caused complete as required and as per direction of Engineer-in-charge.				
(a)	1no. 20A SP Industrial socket board (For PPs in Kitchen)	6.0	Nos	1,720.00	10,320.00
1.4	Supply, delivery, installation & testing of 20A Industrial socket board consisting of 1 No 20-A TP MCB and 1 No 20A TPN metal clad industrial plug socket mounted on a ms board with hinged door including interconnections and making good the damages caused complete as required and as per direction of Engineer-in-charge.				
(a)	1no. 20A TP Industrial socket board (For 3Ph Equipments in Kitchen)	3.00	Nos	2,990.00	8,970.00

SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
1.5	Wiring for circuits and submain with following number & sizes of FR PVC insulated 1100 volt grade multistranded copper conductor wire run inside 2mm thick PVC conduit pipe recessed in ceiling/ column/ walls of building including supply of all materials such as wires, PVC conduit pipe & accessories, ms junction box & pull box etc complete with making good the damages caused as required and as per direction of Engineer-in-charge.				
(a)	2 numbers single core 2.5 sqmm copper wire for phase & neutral and 1 number single core 1.5 sqmm copper wire for earth continuity conductor.(for Lighting ckt/ 15A plug boards)	1925.00	Mtr	163.00	3,13,775.00
(b)	2 numbers single core 2.5 sqmm copper wire for phase & neutral and 1 number single core 2.5 sqmm copper wire for earth continuity conductor.(for 6/ 16A plug boards)	450.00	Mtr	173.00	77,850.00
(c)	2 numbers single core 4.0 sqmm copper wire for phase & neutral and 1 number single core 2.5 sqmm copper wire for earth continuity conductor	600.00	Mtr	198.00	1,18,800.00
(d)	2 numbers single core 4.0 sqmm copper wire for phase & neutral and 1 number single core 4.0 sqmm copper wire for earth continuity conductor .(For 20A Industrial socket outlet boards indise Kitchen),	150.00	Mtr	210.00	31,500.00
(e)	4 numbers single core 6.0 sqmm copper wire for phase & neutral and 2 number single core 4 sqmm copper wire for earth continuity conductor.(BDB-L1/L2 , BDB-Gym),	100.00	Mtr	403.00	40,300.00
(f)	4 numbers single core 4.0 sqmm copper wire for phase & neutral and 2 number single core 4 sqmm copper wire for earth continuity conductor.(For 3Phase outlet boards indise Kitchen),	300.00	Mtr	325.00	97,500.00
(g)	4 numbers single core 10.0 sqmm copper wire for phase & neutral and 2 number single core 6 sqmm copper wire for earth continuity conductor (for BDB pantry)	50.00	Mtr	641.00	32,050.00
1.6	Supply & fixing of telephone outlet boards containing a flush type telephone cord outlet fixed on sheet steel box including laying of PVC conduit pipes and making good the damages caused complete as required and as per direction of Engineer-in-charge.	1.00	Nos	147.00	147.00
1.7	Wiring to telephone socket outlet from junction box with 0.5mm twin pair copper conductor wire run inside pre-laid PVC conduit pipe complete including termination, testing etc complete as required and as per direction of Engineer-in-charge.	50.00	Mtr	23.00	1,150.00
1.8	Supply, delivery and laying of following sizes of 2mm wall thicknees rigid PVC conduit concealed in wall/ column/ roof slab of the building or mounted on surface alongwith other accessories and 18 swg GI fish wire complete for telephone / TV / Circiut or Submain wiring as required and as per direction of Engineer-in-charge.				
(a)	19mm dia	50.00	Mtr	46.00	2,300.00

SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
1.9	Supply, laying & testing of following sizes PVC sheathed, strip/ wire unarmoured Copper conductor control cable of 1100 volt grade laid directly in ground/ on surface of wall/ existing / hume pipe/ through G.I. pipe/PVC pipe as the case may be but excluding the cost of G.I. pipe/PVC pipe complete as required and as per direction of Engineer-in-charge.				
(a)	3 core x 2.5 sqmm YY	120.00	Mtr	165.00	19,800.00
1.10	Supply of materials and end termination of following cables including supply of double compression brass cable glands, cable sockets etc complete as required and as per direction of Engineer-in-charge.				
(a)	3 core x 2.5 sqmm YY	16.00	Nos	50.00	800.00
1.11	Supply , Laying & testing of following size of XLPE insulated, PVC sheathed, round/strip armoured aluminium conductor power cable of 1100 volt grade clamped on surface of wall/ column/ existing RCC/ stone ware/ masonry cable trench/ cable tray/ through G.I. pipe/ hume pipe as the case may be, including cost of saddles/ clamps/ markers etc but excluding the cost of G. I. pipe/ hume pipe complete with making good the damages caused and returning the balance unused cables to stores as required and as per direction of Engineer-in-charge.				
(a)	4 core x 95 sqmm A2XFY	250.00	Mtr	756.00	1,89,000.00
1.12	Supply of materials and end termination of following cables including supply of double compression brass cable glands, cable sockets etc complete as required and as per direction of Engineer-in-charge.				
(a)	4 core x 95 sqmm A2XFY	6.00	Nos	450.00	2,700.00
2.	<u>Distribution Boards</u>				
2.1	Supply, delivery, installation, testing & commissioning of L.T. indoor floor/ wall mounted type distribution boards made out of 2 mm thick CR sheet metal cubicle fixed on m.s. channel base, duly acid treated for derusting, primed and painted with 2 coats of enamel paint of approved shade; dust, damp & vermin proof ; having hinged door and compartmental arrangement for each equipment & busbar chamber on the top of the panel with busbars(Red, Yellow, & Black coloured) running horizontally; having provision for cable/ conduit entry, earthing studs as per specification mentioned below duly factory wired conforming to the relevant ISS and as per special conditions of contract making good the damages caused complete as per the direction of Engineer-in-charge.				

SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
	Wires/Busbars sizes for Main busbars 1. For 200A MCCB=4nos. 40x5mm E.C strips 2. For 100A MCCB=4nos. 25x4mm E.C strips 3. For 63A 3PN MCB=4nos. 25x3mm E.C strips 4. For 40A 3PN MCB=4nos 16sqmm 1.1KV grade FR PVC insulated multistranded copper conductor wires. 5. for32A 3PN MCB=4nos. 10sqmm 1.1KV grade FR PVC insulated multistranded copper conductor wires. NOTE:- Colours coded wires such as Red,Yellow,Blue Black & Green for Phases,Neutral&earth shall be used for the internal wiring of the panel. MCCB's connected with spreader links.				
(a)	MDB (Dinning Hall)				
	Incomer: 1no.200A 3P MCCB with adjustable thermal setting				
	Bus bar: 4 nos. 40x5mm E.C strips				
	Outgoing: 2no.100A 3P MCCB with adjustable				
	2 Nos 40A 3PN MCB 'C'				
	5 Nos 32A 3PN MCB 'C'				
	3 Nos 25A 3PN MCB 'C'				
	9 Nos 25A SPN MCB 'C' as per SLD.				
	Instruments: 3 nos.LED type phase indicating lamps with control fuses & toggle switch.				
	1 no.100/5A CT operated ammeter with selector switch				
	1 nos.digital type 0-500V a c voltmeter with selector switch & control fuses.	1.0	Set	1,61,800.00	1,61,800.00
(b)	DB-P (Kitchen)				
	Incomer: 1no.100A 3P MCCB with adjustable thermal setting				
	Bus bar: 4 nos. 25x4mm E.C strips				
	Outgoing: 7 Nos 20A 4P MCB 'C'				
	6 Nos 16A 2P MCB 'C'				
	6 Nos 10A 2P MCB 'C' as per SLD.				
	Instruments: 3 nos.LED type phase indicating lamps with control fuses & toggle switch.				
	1 no.100/5A CT operated ammeter with selector switch				
	1 nos.digital type 0-500V a c voltmeter with selector switch & control fuses.	1.0	Set	77,000.00	77,000.00
2.2	Supply, delivery, installation, testing & commissioning of L.T. indoor type wall mounted original factory made metal one way enclosures for power supply to different equipments.				
(a)	Metal one way enclosure with 32A 4P MCB 'C'	3.0	Nos	2,600.00	7,800.00

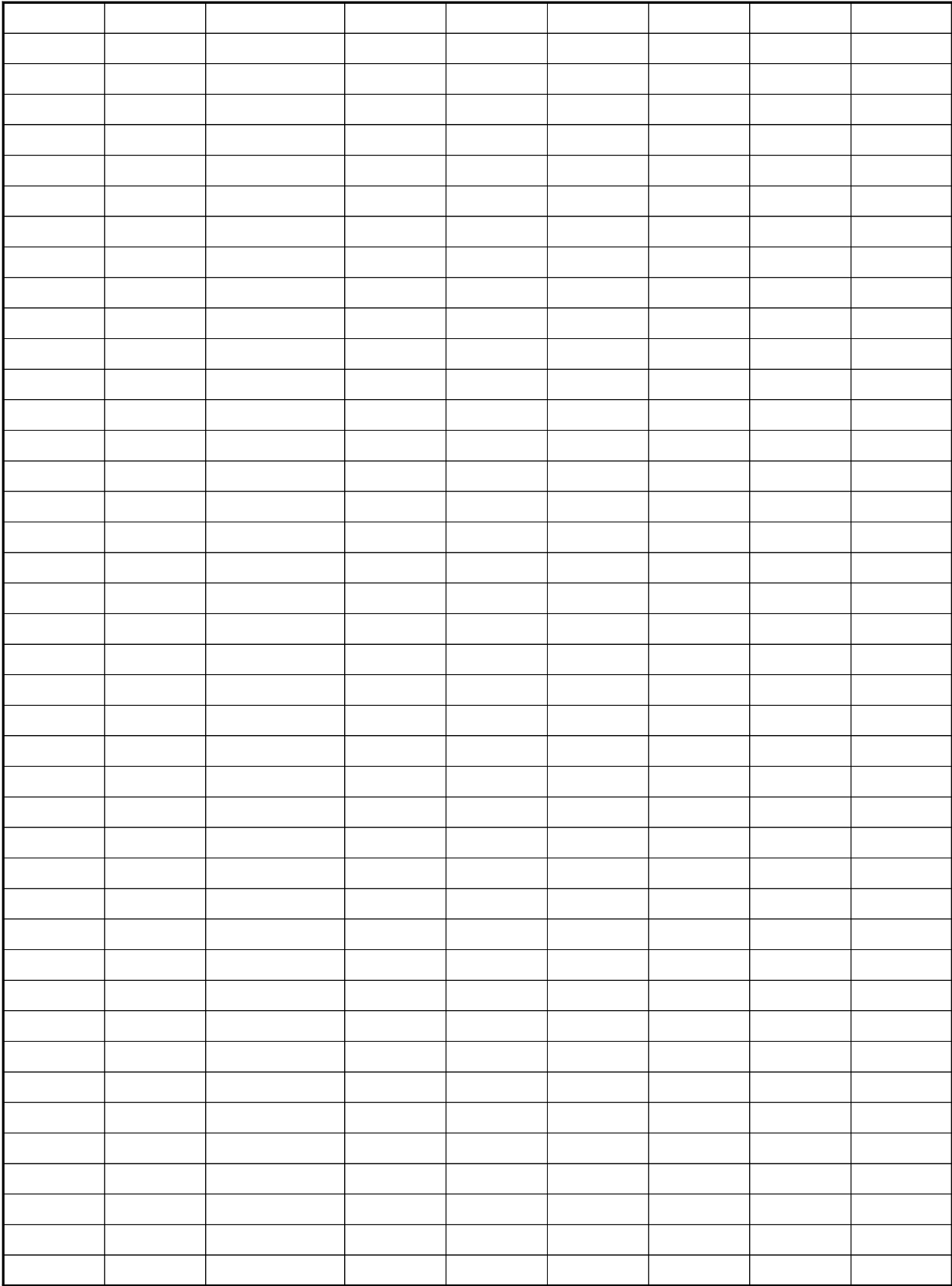
SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
2.3	Supply, delivery, installation, testing & commissioning of L.T. indoor wall mounted double door type distribution boards of original factory made enclosures of the same brand as the MCB conforming to the relevant ISS and as per special conditions of contract making good the damages caused complete as per the direction of Engineer-in-charge.				
(a)	BDB-P1 (Pantry)				
	Incoming: 1 No 40A 4P MCI				
	Outgoing : 3 Nos 40A 2P RCCB (100mA) each followed 4 Nos 6-32 Amp 1P MCB 'C' as per SLD	1.0	Set	27,900.00	27,900.00
(b)	BDB-P2 (Gym)				
	Incoming: 1 No 32A 4P MCI				
	Outgoing : 3 Nos 25A 2P RCCB (100mA) each followed 4 Nos 6-32 Amp 1P MCB 'C' as per SLD	1.0	Set	26,300.00	26,300.00
(c)	BDB-L1/L2 (GF) (4way 7 segment TPN DB)				
	Incoming: 1 No 32A 4P MCI				
	Outgoing : 3 Nos 25A 2P RCCB (30mA) each followed 6 Nos 6-32 Amp 1P MCB 'C' as per SLD	2.0	Set	26,300.00	52,600.00
(d)	BDB-L3/L4 (GF) / BDB-L5/L6/L7(1F) (12 way SPN DB)				
	Incoming: 1no 25A 2P RCCB (30mA)				
	Outgoing : 8 Nos 6-32 Amp 1P MCB 'C' as per SLD	5.0	Set	9,900.00	49,500.00
3	<u>Fittings & Fixtures</u>				
3.1	Supply & fixing of 1x18 watt CFL lamp on existing Angle/batten holder	6.0	Nos	198.00	1,188.00
(a)					
(b)	Supply & Fixing of 1x28 W T5 FTL in CRCA steel sheet with epoxy coated body and cover channel fittings of pf not less than 0.95 and THD not more than 10 % directly & testing & making connection from suitable point outlet with supply & connection with 3core 0.5sqmm unarmoured round flexible copper cord complete as required and as per direction of Engineer-in-charge.	149.0	Nos	890.00	1,32,610.00
(c)	Supply & Fixing of 1x28 W T5 FTL in CRCA steel sheet with epoxy coated body and cover channel fittings of pf not less than 0.95 and THD not more than 10 % to be suspended from the ceiling of building by providing 2 numbers 16 swg m.s. conduit down rod of 900mm upto 1000mm long & fixing of m.s. conduit down rod, ball sockets, making connection from suitable point outlet with 3core 0.5sqmm unarmoured round flexible copper cord, making good the damages caused complete as required and as per direction of Engineer-in-charge.	6.0	Nos	1,570.00	9,420.00

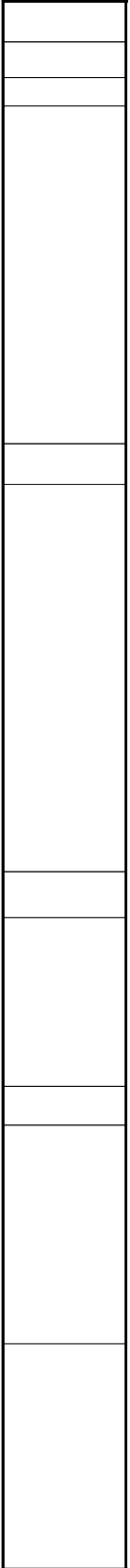
SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
(d)	Supply & Fixing of 1x28 W T5 FTL in CRCA steel sheet with epoxy coated body and cover channel fittings of pf not less than 0.95 and THD not more than 10 % to be suspended from the ceiling of building by providing 2 numbers 16 swg m.s. conduit down rod of 3000mm upto 3500mm long & fixing of m.s. conduit down rod, ball sockets, making connection from suitable point outlet with 3core 0.5sqmm unarmoured round flexible copper cord, making good the damages caused complete as required and as per direction of Engineer-in-charge.	75.0	Nos	2,240.00	1,68,000.00
(e)	Supply & Fixing of 1200mm energy efficient Ceiling Fan of BEE 5 star rating with standard length of down rod (300mm),testing & making connection from suitable point outlet with supply supply & connection with 3core 0.5sqmm unarmoured round flexible copper cord complete as required and as per direction of Engineer-in-charge.	70.00	Nos	1,910.00	1,33,700.00
(f)	Supply & Fixing of 1200mm energy efficient Ceiling Fan of BEE 5 star rating , to be suspended from the ceiling of building by providing 15mm dia heavy gauge G.I pipe as fan down rod for a length from 900mm upto 1000mm long including painting etc & making connection from suitable point outlet with supply & connection with 3core 0.5sqmm unarmoured round flexible copper cord complete as required and as per direction of Engineer-in-charge.	12.0	Nos	2,050.00	24,600.00
(g)	Supply & Fixing of 1200mm energy efficient Ceiling Fan of BEE 5 star rating , to be suspended from the ceiling of building by providing 15mm dia heavy gauge G.I pipe as fan down rod for a length from 3000mm upto 3500mm long including painting etc & making connection from suitable point outlet with supply & connection with 3core 0.5sqmm unarmoured round flexible copper cord complete as required and as per direction of Engineer-in-charge.	70.0	Nos	2,390.00	1,67,300.00
3.2	Supply & Fixing of Energy saving 90watt LED street light luminaires with IP 65 or 66 protection to deliver an average light out put to all parts of the terrace to be fixed on the end of single arm bracket mounted on parapet wall of building complete with connection from terminal box to the luminaries with the help of 2.5 Sq.mm 650/1100 Volt grade 3 core flexible copper cable, PVC insulated and sheathed conforming to IS:694, complete with supply of all materials such as luminaries with control gear, lamp, connecting wires and all accessories and sundries as required for the work and as per direction of Engineer-in-charge.	8.0	No	33,500.00	2,68,000.00

SINo	DESCRIPTION	QTY	UNIT	Supply of Materials	
				RATE Rs.	AMOUNT Rs.
3.3	Supply, delivery, installation & testing of following sweeps and speed of double ball bearing exhaust fans suitable for operation at 250 volt, 50 Hz, a.c. supply complete with a set of propeller metallic blade, tripod leg for mounting of motor, ring frame, gravity louvre complete assembly including supply of sundry materials, making hole of suitable size for housing of exhaust fan, making connection from suitable point outlet, making good the damages caused complete as required and as per direction of Engineer-in-charge.				
(a)	300mm sweep, 1400 rpm.	10.0	Nos	2,190.00	21,900.00
3.4	Supply, delivery, installation & testing of electronic type stepped fan regulator fixed on existing sheet metal switch board including interconnections and making good the damages caused complete as required and as per direction of Engineer-in-charge.	152.0	Nos	300.0	45,600.00
4	Earthing				
4.1	Supply of materials and installation of pipe earth electrode made out of 50mm dia class B G.I. pipe of 3.0 metre long with arrangements for fitting/ termination of G.I. flat / wire with G. I. nut bolts & washers including cost of charcoal, salt, foreign soil, water pouring arrangements, brick masonry enclosure on top with removable RCC cover complete with labour for excavation of pit in all kinds of soil & rock as required and as per direction of Engineer-in-charge.	4.0	Nos	3,010.00	12,040.00
4.2	Supply of materials and laying of 25 x 5 mm GI flat laid under ground including cost of jointing by welding, nut bolts, bituminous tape & bituminous paint, labour charges for excavation of trench in all kinds of soil etc complete as required from earthing electrode upto the GF of Elect room & then GF to 1F as earthing busbar.etc.	200.0	Mtr	100.00	20,000.00
4.3	Supply of materials and laying under ground / floor / wall including making end termination and testing of 8 swg G.I. wire for loop earthing of equipments, switch boards & panels as required complete as per direction of Engineer-in-charge.				
(a)	8 swg	100.0	Mtr	10.00	1,000.00
4.4	Supply and laying of following size PVC pipe underground / floor / wall including marking as required complete as per direction of Engineer-in-charge.				
(a)	50mm dia	160.0	Mtr	180.00	28,800.00
(b)	100 mm dia	50.0	Mtr	350.00	17,500.00
4.5	Supply and laying of 80mm dia GI pipe underground / floor including making for road crossing as required complete as per direction of Engineer-in-charge.	10.0	Mtr	450.00	4,500.00
				Total:- Rs	27,34,844.00
				or Say	27,34,800.00

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA		
List of Approved make for Electrical Items		
For KMS Hall Dining Hall		
Sl no.	Equipment/ description	Approved Make
1	SWITCH GEARS a)ACBs,SFU,Contactors,AuxRelay b) MCCBs 200 Amp and above	Siemens/Schneider/ABB
2	MCCBs 160 Amp & below	Siemens/Legrand/ABB/Schneider
3	MCBs//RCCBs/RCBOs/DBs	Siemens/Legrand/Schneider/ABB
4	Change over Switch	L&T/ Havell's/Legrand/HPL
5	Motor Starters	Siemens/CGL/L&T
6	A C Starters	Siemens/ Electronic type- GETRON
7	Push Buttons	Siemens/L&T/ABB
8	Al./ Cu. conductor XLPE/PVC insulated power & control cable	Polycab/Havell's/Gloster/RPG/NICCO/CCI/NCAB/Universal/Finolex/V-Guard
9	FR and PVC insulated stranded flexible copper wires as per IS 694	Finolex/Anchor/Polycab/Havell's/V-guard
10	PVC rigid conduit heavy duty	Finolex/Plaza/Harsha/Precision/AKG/Berlia/other make with approval but minimum thickness 1.5mm for 20mm and 2 mm for 25mm and above
11	Piano reed type Switches and accessories.	Anchor/HPL/RR
12	Decorative swirch board cover with white top lamination	Hylam/Formica/RR
13	Modular type Switches and accessories	Legrand(Mosssaic)/Crab tree(Athena)/ HPL /Siemens/Schneider/Anchor(wood/Ave)/MK
14	FTL/CFL	Philips/CGL/WIPRO
15	M H/SV Street/Flood light Fittings, lamps & accessories	Bajaj/Philips/CGL/Schreder/WIPRO
16	Post top/garden lights	Philips/CGI/Schreder/WIPRO
17	High Mast lights	Philips/CGL/Bajaj/Schreder
18	Energy meters	Alstom/Secure
19	Measuring Instruments	AE/L&T/COSMO/HPL socomec
20	Ceiling Fans i) DGS&D ii) Energy Eff. fans with 5 * rated as per BEE	Usha/CGL/Bajaj
21	Exhaust fans/Wall fans	CGL/Usha/Bajaj/Havell's
22	Tubular/Octagonal Galvanized/ Mild steel poles.	Aster/Bansal/Bajaj/Schreder
23	CT/PT	Kappa/L&T/AE
24	Paints	Berger/Asian/Nerolac
25	Selector Switch	Kaycee/L&T/GE
26	Geysers	Bajaj/Usha/CGL/V-guard/Jaguar
27	Panel Builders	EAP/Balaji Electricals/ALFA/Konark
28	Cable trays	Legrand/Rexton/Pushpak Fabricators
29	Bus Trunking,Raising mains	Legrand/Schneider/C&S
30	All Other Items	As per approval of EIC







**GENERAL CONDITIONS
OF
CONTRACT**

**NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA**

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CONDITIONS OF CONTRACT

Part-1, General Conditions

DEFINITIONS & INTERPRETATION

1.1 Definitions

In the contract (as hereinafter defined) the following words and expression shall have the meanings hereby assigned to them except where the context otherwise requires:-

- a] “Employer” means the NIT, Rourkela.
- b] “Contractor” means the person or persons, firm or company, whose tender has been accepted by the Employer and includes the Contractors personal representatives, successors and permitted assignees.
- c] “Engineer-in-charge” means representative of NIT, Rourkela and notified in writing to the contractor to act as Engineer for the purpose of the contract.
- d] “Engineers representative” means any resident engineer or assistant of the Engineer or any clerk of works or any other employee or agent appointed from time to time by the Employer.
- e] “Work” shall mean and include all work specified or set forth and required in and by the specifications drawing and schedule here to be annexed or to be implied there from or incidental thereto or to be hereafter specified or required in such explanatory instructions and drawings.
- f] “Contract” means the Invitation to Tender, Instructions to Tenders, General Conditions of Contract, Special conditions of Contract, Specifications, Drawings, Tender Schedule showing approximate quantities, quoted rates and amount against each item, Time Schedule, Letter of intent, Tender and the Contract agreement.
- g] “Contract” Price” means the sum named in the tender subject to such additions thereto or deductions there from as may be made under the provisions of the Contract.
- h] “Constructional Plant” means all appliances or things of whatsoever, nature required in or about the execution, completion or maintenance of the Works or Temporary Works.
- i] “Temporary Works” means all temporary works of every kind required in or about the execution, completion or maintenance of the work.
- j] “Drawing” means the drawings referred to in the Specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
- k] “Site” means the lands and other places envisaged by the Employer where the work are to be executed or carried out.
- l] “Letter of Intent” is an intimation by a letter to tenderer that tender has been accepted in accordance with the provision contained in that letter.
- m] “Approved” means approved in writing including subsequent written confirmation of previous verbal approval.

1.2 Terms “Specifications”

The term ‘Specification’ shall mean schedules, detailed designs, statements of technical data, performance characteristics and all such particulars mentioned as such in the contract. In the absence of any specific specifications issued by the Employer, the specifications issued by the B.I.S will apply.

2.0 Engineer’s Representative

The duties of the Engineer’s representative are to watch and supervise the works and to test and examine any materials to be used or workmanship employed in connection with the works. He shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract nor except as expressly provided hereunder or elsewhere in the Contract to order any work involving delay or any extra payment by the Employer nor to make any variation of or in the Works. The Engineer may from time to time in writing delegate to the Engineer’s representatives any of the powers and authorities vested in the Engineer.

3.0 Assignment and Sub-Letting

The Contractor shall not assign the Contract or any part thereof or any benefit or interest therein or there under without the prior written consent of the Employer.

The Contractor shall not sublet the whole or a part of the work without prior written consent of the Employer and Sub-Contractor or Sub-Contractors are approved in writing by the Employer. Subletting shall not relieve the Contractor from any liability or obligation under the contract, and he shall be responsible for the acts, defaults and neglects of any Sub-Contractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen. Subletting beyond the first stage shall not be permitted.

4.0 Extent of Contract

The Contract comprises of the construction, completion and maintenance of the works & except in so far as the contract otherwise provides the provision of all labour, materials, Constructional Plant, temporary works and everything whether of a temporary or permanent nature, required for such construction, completion and maintenance.

5.0 Contract Documents

The drawings shall remain in the sole custody of the Engineer but two copies thereof shall be furnished to the Contractor free of cost.

One copy of the drawings furnished to the Contractor as aforesaid shall be kept by the Contractor on the site and the same shall at the reasonable times be available for inspection and use by the Engineer and Engineers representative and by any other person authorized by the Engineer.

6.0 General Obligations

6.01 *Contract Agreement* : The Contractor shall enter into and execute a contract agreement in the form annexed hereto within the time specified in letter of intent and in default thereof the earnest money paid by the Contractor shall be forfeited and acceptance of his tender shall be considered as withdrawn. The cost of the stamp fee of the agreement is to be borne and paid by the contractor.

6.02 *Security Deposit* : The Contractor shall within the time specified in the letter of intent/work order deposit with the NIT Rourkela, further sum in addition to the earnest money paid with the tender to work upto a rate 2 ½ % of the value of the contract at the accepted rates as security deposit in cash or in the form of demand draft from a Nationalized Bank in favour of NIT, Rourkela.

In the event of this not being furnished within the period specified in the letter of intent/work order the earnest money shall stand forfeited and acceptance of the Contractor's tender shall stand withdrawn.

To this sum shall be added the deduction from the contractor's interim bills for work done, so as to make a total security of 10% of the value of the contract as aforesaid.

The security deposit shall remain at the entire disposal of the Employer as a security for the satisfactory execution and completion of the works in accordance with the conditions of the contract.

“When the Security Deposit exceeds Rs.1.00 lakh (Rupees one lakh only), the Contractor, if he so desires, may convert the amount in excess of Rs.1.00 lakh into a Bank Guarantee Bond of one of the Scheduled or Nationalized Banks.

On due satisfactory performance and completion of the contract in all respects, the security deposit will be returned to the Contractor without any interest on presentation of an absolute no demand certificate from the Engineer in the prescribed form after completion of maintenance period.

6.03 *Work to the satisfaction of Engineer* : The Contractor shall execute, complete and maintain the works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with and adhere strictly to the Engineer's instructions and directions on any matter. The Contractor shall take instruction and directions only from the Engineer/Engineer's representative.

6.04 *Programme to be furnished* : As soon as practicable after the acceptance of his tender, the Contractor shall, if required submit the Engineer for his approval a programme showing the order of procedure and method in which he proposes to carry out the works.

- 6.05 *Contractors Superintendence* : The Contractor shall give or provide all necessary superintendence during execution of the works. The Contractor or his competent and authorized agent is to be constantly on the works and shall give his whole time to the superintendence of the same.
- 6.06 *Contractors Employees* : The Contractor shall provide and employ on the site in connection with the execution and maintenance of the Works:
- (a) Technical assistants and other staff, skilled and experienced in their respective Area who are competent to give proper supervision to the work.
 - (b) Skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the works.
- 6.07 *Setting-out of the Works* : The Contractor shall be responsible for the true and proper setting out of the works and for the correctness of the positions, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliance and labour in connection therewith. The checking of any setting out or of any line or level by the Engineer or the Engineer's representative shall not in any way relieve the Contractor of his responsibility for the correctness thereof.
- 6.08 *Use of the Explosives* : Explosive shall not be used on the works by the contractor without the permission in writing of the Engineer.
- 6.09 *Watching & Lighting* : The Contractor shall in connection with the works provide and maintain at his own cost all light, guards, fencing and watching when and where necessary or required by the engineer/engineer's representative.
- 6.10 *Care of Works* : From the commencement to the completion of the works, the Contractor shall take full responsibility or the care thereof & of all the temporary works and in case any damage, loss or injury shall happen to the works or to any part thereof or to any temporary works from any cause whatsoever.
- 6.11 *Accident or injury to Workman* : The Employer shall not be liable for or in respect of any damages or compensation payable by Law in respect or in consequence of any accident or injury to any workman or other person in the employment of the Contractor or any sub-contractor save and except an accident or injury resulting from any act or default of the Employer.
- 6.12 *Workman's Compensation* : The Contractor shall at all times indemnify the Employer against all claims for compensation under the provision of the Workman's Compensation Act. or any other Law for the time being in force by or in respect of any workman employed by the Contractor in carrying out the contract.
- 6.13 *Giving of Notice and Payment of fees* : The Contractor shall give all notices and pay all fees required to be given or paid under any Central or State Statute, Ordinance or other Law.

- 6.14 *Compliance With Statutes Regulation etc* : The Contractor shall conform in all respects with the provision of any such Statute, Ordinance or Law as aforesaid and the rules, Regulations or Bye-Laws of any local or other duly constituted authority which may be applicable to the Works.
- 6.15 *Opportunities for other Contractors* : The Contractor shall in accordance with the requirement of the Engineer afford all reasonable opportunities for carrying out their work to any other contractors employed by the Employer and their workmen and to the workmen of the Employer & of any other duly constituted authorities who may be employed in the execution on or near the site of any work not included in the Contract.
- 6.16 *Supply of Plant Materials and Labour* : Except where otherwise specified the Contractor shall at his own expense supply and provide all the Constructional Plant, materials both for temporary and for permanent works, and labour required for the constructions completion and maintenance of the works.
- 6.17 *Site Clearance on Completion of Work* : On the completion of the work all rubbish, debris, kilns, vats tanks, materials and temporary structures of any sort or kind used for the purpose or connected with its construction are to be removed by the contractor and all pits and excavations filled up and the site handed over in a tidy and workmanlike condition.

7.0 Labour

In respect of all labour directly or indirectly employed on the works, the Contractor shall comply with all rules framed from time to time by Government (Central or State) or other local authority and legislations governing labour for the protection or health, sanitary arrangements, wages, welfare and safety of workers.

8.0 Work Materials and Plant

- 8.01 (a) All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture or fabrication or on the site. The Contractor shall provide such assistance, instruments, machines, (labour and materials as are normally required for examining, measuring and testing any work and the quality).
- (b) All sample shall be supplied by the Contractor at his own cost.
- (c) The cost of making any test in performance of his works, shall be borne by the Contractor.
- 8.02 *Access to Site* : The Employer and / or the Engineer and any person authorized by him shall at all times have access to the works and to the site.

8.03 *Removal of improper Work and Materials* : The Engineer shall during the progress of the works have power to order in writing from time to time.

- (a) The removal from the site of any materials which in the opinion of the Engineer are not in accordance with the Contract.
- (b) The substitution of proper and suitable materials.
- (c) The removal and proper re-execution of any work which in respect of materials or workmanship, is not in the opinion of the Engineer in accordance with the contract.

9.0 Commencement Time & Delays

9.01 *Commencement of Works* : The Contractor shall commence the works on site within the period indicated in the Contract and shall proceed with the same with due expedition and without delay except as may be ordered by the Engineer.

9.02 *Time for Completion* : The whole of the works shall be completed within the time stated in the contract.

9.03 *Extension of time for Completion* : Should the amount of extra or additional work of any kind or other special circumstances of any kind whatsoever which may occur be such as fairly to entitle the Contractor to extension of time for the completion of the work the Engineer shall determine the amount of such extension.

9.04 *Rate of Progress* : The whole of the materials, plant and labour to be provided by the Contractor & the mode, manner and speed of execution and maintenance of the works are to be a kind and conducted in a manner to the satisfaction of the Engineer. Should the rate of progress of the work or any part thereof be at any time in the opinion of the Engineer too slow to ensure the completion of the works by the prescribed time or extended time for completion, the Engineer shall so notify the Contractor in writing and the Contractor shall thereupon take such steps as the Contractor may think necessary and the Engineer may approve to expedite progress so as to complete the works by the prescribed time or extended time for completion. If the work is not being carried on by day and by night and the Contractor shall request permission to work by night as well as by day.

9.05 *Liquidated Damages to Delay* : In case the Contractor fails to complete the work within the stipulated time period indicated in the contract, unless such failure is due to force majeure or due to the Employer's default, the contractor shall pay to the Employer by way of compensation for delay and not as penalty, a sum up to maximum 10% of the contract value. This is agreed that this is a pre-estimate of the loss/damage which will be suffered on account of delay/breach on the part of the contractor and the said amount will be payable on demand without there being any proof of the actual loss or damages caused by such delay/breach. The decisions of the Engineer/Site-in-charge in regard to the actual delay will be final and binding on the contractor.

9.06 *Certificate of Completion of Works* : As soon as in the opinion of the Engineer the works shall have been substantially completed & shall have satisfactorily passed any final test that may be prescribed by the contract the Engineer shall on receiving a written undertaking by the contractor to finish any outstanding work during the period of Maintenance, issue a certificate of completion in respect of the works and the period of Maintenance of the works shall commence from the date of such certificate.

- 9.07 *Definition of Period of Maintenance* : In these conditions the expression “Period of Maintenance” shall be either twelve months or any other period if specifically specified in the special conditions of this contract, and calculated from the date of completion of the works certified by the Engineer.
- 9.08 *Execution of Works of repair etc.* : To the intent that the works shall at or as soon as practicable after the expiration of the period of maintenance be delivered up to the NIT in as good & perfect a condition to the satisfaction of the Engineer as that in which they were at the commencement of the period of maintenance the Contractor shall execute all such work of repair, amendment, reconstruction, rectification and making good of defects imperfection, or other faults as may be required of the contractor in writing by the Engineer during the period of maintenance.
- 9.09 *Cost of Execution of Works of Repair etc.* : All such work shall be carried out by the contractor at his own expense if the necessity thereof shall in the opinion of the Engineer be due to the use of materials or workmanship not in accordance with the contract or to neglect or failure on the part of the contractor to comply with any obligation expressed or implied on contractor’s part under the contract.

10.0 Alternations, Additions & Omissions

- 10.01 *Variations* : The Engineer shall make any variation of the form of quantity of the works or any part thereof that may in his opinion be necessary and for that purpose or if for any other reason it shall in his opinion be desirable shall have power to order the contractor to do and the contractor shall do any of the following :
- a) Increase or decrease the quantity of any work included in the contract.
 - b) Omit any such work.
 - c) Change the character or kind of any such work.
 - d) Execute additional work of any kind necessary for the completion of the work.
- 10.02 *Valuation of Variation* : The Engineer shall determine the amount (if any) to be added or to be deducted from the sum named in the tender in respect of any extra or additional work done or work omitted by his order. All such work shall be valued at the rates set out in the Contract if in the opinion of the Engineer the same shall be applicable.
- 10.03 *Claims* : The Contractor shall send to the Engineer’s representative once in every month an account giving particulars as full and detailed as possible of all claims for any additional expense to which the Contractor may consider himself entitled and of all extra or additional work order by the Engineer which he has executed during the preceding month and no claim for payment for any such work will be considered which has not been included in such particulars.

10.04 *Materials Obtained from Dismantlement and Excavation etc :*

- (1) The Contractors in the course of their works, should understand that all material obtained in the work of dismantling, excavation etc. will be considered Employer's property.
- (2) All gold, silver, oil and other minerals of any description and precious stones, coins, treasures, etc. which shall be found in or upon the site shall be the property of the employer, and the Contractor shall duly preserve the same to the satisfaction of Employer and shall from time to time, deliver the same to such person or persons as the Employer may appoint to receive the same.

11.0 Measurement

11.01 *Quantities :* The quantities set out in the tender Schedule are the estimated quantities of the work but they are not to be taken as the actual and correct quantities of the works to be executed by the Contractor in fulfillment of his obligations under the Contract.

11.02 *Works to be Measured :* The Engineer shall except as otherwise stated ascertain and determine by taking measurement of the work done in accordance with the Contract. He shall when he requires any part or part of the works to be measured give notice to the Contractor's authorized representative should forthwith attend or send a qualified agent to assist the Engineer or his representative in making such measurement and shall furnish all particulars required by them. The Contractor shall be paid for the quantities resulting from measurement of the executed work.

12.0 Provisional Payment

(a) No payment's shall ordinarily be made for works estimated to cost less than Rupees One Thousand till after the whole of the works shall have been completed but if any payment during the course of the execution of works is considered desirable in the interest of works, the Contractor may be paid at the direction of Engineer. But in the case of works estimated to cost more than Rupees One Thousand, mostly payments for the portion of work already done, may be made either on the basis, of measurements to be recorded by the Engineer or the Contractor shall on submitting the bill therefore be entitled to receive a monthly payment proportionate to the part there of then approved and passed by the Engineer, whose passing of the sum to be payable shall be final and conclusive against the Contractor. But all such intermediate payments shall be regarded as payments by way of advance against the final payment only.

(b) A bill shall be submitted by the Contractor each month on or before the date fixed by the Engineer for all work, executed in the previous month and the Engineer shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, as far as admissible, adjusted, if possible, before the expiry of ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed as aforesaid the engineer may depute his representative to measure up the said work in the presence of the Contractor, whose countersignature to the measurement list will be sufficient warrant and the Engineer may prepare a bill from such list which shall be binding on the Contractor in all respects.

(c) As and by way of additional security from every progressive on account bill of the Contractor, 7 ½ percent of the value of the work executed, shall be deducted and kept as security deposit until the total of the amount so deducted plus the security (including the earnest money) already deposited will equal the prescribed security, which is 10 % of the value of the works.

(d) The Employer shall not be liable for any loss of securities of any description, nor for any depreciation in the value of securities while in its charge nor for any loss of interest thereon.

The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the contract or the execution of the works unless the contractor shall have made a claim in writing in respect thereof before the giving of the Maintenance Certificate under this clause.

13.0 Remedies and Powers

13.01 *Forfeiture* : If the Contractor shall become bankrupt or have an order for appointment of any receiver made against him or shall present any petition in bankruptcy or shall make an arrangement with or assignment in favour of his creditors or shall agree to carry out the Contract under a committee of inspection of his creditors or if the Contractor shall assign the Contract within the consent in writing of the Employer first obtained or shall have an execution levied on his goods or if the Engineer shall certify in writing to the Employer that in his option the Contractor :-

- (a) has abandoned the Contract, or
- (b) without reasonable excuse has failed to commence the works or has suspended the progress of the works for 28 days after receiving from the Engineer written notice to proceed, or
- (c) has failed to remove materials from the Site or to pull down and replace work for 28 days after receiving from the Engineer written notice that the said materials or work had been condemned and rejected by the Engineer under these conditions, or
- (d) is not executing the works in accordance with Contract or is persistently or flagrantly neglecting to carry out his obligations under the Contract, or
- (e) has to the detriment of good workmanship or in defiance of the Engineer's instructions to the contrary sub-let any part of the contract, or
- (f) otherwise failed to perform his part of the contract according to the true intent & meaning thereof then the Employer may after giving 14 day's notice in writing to the Contractor, enter upon the site and the works and expel the Contractor there from without thereby avoiding the contract or releasing the Contractor from any of his obligations or liberties under the Contractor or effecting the rights & powers conferred on the Employer or the Engineer by the Contract or otherwise available under the law and may himself complete the works or may employ any other Contractor to complete the works.

- 13.02 *Valuation at Date of Forfeiture* : The Engineer shall as soon as may be practicable after any such entry and expulsion by the Employer fix and determine ex-parte or by or after reference to the parties or after such investigation or enquiries as he may think fit to make or institute and shall certify what amount (if any) had at the time of such entry and expulsion been reasonable earned by or would reasonable accrue to the Contractor in respect of work then actually done by him under the Contract.
- 13.03 *Payment after Forfeiture* : If the Employer shall enter and expel the Contractor under this clause he shall not be liable to pay to the Contractor any money on account of the Contract until the expiration of the Period of Maintenance and there after until the costs of completion and maintenance damages for delay in completion (if any) and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum or sums (if any), as the Engineer may certify would have been due to him upon due completion by him after deducting the said amount.
- 13.04 *Illegal Gratification and breach the terms of Contract* : The Contract may also be rescinded and the Contractor shall be liable to make good any loss or damage resulting from such cancellation.
- (a) If any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised or offered by the contractor, any of his servants or agents to any public office or person in the employment of the Employer in any way relating to his office or employment or if any such officer or person shall become in any way directly or indirectly interested in the contract, or
- (b) If the Contractor has committed a breach of any of the terms of the contract and in particular fair wages clause and labour regulations.
- 13.05 *Urgent Repairs* : If by reason of any accident or failure or other event accruing to or in connection with the works or any part thereof either during the execution of the works or during the period of Maintenances, any remedial or other work or repair shall in the opinion of the Engineer or the Engineer's representative be urgently necessary for security and the Contractor is unable or unwilling at once to do such work or repair the Employer may be his own or other workmen do such work or repair as the Engineer or the Engineer's representative may consider necessary. If the work or repair so done by the Employer is work which in the opinion of the Engineer, the Contractor was liable to do at his own expense under the Contract, all the cost and charges properly incurred by the Employer in so doing shall on demand be paid by the Contractor to the Employer or may be deducted by the Employer from any money due or which may become due to the Contractor provided always that the Engineer or the Engineer's representative (as the case may be) shall as soon after the occurrence of any such emergency as may be reasonable practicable notify the Contractor thereof in writing.
- 10.06 *Employer Will have full Liberty to retain and set off sums due or to Become due to Contractor* : The Employer will have full liberty to retain and set off all sums due or to become due to the Contractor (including Security Deposits and Earnest money) whether under this contract or under any other transaction or claim whatsoever, against any sum due or to the Employer under this contract or under any other transaction or claim whatsoever.

14.0 Notice

- 14.01 *Service of Notice on Contractor* : Any notice to be give to the Contractor under the terms of the Contract shall be served by sending the same by post to or leaving the same at the Contractor's principal place of business.
- 14.02 *Service of Notice on Employer* : Any notice to be given to the Employer under the terms of the contract shall be served by sending the same by post to or leaving the same at the Employer's last known address.
- 14.03 *Importance of Special Conditions* : The Special Conditions attached hereto where they differ from the General Condition and Specifications shall over- ride them similarly the description of work in the tender schedule where it differs from the specifications or drawings shall over-ride them.

15.0 Miscellaneous

- 15.01 *Provision of Adequate Shoring* : The Contractor shall at his own cost, provide the material for and execute all such shoring, timbering and strutting as is necessary during the execution of work for the stability and safety of all structures, excavations and works such that no damage, injury or loss is caused or likely to be caused to any person or property.
- 15.02 *Provision of Shed, Store, Houses etc.* : The Contractor shall, at his own cost, provide such sheds or damp proof store houses as the Employer may consider necessary for storage of materials and shall also at his own cost provide Concrete Mixer, Soaking vats etc.
- 15.03 *Payment of Wages act* : The Contractor shall comply with the provisions of the Payment of Wages Act, and the Rules made there under in respect of all employees employed by him in carrying out this contract as he himself and not the Employer, is responsible under the said act for the compliance thereof.
- 15.04 *Safety* : The Contractor shall be responsible for the safety of his workmen and employees. All serious accidents to them on construction site are to be immediately reported. The Contractor shall be responsible that all such accidents, however and wherever occurring on his works, are reported with out delay to the Engineer and he should make every arrangement to give all possible assistance.
- 15.05 *Laws, Bye Laws etc. relating Works* : The Contractor shall strictly conform to the provisions, for the time being in force of any law relating to works of any regulations and byelaws made by any local authority or any water and lighting companies or any undertakings, within the limits of the jurisdiction of which it is proposed to execute the work.
- 15.06 *Change in Partnership Firm* : In the case of contract by partnership firm, any change in the constitution of the firm shall forthwith be notified by the Contractor to the Engineer.

15.07 *Provision for settlement of disputes* : All questions, disputes or difference of any kind whatsoever, arising out of or in connection with the contract at any time, whether during the progress of the work or after its completion or whether before or after the determination of the contract, other than questions, disputes or differences for the decision of which specific provision have been made in the foregoing clause of these conditions (hereinafter referred to as “excepted matters” and decisions on such “except matters” according to the said specific provisions shall be final and binding on the Contractor and shall not be re-opened or attempted to be re-opened on the ground of any informality; omission, delay or error in the proceeding in or about the same or on any other ground whatsoever) shall be submitted in writing by the Contractor to the Employer and the Employer shall within a reasonable time, after the submission of the same, make and notify its decision thereon in writing.

If the Contractor be dissatisfied with the decision of the Employer on any matter in question, dispute or difference on any ground in connection with this contract or as to the withholding by the Employer of any certificate to which the contractor may claim to be entitled to, or if the Employer fails to make a decision within a reasonable time, then and in any such case but not including any of the excepted matters, or matters for which the Contractor has given no claim certificates, the Contractor may within ten days of the receipt of such decision or after the expiry of the reasonable period of time, as the case may be, demand in writing that such matter in question, dispute or difference in connection with this contract be referred to arbitration. Such demand for arbitration shall be delivered to the Employer by the Contractor shall specify the matters which are in question, dispute or difference and only such question, dispute or difference, other than any of the excepted matters, in respect of the contract of which the demand has been made and no other shall be referred to arbitration.

The further progress of any work under the contract shall, unless otherwise directed by the Engineer, continue during the arbitration proceeding, and no payment due or payable by the Employer shall be withheld on account of such proceeding, provided, however, that it shall also be opened to the arbitrator to consider and decide whether or not such work shall continue during the arbitration proceeding.

Matters in question, dispute or difference other than the excepted matters, in respect of this contract to be submitted to arbitration as foresaid shall be referred for decision to a Sole Arbitrator, who shall be the Director, NIT, Rourkela, or any person nominated by him in his behalf.

In case an arbitrator nominated by Director, NIT, Rourkela fails or neglects to arbitrate or is removed, dies or become incapable or withdraw from arbitration for any reason whatsoever, the Director, NIT, Rourkela, as the case may be, shall have the authority to nominate any other person afresh and / or supply the vacancy for the arbitration.

Such submission shall deemed to be submission to arbitration and the decision of such arbitration shall be final and conclusive and the provision of the Indian Arbitration Act of the rules there under and all statutory modifications thereof shall govern all such arbitration proceeding and shall be deemed to apply to and be incorporated in this contract.

- 15.08 *Wages to be Paid in time* : The contractor shall ensure that their employees are paid the wage in time and can only make such deductions which are authorized under the payment of wages act and rules framed there under, that relevant records and registers required to be maintained under the said Act & Rules to be maintained by the Contractors and produced before the officers of the Institute and such other authorities under the Act for scrutiny as & when required. In case the Contractors default in making statutory payments under payment of wages Act or any other labour Act, which the Contractor is obliged to make to their employees, the Employer reserves the right to deduct any amount from the bills of the Contractors towards payment to their employees on demand from the Govt. Labour Directorate. This amount shall be made available to such authorities of the Govt. for disbursement to the employees of the contractor. They, however, will be kept informed about the same.
- 15.09 *Malpractice* : Any unauthorized removal or possession of any of the Employer's properties by the Contractor, its agents, servants and / or employees shall be deemed to be a malpractice. If the Contractor is found guilty of Malpractice in the course of carrying out the contract resulting from the acceptance of his tender, the contract will be liable to be cancelled and the security deposit forfeited without prejudice to and other action which the employer may take under law.
- 15.10 *Black Listing* : Any Contractor found guilty of theft or in unauthorized possession of Institute's properties, is liable to be debarred from allotment of further work and the work in hand is also liable to be terminated without any notice. Further such contractors are liable to be blacklisted from allotment of work in NIT. The above action will be taken in addition to the other penal action under the relevant provisions of law which the employer may take.

SPECIAL CONDITIONS OF CONTRACT

FOR CIVIL ENGINEERING WORKS

1. The scope of contract generally covers complete civil engineering works required in connection with (i) including all ancillary works such as drains, diversions, alterations and additions to existing Civil Engineering Works and cleaning the site etc. complete as per the approved working drawings and instructions used to contractor from time to time. The contractor shall have to take the necessary precaution to safeguard against any damage to the neighboring existing structure and underground services etc.

2. The tenderer shall visit and is deemed to have visited the site and make himself thoroughly acquainted with the nature and requirement of the job, facilities of access for materials and removal of rubbish cost, of carriage, freights and other charges and shall allow in his tender for special difficulties if any in carrying out the work. He shall also include in his tender, charges for doing final surfacing to all repairs required to be done for any type of fixture, installation, etc. and for the removal of spoil arising of his contract.

3. The contract for the work is a complete one for labour, materials and workmanship including the use of construction equipments, tools and tackles. The contractor shall have to make his own arrangement for all materials required for the due performance of the contract.

All lap lengths in reinforcement rods have to be approved by the Engineer. Measurements of reinforcement will be inclusive of approved chairs, spacers, stays and overlaps.

4. The specifications and drawings given for execution, acceptance of construction and erection works are obligatory on the contractor for the construction works of NIT, Rourkela. If in the course of construction work, some additional problems arise, which are not covered by the given specifications, the contractor will be given proper instruction by the Engineer. Such instructions shall be observed in full by the contractor regarding specifications, drawings, method of conducting work, any other measures necessary for the fulfillment of construction. Verbal instructions be always got confirmed from the Engineers concerned, before execution by the contractor.

5. Specifications for the quality of building materials as also for the quality of construction work are given in corresponding sections of these specifications and / or the working drawings. Unless otherwise specified all materials and workmanship shall conform to the specifications attached and drawings supplied. Any item not covered by these, shall conform of the latest Indian Standard specifications.

6. Work shall be carried out in such a manner as not to interfere with or affect, retard or disturb the progress of other works being executed by other agencies. The contractor's rate shall include for any losses due to likely delay in coordinating with other works and interruption on account of inherent nature of the job, and as such, no extra claim will be admissible on such account.

7. If due to the design and other stipulations in the tender, or requirements at site, a particular sequence of overall constructional operations has to be followed due to which certain interruptions to any one or more types of work or items of execution are inherent, no claims for such interruption are admissible.
8. For carrying out the work, the contractor will be provided with two sets of working drawings.
9. All technical documents regarding the construction of works are generally given in the metric system and all works should be carried out according to the metric system. All documents concerning the work shall also be carried out in the metric system.
10. While carrying out the works the contractors should be provided for:-
- a) Safety of personnel engaged on the construction.
 - b) Protection and safety of works during their progress.
 - c) Sanitary and hygienic condition of working and living for his workers, as per labour regulations.
11. In respect of portions of works which are likely to be embedded or covered up by the other works, the contractors shall submit them for technical inspection and have the necessary measurement and completion certificates duly signed by the engineer and contractor before letting such portions to be embedded or covered.
12. On completion of work, the contractor must submit to the engineer the following documents for the passing of the works:-
- i) The technical documents according to which the work was carried out.
 - ii) A copy of the working drawing showing thereon all additions and alterations in the process of execution.
 - iii) Completion certificates for 'embedded' and 'covered up' works.
 - iv) Manufacture's certificates, guarantees and test certificates.
 - v) Certificates or control checking and test of materials.
13. The contractor shall submit to the engineer, in the form required by him and in the appointed time, the information regarding the progress of the work being carried out by them.
14. The power given to the representative of the contractor for signing technical certificates shall be indicated in a special letter addressed to the engineer.
15. The technical commission for the acceptance of covered work and unfinished work should consist of a representative each of:-
- (1) Employer
 - (2) Consultants.
 - (3) Contractor who has done the work, and
 - (4) Agency who accepts the work for continuation of the construction of the building or/ erection of equipment.

16. Contractor shall properly store all materials brought by him to the work site to prevent damage due to rain, wind direct exposure to sun etc. and also from theft, pilferage etc. The contractor shall maintain stocks of all materials required by him for the proper and speedy execution of his work.
17. The contractor shall make his own arrangement to procure all construction plant and equipment, tool and tackles etc. for his works.
18. All materials, construction plants and equipments etc. once brought by the contractor within the NIT area are not to be moved from there without the written authority from the engineer. Similarly, all enabling works built by the contractor for the main construction undertaken by him, are not to be dismantled and removed without authority from the Engineer.
19. The contractor shall at all times provide sufficient fencing, notice boards, lights, watchmen to protect and guard the works and provide all facilities and observe all the rules mentioned in the General Conditions of the Contract enclosed with the tender.
20. (a) Concrete and mortars are generally specified by the strength or the approximate proportions by volume respectively. The contractor may quote on the basis of their proportions. The concrete that will be used in the work shall be proved to be of requisite standard as laid down in the Indian standard specification and also by other intermediate test that may be prescribed for important construction. Batching by volume may be permitted at the discretion of the Engineer.
- (b) The quantities of all excavation, concrete, reinforcement steel work and shuttering as shown in the tender schedule are approximate. The rate quoted shall fully apply for any variations in the scope of work and the resulting quantities. The payment shall be made on actual quantities constructed and measured at site as per standard practice in conformity with I.S 1200.
21. The aggregate to be used in the work shall be hard, strong and durable and shall be clean and free from clay films and other adherent coating. These must be machine crushed, screened before mixing. Sand must be coarse and thoroughly screened before mixing. Mixing shall be done by an approved mechanical batch mixer or by portable concrete mixers.
22. In the areas of fill, filling shall not be done until foundations and underground work e.g. pipes cables, etc. are completed. Should the fill be done prior to such completion, the contractor shall do all excavation and protection work for doing the foundations, underground works etc. at his own cost.
23. (a) The specifications prescribe various tests at specified intervals for ascertaining the quality of his work done. If the tests prove unsatisfactory, the Engineer shall have liberty to order the contractor to redo the work done, in that period, and do order such alterations and strengthening that may be necessary at the cost of the contractor. The contractor shall be bound to carry out such orders failing which the rectification, will be done by the Engineer through other agencies and cost recovered from the contractor.
- (b) Structure test:- The engineer shall instruct the contractor to make a loading test on the work or any part thereof at the contractors cost, if in his opinion such a test is necessary.

(c) Charges for all tests shall be borne by the contractor.

24. The contractor shall not allow any visitors on the works except with the approval of the Engineer.

25. The tenderers are required to quote rates against all the items of the attached Tender schedule, failing which their tender may not be considered.

26. All guarantees such as for water- proofing materials for the entire work as obtained from the manufacture shall be transferred to the employer by the contractor after completion of the work.

27. The contractor shall keep a competent and qualified engineer constantly, assisted by others, who will be responsible for carrying out of the work to the satisfaction of the engineer-in – charge. Any direction or instructions given to him in writing shall be held to have been given to the contractor.

28. The following guidelines should be followed in respect of calculation of theoretical consumption of cement for civil engineering works:-

- i) Theoretical consumption will be calculated on the basis of design-mix.
- ii) In case of concretes and mortar specified in the contract on volumetric proportion basis, the calculation of theoretical consumption will be governed by analysis.
- iii) The permissible wastage of cement over the theoretical consumption as indicated above will be upto 5%.

29. (a) Item of work not covered by the specification attached shall conform of the latest version of Indian standard Specification.

(b) The contractor shall employ such workers who possess good antecedent reports. The contractor shall be fully responsible for the conduct of his workman and shall ensure that his workers do not indulge in any criminal activities. In case of any loss suffered by the NIT due to theft, damage etc. caused by the contractor's workmen, the same will be made good by suitable recovery from the contractors running bills without prejudice to other rights of the company under the contract and under the law.

30. a) The contractor should be conversant about the location & the condition of the surroundings before quoting the rates.

b) The provision for approach road for bringing the building materials at the works site will be the responsibilities of the contractor at his cost.

31. The date of taking over of the building by the representative of NIT shall be taken as the date of completion of the building. The defects of construction which are within the scope of the contract shall be recovered and signed jointly by the contractor's representative. The recorded defects will have to be attended by the contractor and it shall be the sole responsibility of the the contractor. Only after completion, finalization of accounts in respect of final bill will be taken up by the department. If the recorded defects are not attended to by the contractor within 15 days, the department will at its own discretion employ another agency at

the risk and cost of the contractor to get those recorded defects attended without any further reference to the contractor.

32. The contractor shall deal with all aspect of their as well as their sub- contractors labour including industrial relations.

33. The contractor should ensure payment of all dues including retrenchment compensation, even if the labour is engaged by his sub-contractor.