

NATIONAL INSTITUTE OF TECHNOLOGY

ROURKELA

RENOVATION OF HALL OF RESIDENCE N0-1 BUILDING
AT ROURKELA

DETAIL BILL OF QUANTITY

ARCHITECT

Design Techno

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GENERAL SUMMARY

SL. NO.	DESCRIPTIONS	AMOUNT IN Rs.
Section - I	Cost of Foundation & Plinth	Rs.
Section - II	Cost of Superstructure	Rs.
Section – III	Sanitary, Plumbing & Water Supply.	Rs.
Section – IV	Surface Drain	Rs
Section – V	Dismantling & Salvage value	Rs
	TOTAL	Rs.

SECTION-I
FOUNDATION & PLINTH

Sl. No.	DESCRIPTION	Qty.	Unit	Rate in Rs.	Amount in Rs.
01.	Earth work in excavation of foundation trenches as shown in drawing including banking 225 mm layers dressing to profile & lead up to 50 meters & lift up to 1.5 m in all sorts of soil (Including filled up soil, or morrum mixed with weathered laterite) preparation of bed, trimming the sides of trenches, leveling, dressing and ramming the bottom including necessary shoring, complete.	59.00	Cum.		
02.	Earth work in filling to foundation trenches and plinth with excavated earth in layers not exceeding 150mm including watering, breaking lumps and ramming & compacting etc.. & lead up to 50 meters & lift up to 1.5 m complete.	40.00	Cum.		
03.	Supplying and filling with sand in plinth brought from outside in layer not exceeding 150 mm in depth and consolidating each layer by ramming and watering. (Measure consolidated volume only).	10.00	Cum.		
04.	Providing and laying cement concrete with graded stone aggregate of 40mm nominal size to column foundation, sub floor, etc. including cost of curing, centering and shuttering and conveyance of all labour and materials etc. complete in all respects.				
	a)P.C.C(1:2:4)	15.0	Cum.		
	b)P.C.C. (1:3:6)	236.00	Cum.		
05.	Brick masonry work in cement mortar (1:6) in full brick thick walls using K.B. Bricks having minimum crushing strength of 75 Kg/cm ² after				

immersing the bricks for 24 hours in water before use in foundation and plinth with all necessary projections, cutting, moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, royalties and taxes of all materials and cost of labour, T&P required for the work etc. complete.

Full brick thick brick work in c.m. (1:6) in foundation & plinth.

8.00 Cum.

06. Providing R.C.C. in proportion 1:1.5:3 by volume 1 cement : 1.5 crusher broken down graded granite chips of 20mm size : 3 coarse sand including hoisting and laying concrete by suitable means, including curing for 3 weeks including cost and conveyance, royalties and taxes of all materials and labour required for the work etc. complete in all respect but excluding cost of reinforced steel rod and centering & shuttering and cost of labour charges for bending, binding and tying the grills hoisting of steel rod etc.

a) In Foundation

12.00 Cum.

07. Providing, straightening, bending, binding and placing in position high strength deformed bars for reinforced cement concrete work including distribution bars, stirrups, binders etc. including initial straightening, removal of loose rust (If necessary cutting to requisite length, hooking, bending and binding to correct shape placing in proper position and binding with 20 gauge black annealed wire at every intersection complete as per drawing and direction (Payment to be made on actual quantities of reinforcement used in the work as per drawing and direction, weight calculated as per

- standard tables with three places of decimal and no extra for wastage, unnecessary overlaps, spacer, chairs or rolling margin shall be paid for, weight of binding wire shall not be measured but its cost being included in the rate of reinforcement).
- 1.5 M.T.
08. Providing and fixing rigid smooth centering and shuttering made out of R.C.C. shuttering ply conforming to I.S.: 4990 or marine ply conforming to I.S. – 710 including strutting, propping laying of water proof paper or plastic sheet to the horizontal surface to make water tight shuttering and also removal of form work in foundation, column, shaft, plinth beams, slab etc. including the cost of all labour, materials. (Only the area in contact with concrete will be measured).
- a) In Foundation 96.00 Sqm.
09. Supplying chemical emulsion in sealed container for Post constructional anti-termite treatment to all buildings as per IS: specifications 4.3.1.1 of I.S 6313 part 3_1981 with chloropyrophus 20% diluted to 1% concentrate by adding water & applying after cutting shallow channel closed to wall face ensuring uniform dispersal of chemical to a depth of 300 mm. from ground by Roding with 12mm dia m.s. rod at 150 mm. interval using 1.75 liter of chemical per meter length & 0.5 liter chemical shall be used to treat the back fill of earth by directly spray of chemical towards the wall surface. Inside wall faces to be treated by drilling holes of 12mm dia at 300 mm interval 1.0 liter chemical per meter length of wall, extra treatment for wooden works by drilling holes 10mmdia around the chaukatha at 150mm interval and using 1.5liter chemical . Measurement should be

done as per perimeter of the
building.

2330 Sqm.

**SECTION-II
SUPERSTRUCTURE**

Sl. No.	DESCRIPTION	Qty.	Unit	Rate in Rs.	Amount in Rs.
01.	Providing brick masonry work of Full Brick thick including parapet corbelling/cornice (design brick masonry) work & Half Brick thick including two numbers of 6mm M.S. steel bar in every 3rd layer using K.B. Bricks having minimum crushing strength of 75 Kg/cm ² with necessary scaffolding, watering and curing and cutting of brick into required shape & size etc. at all level including cost of conveyance, royalties and taxes of all materials & cost of labour, T&P required for the work etc., complete.				
i)	Full Brick thick in C. M. (1:6).	210.00	Cum.		
ii)	Half Brick thick in C.M. (1:3).	1002.00	Sqm.		
iii)	Extra for 6 mm. steel	1002.00	Sqm.		
02	Providing R.C.C. in proportion 1:1.5:3 by volume with 20mm size crusher broken down graded granite chips, coarse sand including hoisting and laying concrete by suitable means, including curing for 3 weeks including cost and conveyance, royalties and taxes of all materials and labour required for the work etc. complete in all respect but excluding cost of reinforced steel rod and cost of labour charges for bending, binding and tying the grills hoisting of steel rod etc. and cost of centering & shuttering also.				
		36.00	Cum.		

03. Providing and fixing rigid smooth form work for R.C.C. work making out of shuttering ply confirming to I.S. : 4990-1998 or marine ply confirming to I.S. – 710 including starting, propping laying of water proof paper or plastic sheet to the horizontal as well as beam sides surface to make water tight shuttering and also removal of form work in column, shaft, beams, slab, staircase, lintel, chajja, fins etc. including the cost of all labour, materials. (Only the area in contact with concrete will be measured). 500.00 Sqm.
04. Providing, straightening, bending, binding and placing in position high strength deformed bars for reinforced cement concrete work including distribution bars, stirrups, binders etc. including initial straightening, removal of loose rust (If necessary cutting to requisite length, hooking, bending and binding to correct shape placing in proper position and binding with 20 gauge black annealed wire at every intersection complete as per drawing and direction (Payment to be made on actual quantities of reinforcement used in the work as per drawing and direction, weight calculated as per standard tables with three places of decimal and no extra for wastage, unnecessary overlaps or rolling margin shall be paid for, weight of binding wire shall not be measured its cost being included in the rate of reinforcement). 4.0 M.T.
05. Providing and laying plaster to walls, columns, bands, fins etc., with sand cement mortar including racking out joints roughening the concrete surface rounding off or chamfering & filling of the protruded surface of

the bricks where necessary as per direction including working in narrow width with cost of all labour, materials scaffolding etc. complete in all floors in all respects as required for the completion of the work.

15mm thick cement plaster in the proportion (1:6) to all levels to external surface of the walls.

750.00 Sqm.

06. Providing and laying plaster to walls, columns, bands, fins etc., with sand cement mortar including racking out joints roughening the concrete surface rounding off or chamfering & filling of the protruded surface of the bricks where necessary as per direction including working in narrow width with cost of all labour, materials scaffolding etc. complete in all floors in all respects as required for the completion of the work.

12mm thick cement plaster in the proportion (1:6) to internal surface of the walls, columns, beams shelves/ chajjas etc.

4080.00 Sqm.

07. Providing and laying 6mm thick cement plaster in the proportion of (1:4) to ceilings, chajjas, soffit beams, fins, railing and projections if any at all levels.

159.00 Sqm.

08. Supplying and fixing Green Rajsthan Kota 20 mm thick with 2mm variation single piece tile for steps (tread and riser) and landing to staircase pre-polished laid in proper line with cement mortar (1:4) 20mm thick jointed with grey cement slurry mix with pigment to match this shade including rubbing and polishing, rising 25mm from riser and the fixing shall be done to the satisfaction of the Architect/ Site

	Engineer. The rates include cost of all labour, materials, royalties, T&P etc. and for work complete.	135.00	Sqm.
09a)	Supplying and fixing Green Rajsthan Kota stone tile 20 mm thick with 2mm variation for floor laid in proper line with cement mortar 1:4 20mm thick jointed with grey cement slurry mix with pigment to match this shade including rubbing and polishing, and the fixing shall be done to the satisfaction of the Architect/ Site Engineer. The rates include cost of all labour, materials, royalties, T&P etc. and for work complete(size 580mmx580mm approx).	4000.00	Sqm
b)	Dado over 12mm thick cement mortar (1:3) fixed with cement slurry jointed with grey cement slurry mix with pigment to match this shade including rubbing and polishing,	730.00	Sqm
10.	Supplying and fixing cuddapa stone(top surface polished)of minimum thickness 20-25mm. over kitchen platform laid in proper line with cement mortar 1:3 and the fixing shall be done to the satisfaction of the Architect/ Site Engineer. The rates include cost of all labour, materials, royalties, T&P etc. and for work complete.	165.00	Sqm
11.	Supplying, fixing and laying anti-skid ceramic tiles (Kajaria or equivalent brand) in all floors at all heights of 300mm x 300mm size of minimum thickness 6mm or above of approved make to floor surface conforming to drawings and designs set in cement mortar of proportion (1:3) to proper line and plumb including cutting to required size and shape and fixing at corners splays and chambers etc. and the joints are to be properly finished with white cement with required pigment and		

	curing complete with cost of all labour, materials, taxes, T&P, conveyance etc. as directed by the Site Engineer/Architect.	219.00	Sqm.
12.	Supplying, fixing in position polished cudappa stone of 25mm thick with 3mm variation in shelves jointing with approved adhesive as per design and drawing including cutting grooves in wall and making good complete as per direction of site Engineer/Architecture.	489.00	Sqm.
13.	Supplying, fixing and laying ceramic glazed tiles (Kajaria or equivalent brand) in all toilet dado at all heights of 200mm x 300mm size of minimum 5.5 mm.thick of approved make shade and design to wall surface conforming to drawings and designs set in cement mortar 12 mm thick of proportion (1:3) to proper line and plumb including cutting to required size and shape and fixing at corners splays and chambers etc. and the joints are to be properly finished with white cement and curing complete with cost of all labour, materials, taxes, T&P, conveyance etc. as directed by the Site Engineer/Architect.	2136.00	Sqm.
14	Providing and applying the exterior surfaces with two or more coats weather coat/ weather shield of approved brand and shade to give an even shade in two coats including all scaffolding after removing old paint by scrapping and repair the old cracks and lumps by using Dr.fixit crack X (Pidilite) to make a smooth surface as per direction of Site Engineer/Architect. The rate shall include all the taxes, T&P, cost scaffolding, materials, labour etc. for complete the work	6245.00	Sqm.
15	Providing & applying two or more coats washable oil bound distemper		

	to wall, ceiling after preparing the base by removing the old paints with wire brushes etc. complete in all respect as per direction of Site Engineer/ Architect.	2803.00	Sqm.
16	Providing and applying white wash with lime (Two or more coats) to give an even shade to the interior faces of walls, ceiling, beams etc. at all levels including cleaning and smoothening the surface thoroughly scaffolding etc. complete as per direction of Site Engineer/ Architect	11746.00	Sqm.
17	Providing and applying synthetic enamel paint of approved brand of approved colour to give an even shade. Two or more coats on old work after removal of old paint, rust, and sand papering and preparing the base with a coat of primer to receive new paint for doors, windows & grills including all scaffolding.	3120.00	Sqm.
18	Removing and re fixing with minor repairing in, shutters etc. matching with existing as per the direction of the Site Engineer/Architect.	10.00	Each.
19	Supplying and fixing of chemically treated paneled door shutters of 38mm thick matching with the existing shutters including all matching fittings cleats and blocks complete a as per the direction of the Site Engineer/Architect.	30.00	Sqm.
20	Supplying and fixing of glaze ventilators with MS angle frame with 4mm pinhead glass to be fixed to wall of toilet as per drawing & design with all fittings and fixings, hardware, glass etc. complete in all respect(frame weight 20 kg/ sqm.).	37.00	Sqm.
21	Replace the damaged wooden glazed window by providing MS angle frame shutter with 4mm pinhead glass as per design and drawing with		

	all fittings and fixings, hardware, glass etc. complete in all respect(frame weight 30 kg/ sqm.).	522.00	Sqm.
22	Plastering to external wall, chajja, fins, beams, columns etc. at all level 20mm thick in cement mortar 1:6using water proofing compound as per manufactures specifications after removal of old plaster and dispose of the debris beyond the premises as per direction of Site Engineer/ Architect.	750.00	Sqm.
23	Water proofing treatment to toilet slabs with elastic two pack acrylic polymer based water proofing system with glass fiber as intermediate membrane by using approved brand to existing group slab, floor & wall joints, floor trap surfaces etc.	257.00	Sqm.
24	Water proofing treatment to terrace after removing the old work and laying cement concrete 1:2:4 using 12mm down graded stone aggregates of 75mm average thickness with proper slope to rain water spouts using approved waterproofing chemical plastocrete plus@ 100 gm per bag of cement conforming to IS2645 with slope 1:100 with necessary hollering .	2200.00	Sqm.
25.	Providing & fixing 30mm thick “Rajshree Brand Factory” made solid panel PVC door or equivalent confirming to criteria of testing as per IS:4020 with upto date amendments consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for tiles & 20mm x 20mm for top and bottom rail. M.S. frame shall have a coat of steel primer of approved make and manufacturer. M.S. frame shall be covered with 5mm thick heat moulded “Rajshree or equivalent PVC ‘C’ channel of		

<p>size 30mm x 50mm forming stiles and 5mm thick, 75mm wide PVC sheets for top rail, lock rail & bottom rail on either side and 10mm (5mm x 2) thick, 20mm wide cross PVC sheet as gap insert for top rail and bottom rail. Paneling of 5mm thick PVC sheet to be filled in the M.S. frame welded/sealed to stiles and rails with 30mm x 5mm thick PVC sheet beading on either side, and joined together with solvent cement adhesive etc. An additional 5mm thick PVC strip of 20mm width is to be struck on the interior side of the 'C' channel using PVC solvent adhesive complete as per direction of Engineer-in-charge. The cost should include the cost of material, transportation and royalties, labour for complete job.</p>	109.00	Sqm.
<p>26. Supplying, fitting and fixing of properly welded M.S. grills to windows as directed by Architect. as per the drawing and design with enamel paint of approved colour two or more coat over a coat of primer. The cost shall include the cost of hard wares such as screws, etc. required materials, labour, taxes for complete job.</p>	1900.00	Kg.
<p>27. Providing and fixing 40x3 mm iron hold fast 25 cm long including fixing to frame with screws and wooden plugs and embedding in cement concrete block.</p>	480.00	Each
<p>28. Supplying and fixing chemically treated, well dressed and seasoned first class Sal wood frames to doors in all floors including two coats of wood preservatives to rear frames in contact with concrete and masonry surface with cost and conveyance of all labour, materials etc. complete in all respect as required for the</p>		

	completion of the work.(size as per existing sal wood frame)	25.00	Cum.
29.	Providing all material & labour for 65 mm thick double skin (using 6 mm. B.W.R. PLY) for full height kitchen partition with partly glazed (5 mm glass) door shutter. Wooden frame using 52mm x 52mm. sal wood members at 600 mm. c/c & horizontal member anchoring the top & bottom member to roof slab & floor slab with necessary rawl plugs as per detail drawing & design complete as per direction of site Engineer / Architects.	560.00	Sqm.
30.	Providing & fixing 125 mm. aluminum handles with necessary screws.	20	Each.
31.	Providing & fixing 300mm x 10mm mm. aluminum towel bolt with necessary screws.	20	Each.
32.	Providing & fixing 230mm x 60mm mm. aluminum door bolt with necessary screws.	10	Each.
33.	Providing all material & labour for wall hung kitchen storage cabinet 1350mm level to 2100mm level from floor made out of 19mm B.W.R. ply ,two coats of enamel paint over a coat of primer complete as per design & drawing.	85.0	Sqm.

SECTION – III
SANITARY, PLUMBING AND WATER SUPPLY

Sl. No.	DESCRIPTION	Qty.	Unit	Rate in Rs.	Amount in Rs.
01	Providing and fixing with GI pipe, complete with GI fittings and MS clamps including cutting hole and making good the wall etc.(Internal work complete as per direction of site engineer/Architect including one coat of primer and coat of approved enamel paint , checking the line for water tightness with pressure gauge) using Tata Medium or equivalent brand.				
a)	20mm nominal dia	552.00	Rmt.		
b)	25mm nominal dia	138.00	Rmt.		
02	Providing and fixing with GI pipe, complete with GI fittings and MS clamps including cutting hole and making good the wall etc.(External work complete as per direction of site engineer/Architect including one coat of primer and coat of approved enamel paint , checking the line for water tightness with pressure gauge) using Tata Medium or equivalent brand.				
a)	25mm nominal dia	138.00	Rmt.		
b)	32mm nominal dia	230.00	Rmt.		
c)	40mm nominal dia	230.00	Rmt.		
d)	50mm nominal dia	100.00	Rmt.		
03.	Providing and fixing white vitreous china European pattern water closet with P/S trap (Plain or vented) with 10 liter capacity P.V.C. low level cistern with manually controlling device(handle lever) confirming to				

	I.S 7231(Parryware, Hindware) suitable for fitting to wall, 32mm dia pvc medium class flush pipe with fittings, adopters etc with single solid black plastic seat and lid and C.P. hinges rubber buffers, all of approved brand and quality, complete including cutting and making good the walls and floors wherever required.	46.00	Each.
04.	Providing and fixing white vitreous china 580mm X 450mm (approx.) size water closet (Orissa pattern pan) with P/S trap (plain/ vented) with integrated footrest with 10 lit capacity low level P.V.C. cistern with manually controlling device(handle lever) conforming to I.S 7231(Parryware, Hindware) with. 32mm dia pvc medium class flush pipe all of approved brand and quality complete including painting of fittings and brackets with enamel paint, cutting and making good the walls and floors wherever required.	23.00	Each.
05.	Providing and fixing 550mm X 400mm size flat back white glazed vitreous china centre tap hole wash basin with C.I. enamel painted brackets, with single 20mm dia C.P. pillar cock of approved make, 32mm dia C.P. waste with flange of standard pattern, complete with cutting and making good the walls wherever required.	69.00	Each.
06 a.	Towel Rail : Providing & fixing 20 X 600mm long CP towel rail with M.S. brackets complete in all respect including the cost of screws/ rawl plugs.	69.00	Each.
b.	Towel ring 150mm dia.	69.00	Each.

07. Glass Shelf :
- Providing and fixing 600 X 120 X 5mm glass shelf with edges rounded off supported on anodised aluminium angle frame with C.P. brackets and anodised aluminium guard rail complete fixed with 40mm long screws. 69.00 Each.
08. Mirror :
- 600mm X 450mm sizes of best quality beveled edge plate glass mirror 5.5mm thick silvered as per I.S. 3438 of latest edition with necessary C.P. dome shaped screws plain asbestos sheet backing 6mm thick rubber buffers etc. all of approved make model and quality. 69.00 Each.
09. 610 X 510mm (approx.) size with bowl depth 200mm.of salem stainless steel sink(ISI 304 18/8) for kitchen as per IS 13983 without drain board with necessary M.S. fabricated or C.I. painted brackets, waste with connecting pipes and wall flanges, CP sink cock with regular swinging spout etc of approved make, model and quality complete with all fixing materials. 69.00 Each.
10. Supplying, fitting and fixing P.V.C. pipes of following sizes conforming to IS mark of latest edition, with bobbins, nails etc., including making holes in wall and floors and cutting trenches in any soil or through concrete or masonry if necessary and mending good the damages, with necessary solvent cement joints, with two coats of approved oil paint over a coat of primer for exposed lines and three coats of anti corrosive bitumastic paint for concealed lines etc., all of approved make and quality complete as per specification, drawing and instructions.

a.	50 mm dia.	138.00	Rmt.
11.	Supplying, fitting and fixing Extra over P.V.C. pipes the following P.V.C. fittings such as bends (plain or with door), junction, single or double plain or door/P/S or BM trap, extension piece, single/double branch, cowls, offset, inspection piece or hand hole piece, pass over, heal rest etc., including the cost of all labour, materials, taxes, conveyances etc., complete for the work filled up to the satisfaction of the Engineer-in-charge and as per specification, drawing and instructions.		
a)	50mm dia.	275.00	Each.
12.	Supplying, fitting and fixing CI grating of approved make and quality for floor trap.		
	Plain 150mm to 125mm dia CP on brass grating with or without cutout for waste pipe connections and suitable for fixing on top of socket or spigot end of pipe as per specification, drawing and instructions.	138.00	Each.
13.	Supplying, fitting and fixing Gun metal full way valve (Peet valve) with ISI mark & CI wheel of approved make and quality of following sizes as per specification, drawing and instructions.		
a)	50mm dia.	2.00	Each.
b)	40mm dia.	12.00	Each.
c)	32mm dia.	4.00	Each.
d)	25mm dia	12.00	Each.
14.	Supplying, fitting and fixing 20mm dia CP on brass approved make,		

	model and quality bib cock (Weight not less than 0.40 Kg) complete as per specification, drawing and instructions.	69.00	Each.
15.a)	Supplying, fitting and fixing 20mm dia CP on brass plain/angular type stop cock of approved make, model and quality bib cock (Weight not less than 0.40 Kg) as per the specification, drawings and instructions.	69.00	Each.
b)	20mm dia long body big cock approx. Weight 500 gm	138.00	Each.
16.	Supplying, fitting and fixing 20mm dia CP on brass heavy quality connector with both side CP heavy nuts and washers etc. of approved make, model and quality complete as per specification, drawing and instructions of the Engineer/Architect.	345.00	Each.
17.	Supplying, fitting and fixing 20mm dia. concealed stopcock of approved make, model and quality (weight not less than 0.4 Kg.) as per specification and direction of the Engineer/Architect.	138.00	Each.
18.	Supplying, fitting and fixing CP on brass Pillar cock of approved make, model and quality as per the specification, drawings and instructions of the Engineer/Architect.	69.00	Each.
19.	Supplying, fitting and fixing CP on brass overhead shower of approved make, model and quality as per the specification, drawings and instructions of the Engineer/Architect.	69.00	Each.
20.	Supplying, fitting and fixing CP on brass Robe hook(multi hook) of		

- approved make, model and quality as per the specification, drawings and instructions. 69.00 Each.
21. Providing and fixing PVC rain water pipe with spigot & socket and all necessary PVC specials such as tees, bends, loose, sockets, shoes clamps etc. including jointing materials as per the manufacturer's specification, cutting holes in the walls and floors and mending good the same, with fixing the vertical line by PVC clamps of approved design including providing seasoned hard wood wedge fixed to wall including necessary cutting holes in walls and mending good the damage in cement mortar (1:6) including fixing the clamp to water wedges with brass screws using grill necessary scaffolding etc. The joints are to be filled with spurn yarn soaked in tarred and cement mortar (1:2).
100mm dia 150.00 Rmt.
22. Constructing inspection pits of inside measurements 900mm x 800mm up to 1 Mtr. (Depth) with 250mm thick 1st Class brick work in C.M. (1:4) on all sides, bottom of the pit consisting of 100mm thick cement concrete (1:4:8) with stone chips over a layer of brick flat soling 12mm thick (1:3) cement plaster to inside walls and outside upto G.L. & 19mm thick cement plaster (1:4) to bottom of the pit providing necessary invert with cement concrete (1:2:4) with stone chips neat cement finishing to entire interior surfaces to the top of the pit covered with 100mm thick R.C.C. slab (1:2:4) with stone chips and necessary reinforcement upto 1% and shuttering including 6mm thick (1:4)
Cement plaster in all external surfaces of the slab with necessary fittings, earth work in excavation in all sorts of soil filling the sites of the pit with

	earth and removing spoils after work complete in all respect with 50 Kg. weight C.J. manhole cover and frames.	20.00	Each.
23.a)	Proving & fixing 100mm dia H.C.I. pipe with MS holder clamps fixed on wall face including joining the joints by filling with spun yarn with lead caulked joints including cost of all materials taxes scaffolding compete up to 12mtr height as per drawing and designing to the satisfaction of site engineer/Architect including 1 coat of primer and enamel paint to external surface and black enamel paint to internal surface.	648.00	Mtr.
b)	Extra for plain bends, tees, door bends, cowl, gully trap etc	600.00	Each.
24.	Proving all material and labour for 250mm dia RCC Hume pipe (NP2 class light duty) line laid over 100 mm thick cement concrete (1:4:8) for sewerage connection from chamber to chamber laid in slope and jointed using RCC collars using stiff cement mortar mix 1:2(1 cement : 2 sand) complete including checking for leakage in joints as per direction of site Engineer/Architect.	360.00	Mtr.
25.	Providing all material and labour for 300 x 300 x 450mm gully chamber with 250mm thick brickwork all around and neat cement punning and 100mm thick RCC cover slab complete as per drawing designing and as per direction of site Engineer /Architect.	24.00	Each.
26.	Provided all materials and labour for cement concrete 1:4:8 all around the H.C.I pipes laid inside earth complete as per direction of site Engineer /Architect.	50 .00	Rmt.

27.	Provided & fixing PVC waste pipe for wash basin , sink etc. as per direction of site Engineer /Architect.	140	Each.
28.	Provided & fixing chimney with necessary fittings complete as per drawing &direction of site Engineer /Architect .(base price Rs 8000.00)	69	Each

**SECTION –IV
SURFACE DRAIN**

Sl. No.	DESCRIPTION	Qty.	Unit	Rate in Rs.	Amount in Rs.
01.	Earthwork in trenches and over areas for foundation of surface drain in all kinds of soil except rock including shoring, strutting, dewatering lead up to 50 meter and lift up to 1.5 meter. complete as per the direction of the Engineer-in-charge.	124.00	Cum.		
02	Providing and laying cement concrete with graded crusher broken stone aggregate of 20mm nominal size to sub floor including cost of curing, centering and shuttering and conveyance of all labour and materials etc. complete in all respects. P.C.C. (1:4:8).	21.00	Cum.		
03.	Brick masonry in cement mortar (1:6) in full brick walls using K.B. Bricks having minimum crushing strength of 75 Kg/cm ² after immersing the bricks for 6 hours in water before use in foundation and plinth with all necessary projections, cutting, moulding, corbelling, chamfering, watering and curing etc. including cost, conveyance, royalties and taxes of all materials and cost of labour, T&P required for the work etc. complete.				

a).	Brick work in C.M. (1:6).	52.00	Cum.
04.	Providing and laying 15mm thick cement plaster to surface drains at all levels with cement mortar (1:3) (1 cement : 3 coarse sand) finished with a floating coat of neat cement including rounding of junctions, with floor including deep chipping to concrete base, curing etc. complete.	373.00	Sqm.
05.	Providing and laying pre-cast and procured reinforced cement concrete slab cover (1:2:4) (1 cement : 2 coarse sand : 4 stone aggregate 2.5m nominal size) of 50mm thick to drain top and providing weep holes 125mm x 125mm on the surface at every 10'-0" intervals complete with centering, shuttering, steel reinforcement including fixing in position cutting chase and mending good damages with cement mortar (1:3) etc. (Payment to be made on exposed area).	166.00	Sqm.

SECTION – V
DISMANTLING AND SALVAGE VALUE

Sl. No.	DESCRIPTION	Qty.	Unit	Rate in Rs.	Amount in Rs.
01	Dismantling of existing plinth protection /A.S flooring in all floors including all cost of all labour, T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials as per instruction of site Engineer/Architect.	4880.00	Sqm.		
02.	Dismantling of existing R.C.C. work at all heights, in all floors including all cost of all labour, T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials as per instruction of site Engineer/Architect.	5.00	Cum.		
03.	Dismantling of existing plaster in all floors including cost of scaffolding and labour, T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials as per instruction of site Engineer/Architect	600.00	Sqm.		
04.	Dismantling of existing brick work in all floors (external) including cost of scaffolding and labour, T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials as per instruction of site Engineer/Architect	10.00	Cum.		
05.	Transportations of earth debris construction material by mechanical				

	means including loading unloading & leveling at specified location up to lead 2 km beyond initial lead.	500.00	Cum.
06.	Dismantling of existing P.C.C(1:4:8) in all floors including cost of scaffolding and labour, T & P complete with removal of debris from site up to a lead of 100mtr and stacking the necessary materials as per instruction of site Engineer/Architect	100.00	Cum.
07.	Salvage value of replaced windows,door frames, door shutters, grills(not necessary for owner) with fittings .	L.S.	

Approved List of Manufacturers / Brand for civil Works

All materials to be used in works shall conform to Indian Standards Specification as published by ISB from time to time (and in the absence thereof as approved by Engineer-in-Charge) in general the mode of measurement of the civil engineering works shall be guided by I.S.I. Code No.1200-1964 (Revised) for Indian Standard Method of measurement of building work.

SL NO	DESCRIPTION	I.S. CODE	APPROVED MAKE
1.	Cement: Ordinary port land cement 43 grade	269: 1967	OCL / ACC / Lafarge
2.	Steel: a) Mild steel:	432 (Part I) 1982	TATA / SAIL
	b) High strength deformed steel:	1786: 1985	TATA / SAIL
3.	Sand:	383: 1963 or 515 (Revised)	
4.	Coarse Aggregate:	383	
5.	Lime:	792: 1973	
6.	Brick: Common burnt clay building bricks	1077: 1992 (Fifth Revision)	
7.	Ceramic tile / Glazed tile:	777: 1970	Spartek / Kajaria / Orient / Jhonson
8.	Paints:		ICI / Berger / Asian Paints
9.	Water proofing Admixture:	2645 and 9103	SIKA / Fosrock
10.	Glass		Modi/Asahi/Saint Gobain
11.	Ply		Green Century/ Mayur
12.	Adhesive		Araldite & Fevicol

Specification of Sanitary Materials

- | | | |
|-----|---------------------|---|
| 1. | Sanitary Fittings : | Hindustan Sanitary Ware/Parryware. |
| 2. | CI pipe & fittings: | IS 3989 of Jayaswals NECO Ltd./ Similar approved. |
| 3. | C.P fittings : | Jaquar/Ark/Crabtree/Plumber. |
| 4. | G.I. Pipes : | Tata make (medium quality) or equivalent. |
| 5. | G.I. Fittings : | 'R'/HB/KS brand with ISI marked. |
| 6. | G.M. Valves : | Leader/Zoloto brand. |
| 7. | SW pipes : | Sonali/Hind brand. |
| 8. | CI Cover & frame : | Local brand good quality. |
| 9. | Paint : | Jhonson & Nicolson / ICI brand /Asian Paint. |
| 10. | Kitchen Sink : | Nirali or Similar approved. |
| 11. | Mirror : | Golden fish or similar approved. |
| 12. | Sluice Valve : | Upadhya or similar approved. |

Specification for Materials, Measurement & workmanship as per CPWD & ISI.