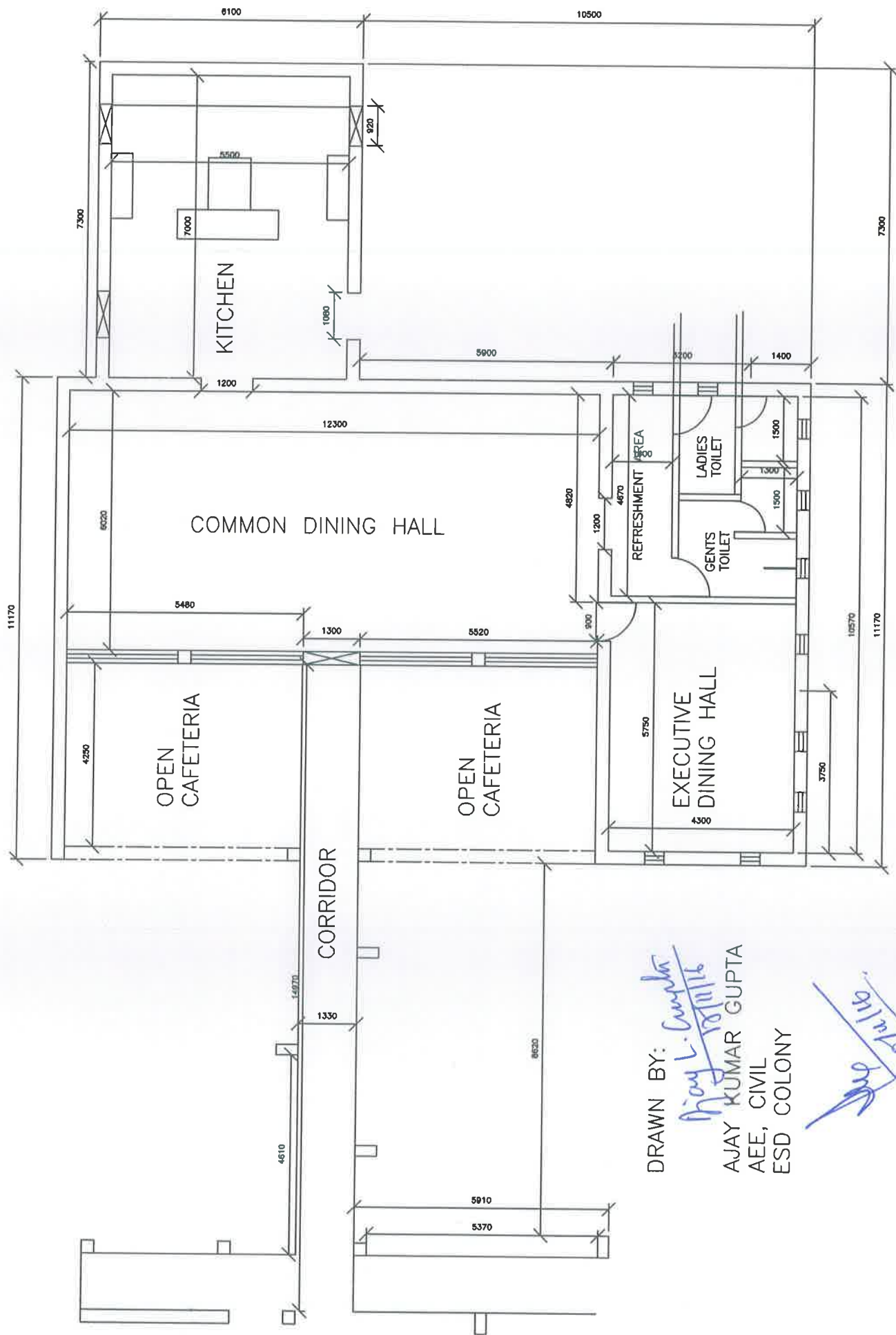


DRAWN BY:
Ajay Kumar Gupta
 AJAY KUMAR GUPTA
 AEE, CIVIL
 ESD COLONY

EXISTING PLAN OF DINING HALL OF EXECUTIVE HOSTEL AT CMRI DURGAPUR-9.

9/11/16
[Signature]



DRAWN BY: *Ajay L. Gupta*
 AJAY KUMAR GUPTA
 AEE, CIVIL
 ESD COLONY

10/11/16
[Signature]

MODIFIED PLAN OF DINING HALL OF EXECUTIVE HOSTEL AT CMERI DURGAPUR-9.

Central Mechanical Engineering Research Institute, Durgapur

Electrical Engineering Services Section

Name of the work : Upgrade of single room Hostle in Executive Guest House at

CSIR - CMERI Colony Dgp-9.

S.No.	Description	Qty.	Unit	Rate (Rs)	Amount (Rs)
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1 Wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sq. mm. FRLS PVC insulated copper conductor single core cable in surface/recessed steel conduit, with **modular switch**, modular plate, suitable GI box and earthing the point with 1.5 sq. mm. FR PVC insulated copper conductor single core cable etc as required Group A. As per CPWD-2013 General specification of electrical works.

a) Group A 22 Point
b) Group-B 36 Point

2 Wiring for circuit/submain wiring along with earth wire with the following size of FRLS PVC insulated, copper conductor, single core cable in recessed steel conduit as required.

a) 2 x 1.5 sq. mm. + 1x 1.5 sq. mm earth wire 180 Metre
b) 2 x 2.5 sq. mm. + 1x 2.5 sq. mm earth wire 90 Metre
c) 2 x 4 sq. mm. + 1x 4 sq. mm earth wire 160 Metre
d) 2 x 6 sq. mm. + 1x 6 sq. mm earth wire 4 Metre

3 Supply & fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 Amps modular Socket outlet and 5/6 Amps modular switch, connections, etc. complete as required.

4 Supply & fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 Amps modular Socket outlet and 15/16 Amps modular switch, connections, etc. as required.

5 Supply and fixing following size/ modules, GI Box along with modular base & cover plate for modular switches in recess etc as required.

2 Module (75mmX75mm) for, Regulator 11 Each

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S.No.	Description	Qty.	Unit	Rate (Rs)	Amount (Rs)
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6 supplying and fixing DP sheet steel enclosure 12 Each

on surface/recess along 20/25/32 amps 240 volts "C" curve DP MCB complete with connection, testing and commissioning etc as required, Make- Legrand.

7 Earthing with G.I. earth pipe 4.5 mm long x 40 mm dia. Including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal or coke and salt complete as required.

8 Supply and laying 25X5 mm GI strip at 0.05 meter below ground as strip earth electrode, including connection/terminating with nut, bolt, spring, washer etc as required. (Joining shall be done by overlapping and with 2 set og GI nuts bolts & spring washer spaced at 50mm).

9 Laying of one number PVC insulated and PVC sheathed/XLPE power cable 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.

a Up to 35 Sq. mm.
b Above 35 Sq. mm and up to 95 Sq. mm

28 Metre
30 Metre

10 supplying and fixing stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc as required, Make- Legrand.

11 Supply and Fixing of Pannel LED luminarie, Opal PMMA diffuser fittings of CRCA smart brite toffer 39W, 2800 Lumen, 50Hz, 140V-270V, IP-20, L70 Life class, dimension 558X558X60h, energy efficient, including lamp, connection, testing, commissioning as required. Model no- RC-370 RC370B LED28S-6500 L60W60 PSU OD of philips.

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S.No.	Description	Qty.	Unit	Rate (Rs)	Amount (Rs)
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- 12 Supply and Fixing of Green LED smart downlight
round luminaire, 12.5W, 6500K, 50Hz, 250V, Cut out dimension 165mm round, energy efficient, including connection, testing, commissioning as required. Model no- DN152B LED9S-6500 PSU VH - 165mm of philips.
- Each 7

- 13 Supply and Fixing of 4ft, 18W,-1800 lumens,6500K LED batten white with gray caps luminaire fixture with, energy efficient ready to use pack, including connection, testing, commissioning as required. 61019 Astra Line (1214x37x22.5)mm of philips/equivalent)
- Each 24

- 14 Supply and Fixing of 2ft, 9W,-900 lumens,6500K LED batten lighting fixture with, energy efficient ready to use pack, including connection, testing, commissioning as required. 61019 Astra Line (618x30x22)mm of philips/equivalent)
- Each 4

- 15 Supply and Fixing of 240V, 50HZ, 60 watts LED, road way Energy shaving luminaire, with pressure die cast aluminium IP66 luminaire with high power LED as light source, including Fixing of subtle single arm bracket, clamps etc on parapit wall of roof as required. connection, testing, commissioning as required. Make- LHETAXU7PN6J060 of Havells.
- Each 6

- 16 Supplying and fixing of 6 way ETPN (IP43-IK09 protection) distribution board with SP/DP/FP MCBs outgoing with provision for FP MCBs as incomer with tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnection including earthing, connection, testing, commissioning etc as required. Incomer -80A Amp FP MCBs(10KA) 1No. Outgoing -63A FP MCB-1 no, 40 to 63 Amp SP MCBs(10KA) - 18 Nos. (Model no- 607716 for DB, 408703 for 80A FP MCBs 408794 for 63A, of Legrand)
- Set 1

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S.No.	Description	Qty.	Unit	Rate (Rs)	Amount (Rs)
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17 Supply and fixing of 300 mm sweep, 220/240 Volt, 50 Hz, **wall fan**, Make - Havells D' Zire HS, Including wire connection, testing and commissioning etc. as required.

18 Supply & fixing of electric storage water Heater/ Gyser, 5 star rated, capacity 15 Liters, 230V, 50 Hz 2 KW, with automatic temprature control, system, Rated pressure 8 bar, with installing by fastning suitable counter shank Bolts, nuts, washer etc as required at a certain hight of bath room wall, including connection & body earthing complete as required. Make Venus15L Splash gyser Honey gold, Model No- SPLASH GL VERTICAL- 15GL of VENUS / equivalent

19 Supply and Fixing of 230 volts 50 Hz, sweep - 300 mm, Heavy duty Exhaust Fans including making hole with suitable Net & lubar and all the accessories as complete as required sweep - 300 mm, Model -Turbo Force SP of Havells.

20 Supply and fixing of 1200 mm sweep, 220/240 Volt, 50 Hz, 320 rpm, 5 star rated, 3 blade, double bearing, ceiling fan, Make - Crompton Greaves BEE, Model- HS Plus. Including wire connection, testing and commissioning etc. as required.

21 Supply of brand 650V/1.1 KV grade XLPE insulated, core laid up, Thermo plastic Tape inner sheathed , Aluminium conductor armoured and extruded PVC type power cables conforming to IS 7098(Part -1) of following sizes. Make- glosster/ Pily cab/ Equivalent.

4.0 x 16 sq mm A2XWY cable. 30 Mtr
3.5 x 50 sq mm A2XWY cable. 32 Mtr

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S.No.	Description	Qty.	Unit	Rate (Rs)	Amount (Rs)
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22 Supply and fixing of 8 (2+6) way SPN (IP43-IK 09 with metal door protection) distribution board for single phase Outgoing with provision for MCB as incomer with tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnection including, installation, plastering/Massonary works for fixing the DB, painting, earthing, connection, testing, commissioning etc as required. **Incomer 32 Amp DP MCB(10KA) - 1No. Outgoing - 10 to 32 Amp SP MCB(10KA) - 6Nos.** Model 607711(DB)/408636(DP, MCB)/408590-95(SP) of Legrand.

23 Dismantling of old existing MS conduite 1 JOB

inside/out side the wall, main switch, battion wiring, switch board, old MS box etc with repairing the same as required from dining place and adjescent area, and shifting the dismantling material to store yard (CMERI institute) as required, as per instruction of I/C.

24 Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1KV grade as required
3 1/2 X 50 sq mm (35mm) 2 Each
4 X 16 sq mm (28mm) 2 Each

25 Supplying and fixing of 4(8+12)way ETPN (IP43. 1 Set

IK09 protection) distribution board with SP/DP MCBs outgoing with provision for FP MCBs as incomer with tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnection including earthing, connection, testing, commissioning etc as required. **Incomer -63A Amp FP MCBs(10KA) . 1No. Outgoing - 10 to 32 Amp C curve SP MCBs(10KA) - 12 Nos.** (Model no- 607715 for DB, 408702 for 63A FP MCBs 408590-95 for SPMCBs, of Legrand.)

Total Rs.

(Rupees)..... only.)

Signature of the Tenderer with date

SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
1	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground as per direction of Engineer-in-charge.	Sqm	1000	Rs.	
2	Demolishing Cement concrete work 1:3:6 or richer mix manually/ by mechanical means including disposal of serviceable material at a specified location as per direction of Engineer-in-charge.	Cum	25	Rs.	
3	Demolishing RCC work manually/ by mechanical means including stacking of steel bars and disposal of serviceable material at a specified location as per direction of Engineer-in-charge.	Cum	15	Rs.	
4	Demolishing brickwork in cement mortar manually/ by mechanical means including stacking of serviceable materials and disposal of unserviceable materials at a specified location as per direction of Engineer-in-charge.	Cum	54	Rs.	
5	Dismantling doors, windows and clerestory windows (steel or wood) shutter Of area 3 sq. metres and below including chowkhats, architrave, holdfasts etc. complete and stacking at a specified location as per direction of Engineer-in-charge.	Each	14	Rs.	
6	Dismantling doors, windows and clerestory windows (steel or wood) shutter Of area beyond 3 sq. metres including chowkhats, architrave, holdfasts etc. complete and stacking at a specified location as per direction of Engineer-in-charge.	Each	4	Rs.	
7	Dismantling CI or AC rain water pipe 100mm dia. with fittings within a lead of 50m	M	20	Rs.	
8	Dismantling Indian WVC pan including taking out base concrete if necessary.	Nos	1	Rs.	
9	Labour for dismantling G.I.Pipes with fittings				
	a) 15mm	M	20	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Sl. No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
	b) 20 mm	M	15	Rs.	
	c) 25 mm	M	25	Rs.	
	d) 40 mm	M	25	Rs.	
10	Supplying, fitting and fixing G.I. pipes of TATA make with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple, long screw, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, making threads, fitting etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accessories, specials, (A) For Exposed Work				
	a) 20 mm dia. medium quality	Mtr	15	Rs.	
	b) 25 mm dia. medium quality	Mtr	25	Rs.	
	c) 40 mm dia. medium quality	Mtr	25	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
11	Supplying, fitting and fixing G.I. pipes of TATA make with all necessary accessories, specials viz. socket, bend, tee, union, cross, elbo, nipple, longscrow, reducing socket, reducing tee, short piece etc. fitted with holder bats clamps, including cutting pipes, making threads, fitting etc. complete in all respect including cost of all necessary fittings as required, jointing materials and two coats of painting with approved paint in any position above ground. (Payment will be made on the centre line measurements of total pipe line including all specials. No separate payment will be made for accessories, specials, Payment for painting will be made separately): (B) For Concealed Work: 15 mm dia. medium quality	Mtr	20	Rs.	Rupees.
12	Providing, fitting and fixing gun metal gate valve with C.I. wheel of approved brand and make tested to 21 kg per sq.cm. (for water lines only).				
	a) 20 mm	Each	2	Rs.	Rupees.
	b) 25 mm	Each	2	Rs.	Rupees.
	c) 40 mm	Each	1	Rs.	Rupees.
13	Providing and placing on terrace (at all floor levels) 2000 litre capacity polyethylene water storage circular tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	litre	2000	Rs.	Rupees.
14	Supplying, fitting and fixing white vitreous china best quality approved make wash basin with G.I. Pipe brackets in wall, C.P. waste fittings of 32 mm dia., one approved quality brass C.P. pillar cock of 15 mm dia., C.P. chain with rubber plug of 30 mm dia., approved quality P.V.C. waste pipe with C.P. nut 32 mm dia., 900 mm long approved quality P.V.C. connection pipe with heavy brass C.P. nut including mending good all damages and painting the brackets with two coats of approved paint: 550 mm X 400 mm size	Each	7	Rs.	Rupees.

18/11/2016

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Shy L. Singh

SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
15	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required : W.C. pan with ISI marked white solid plastic seat and lid	Each	2	Rs.	
16	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required : Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern	Set	1	Rs.	
17	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing : Rectangular shape 1500x450 mm	Each	2	Rs.	
18	Providing and fixing 600 x 450mm bevelled edge mirror of superior glass (of approved quality) complete with 6mm thick hard board ground fixed to wooden cleats with CP brass screws and washers complete.	Each	2	Rupees.	
19	Supplying, fitting and fixing Chromium plated Bib Cock with wall flange (Equivalent to Code No. 5047 & Model - Florentine of Jaquar or similar brand).	Each	3	Rupees.	
20	Supplying, fitting and fixing Chromium plated concealed Stop Cock heavy duty (Equivalent to Code No. 5083 & Model - Florentine of Jaquar or similar brand).	Each	12	Rupees.	
21	Providing and fixing Toilet Paper Holder: C.P. brass.	Each	2	Rupees.	
22	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Each	7	Rs.	


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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
23	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.	Each	7	Rs.	
24	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour: 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms	Each	7	Rs.	
25	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour, weighing not less than 300 gms.	Each	7	Rs.	
26	Providing and fixing 100mm sand cast iron grating for gully, floor or nahani trap.	Each	20	Rs.	
27	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required : Kitchen sink with drain board: 510x1040 mm bowl depth 250 mm	Each	1	Rs.	
28	Supplying, fitting and fixing approved brand P.V.C. Connector white flexible, with bolts ends coupling with heavy brass C.P. nut, 15 mm dia.: 600 mm long	Each	10	Rs.	
29	Supplying, fitting and fixing approved brand P.V.C. waste pipe with coupling at one end fitted with C.P. over brass nut, 32 mm dia: 900 mm long	Each	10	Rs.	
30	Providing and fixing 100 mm dia. soil, waste and vent pipes : Sand cast iron S&S pipe as per IS: 1729	Meter	24	Rs.	
31	Providing and fixing 75 mm dia. sand cast iron S&S bend as per IS: 1729 of required degree with excess door insertion rubber washer 3 mm thick bolts & nuts complete.	Each	7	Rs.	
32	Providing and fixing 100x100x100x100mm Sand cast iron S&S as per IS - 1729 double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :	Each	4	Rs.	

Handwritten signatures and dates:
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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
33	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth: Granite Stone of approved shade.	Sqm	1	Rs.	
34	Renewing cast iron inspection door with bolts and nuts complete for fittings of 50mm dia.to 150mm dia.H.C.I.pipe.	Each	8	Rs.	
35	Providing and fixing 100 mm inlet and 75 mm outlet Sand Cast Iron S&S as per IS- 1729 Trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :	Each	7	Rupees.	
36	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work (F.P.S) in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design.	Each	4	Rs.	
37	Providing and fixing square-mouth 150 x 100 mm size P type S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) 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 : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	5	Rs.	
38	Providing and laying jointing glazed stoneware pipes 150 mm dia. grade 'A' with stiff mixture of Cement Mortar 1:1 (1 Cement : 1 Fine Sand) including testing of joints etc. all complete.	M	45	Rs.	

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SCHEDULE OF QUANTITY

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
39	Providing and laying Cement Concrete 1:5:10 (1 Cement : 5 Coarse Sand : 10 graded stone aggregate 40 mm nominal size) all round S.W. pipe 150 mm dia. including bed concrete as per standard design.	M	45	Rs.	
40	Providing and fixing on wall face unplasticised 110 mm dia. Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.	M	55	Rs.	
41	Providing and fixing on wall face unplasticised PVC moulded fitting/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion.			Rs.	
	a) 110x110x10 mm Single tee with door	Each	10	Rs.	
	b) 110 mm Shoe(Plain)	Each	10	Rs.	
				Rupees.	
42	Providing and fixing unplasticised - 110 mm diameter PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50 x 50 x 50 mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 Cement : 4 Coarse sand) and making good the wall etc. complete.	Each	50	Rs.	
43	Supplying, fitting & fixing 1.5mm thick Trapezoidal profile corrugation Polycarbonate clear sheet made of national brand, excluding the supporting frame work, fitted and fixed with 10mm dia x 55mm Self-driving screws, EPDM washers and putty complete with 150mm end lap and one corrugation minimum side lap complete as per specification & direction of Engineer-in-charge including materials, labour, taxes and all other incidental charges (Payment to be made on area of finished work).In Roof	Sqm	50	Rs.	

SCHEDULE OF QUANTITY

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
44	Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture spintone/ cosmos / Hexa or equivalent of size 595 x 595 mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanising @ 120 grams per sqm including both side) consisting of main "T" runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33 mm thick (minimum) sheet, spaced 1200 mm centre to centre, and cross "T" of size 24x28 mm made out of 0.33 mm (Minimum) sheet, 1200 mm long spaced between main "T" at 600 mm centre to centre to form a grid of 1200x600 mm and secondary cross "T" of length 600 mm and size 24 x28 mm made of 0.33 mm thick (Minimum) sheet to be inter locked at middle of the 1200x 600 mm panel to form grid of size 600x600 mm, resting on periphery walls /partitions on a Perimeter wall angle pre-coated steel of size (24x24x3000 mm made of 0.40 mm thick (minimum) sheet with the help of rawl plugs at 450 mm centre to centre with 25 mm long dry wall screws @ 230 mm interval and laying 15 mm thick densified edges calcium silicate ceiling tiles of approved texture (Spintone / Cosmos/hexa) in the grid, including, cutting/ making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc, wherever required. Main "T" runners to be suspended from ceiling using G.I. slotted cleats of size 25x35x1.6 mm fixed to ceiling with 12.5 mm dia and 50 mm long dash fasteners, 4 mm G.I. adjustable rods with	Sqm	100	Rs.	
				Rupees.	

galvanised steel level clips of size 85 x 30 x 0.8 mm, spaced at 1200 mm centre to centre along main "T", bottom exposed with 24 mm of all Tsections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge. Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs) having area less than 0.30 sqm. The calcium silicate ceiling tile shall have NRC value of 0.50 (Minimum), light reflection > 85%, noncombustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity < 0.043 w/m 0 KC.

18/11/16

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
45	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purline, rafters and trusses and including cutting to size and shape wherever required.	Sqm	52	Rs.	Rupees.
46	Providing and fixing pre-coated galvanised steel sheet roofing accessories 0.50 mm (+ 0.05 %) total coated thickness, Zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete; Ridges plain (500 - 600mm)	Metre	7.4	Rs.	Rupees.
47	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m; in all kinds of soil.	Cum	5	Rs.	Rupees.
48	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth upto 50 m and lift upto 1.5 m, disposed soil to be levelled and neatly dressed; in all kinds of soil.	sqm	100	Rs.	Rupees.
49	Supplying & filling in plinth with sand under floors, including watering, ramming consolidating and dressing complete.	Cum	25	Rs.	Rupees.
50	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in 1:4 grade (1 cement: 4 coarse sand).	Cum	2	Rs.	Rupees.

18/11/2016

Dgp

SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
51	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in 1:4 grade (1 cement : 4 coarse sand).	Cum	7	Rs.	
52	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth upto floor V level in cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	105	Rs.	
53	Providing and laying in position 1:3:6 (1 cement : 3 Coarse Sand : 6 graded stone aggregate 20 mm nominal size) cement concrete of specified grade excluding the cost of centering and shuttering, all the work are to plinth level	Cum	20	Rs.	
54	Providing and laying in position 1:2:4 (1 cement : 2 Coarse Sand : 4 graded stone aggregate 20 mm nominal size) cement concrete of specified grade excluding the cost of centering and shuttering, all the work are to plinth level	Cum	20	Rs.	
55	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand including finishing the top smooth	Sqm	90	Rs.	
56	Reinforced cement concrete work in walls (any thickness) including attached pilasters, buttresses, plinth and string courses, columns, pillars, piers, abutments, posts and struts etc upto floor V level excluding cost of centering, shuttering, finishing and reinforcement in 1:5 : 3 (1 cement : 1.5 coarse sand : 3graded aggregate 20mm nominal size).	Cum	9	Rs.	
57	Centering & shuttering including strutting, propping etc & removal of form for plinth beams, cantilevers etc.	Sqm	11	Rs.	
58	Centering & shuttering including strutting, propping etc & removal of form for Shelves (Cast in situ).	Sqm	65	Rs.	
59	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level. Thermo-Mechanically Treated bars of grade Fe-500 D or more	Kg	900	Rs.	

SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
60	Extra for providing and mixing water proofing material in cement of concrete/plaster work in proportion recommended by the manufacturers.	Per 50 kg cement used	500	Rs.	
61	12mm cement plaster of mix 1:4 (1cement: 4coarse sand)	Sqm	500	Rs.	
62	12 mm. cement plaster finished with a floating coat of neat cement of mix 1:4 (1 cement : 4 fine sand).	Sqm	55	Rs.	
63	15mm cement plaster on rough side of mix 1:4 (1cement: 4coarse sand)	Sqm	350	Rs.	
64	6mm cement plaster to ceiling of mix 1:3 (1cement: 3 fine sand)	Sqm	160	Rs.	
65	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade : New work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	Sqm	500	Rs.	
66	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : Two or more coats on new work	Sqm	200	Rs.	
67	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacture, over the plastered wall surface to prepare the surface even and smooth complete.	Sqm	1025	Rs.	
68	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	Sqm	525	Rs.	
69	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work	Sqm	525	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
70	Providing and laying polished vitrified floor tiles 600x600 mm. (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20 mm. thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement & matching pigments etc. complete. Deduct for not using 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) bedding in laying of floor tiles but Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477, in average 3mm thickness.	Sqm	190	Rs.	
71	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	Sqm	76	Rs.	
72	Providing and laying Ceramic glazed floor tiles 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc., complete.	Sqm	14	Rs.	
73	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	100	Rs.	

Agul. Singh
18/11/2016

Agul. Singh
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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
74	Providing and fixing 18 mm thick gang saw cut mirror polished (pre-moulded and pre-polished) machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations and texture laid over 20mm thick base cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc. complete at all levels. Granite of any colour and shade of area of slab over 0.50 sqm.	Sqm	20	Rs.	
75	Providing edge moulding to 18 mm thick marble/granite stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge: Granite work	M	40	Rupees.	
76	Extra for providing opening of required size & shape for wash basins in granite work including necessary holes for pillar taps etc. etc. complete.	Each	1	Rs.	
77	Stone tile (polished) work for wall lining over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement complete. 8mm thick (mirror polished and machine cut edge): Granite of any colour and shade.	Sqm	20	Rs.	
78	Demolishing lime concrete manually/ by mechanical means and disposal of material at specified location as per direction of Engineer in charge.	Cum	25	Rupees.	
79	Grading roof for water proofing treatment with Cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size).	Cum	14	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
80	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The membrane shall be as under: Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane: 3 mm thick	Sqm	235	Rs.	
81	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately). Sal wood	Cum.	0.15	Rs.	
82	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand: 6 graded stone aggregate 20mm nominal size).	Each	12	Rs.	
83	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part-1) non-decorative type, core of block board construction with frame of 1 st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters with 35mm thick ISI marked stainless steel butt hinges with necessary screws.	Sqm.	6	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
84	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ± 1 mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge: Extruded section profile size 48x40 mm	M	10	Rs.	
85	Providing and fixing factory made 30 mm thick Decorative finish (both side wood grained finish) door shutter made of solid PVC foam profile. The styles & rails shall be of size 75 mm x 30 mm having wall thickness 5 mm. The styles, top & bottom rails shall have one side wall thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power. The styles and rails shall be reinforced with M.S. tubes of size 33 mm x 17 mm x 1 mm, painted with primer, all four corners of reinforcement to be welded or sealed. Solid PVC extruded biding (push fit type) will be set inside the styles and the rails with a cavity, to receive single piece extruded 5 mm PVC sheet as panel. The styles and rails will be mitred cut and joint with the help of PVC solvent cement & self driven self tapping screws. Single piece extruded solid PVC lock rail of size 100 mm x 30 mm with wall thickness 5 mm & 15 mm integrally extruded in the middle of the lock rail & fixed with styles with the help of PVC solvent cement & self driven self tapping screws of size 100 mm x 8 mm complete as per manufacturer's specifications and direction of Engineer-in-charge.	Sqm	3.2	Rs.	
86	Providing and fixing ISI marked aluminium butt hinges anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete: 75x63x3.2 mm	Each	6	Rs.	
87	Providing and fixing aluminium tower bolts, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete : 300x10 mm	Each	10	Rs.	

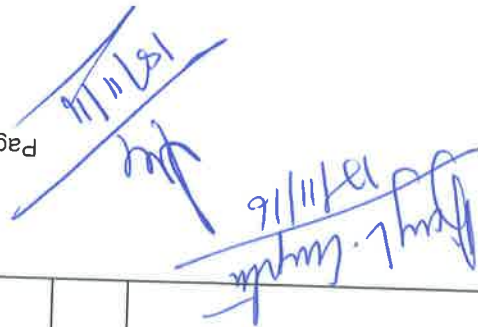
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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
88	Providing and fixing aluminium handles, ISI marked, anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade, with necessary screws etc. complete : 100 mm	Each	10	Rs.	
89	Providing and fixing aluminium sliding door bolts, ISI marked anodised anodic coating not less than grade AC 10 as per IS : 1868, transparent or dyed to required colour or shade, with nuts and screws etc. complete : 300x16 mm	Each	5	Rs.	
90	Providing & fixing Anodised aluminium (anodised transparent or dyed to required shade according to IS : 1868, Minimum anodic coating of grade AC 15) for doors, windows, ventilators with extruded built up standard tabular sections of approved make conforming to IS:733 & IS:1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom, and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight mitted and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, C.P.brass / stainless steel screws, all the directions of Engineer-in-Charge. For shutters of doors, windows & ventilators making provision for fixing of fittings wherever required including the cost of PVC/ neoprene gasket required.	Kg	135	Rs.	
91	Providing & fixing Anodised aluminium (anodised transparent or dyed to required shade according to IS : 1868, Minimum anodic coating of grade AC 15) for partitions with extruded built up standard tabular sections of approved make conforming to IS:733 & IS:1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom, and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight mitted and jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, C.P.brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-Charge. For fixed portion.	Kg	200	Rs.	


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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
92	Providing & fixing glazing in aluminum door, window, ventilator shutters, and partition etc with PVC / neoprene gasket etc. Complete as per the architectural drawing and the direction of Engineer-in-Charge with glass panes of 5.5 mm thickness.	Sqm	62	Rs.	
93	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge.	Sqm	11	Rs.	
94	Filling the gap in between aluminium frame & adjacent RCC/Brick/Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and the direction of Engineer in Charge complete: upto 5mm depth and 5 mm width.	M	262	Rs.	
95	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required: In gratings, frames, truss, guard bar, ladder, railings, brackets, gates and similar works	Kg	4500	Rs.	
96	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters: 80x120 mm M.S. laths with 1.20 mm thick top cover	Sqm	3.5	Rs.	

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SCHEDULE OF QUANTITY

Name of the work "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9."

Item No.	Description	Unit	Qty.	Rate (Rs)	Amount (Rs)
97	Supplying and fixing in position vertical blinds (Vista (levelor) made with 100 mm wide fabrics of approved quality, make and shade assembled on top aluminium frame (33 mm x 28 mm x 1.2 mm) with powder coated (approx 50 micron) with high quality nylon runners with auto clutch mechanism, stainless steel master runners, stainless steel fitter chains and PVC end covers. The bottom end of the fabrics are suspended with a weight which are to be connected by link chains. All complete as per manufacturer's specifications. Rate should including 3" overlapping of fabrics beyond the window/curtain wall opening all complete as per direction with all labour and materials (Measurement to be made on the opening size).	Sqm	8	Rs. Rupees.	
	Total				
	(Rupees in Words)				

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**CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)
M.G. AVENUE, DURGAPUR- 713209, INDIA**

Scope of work & other details

NAME OF THE WORK: Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9.

A. SCOPE OF WORK: The scope of work includes the following:

1. Dismantling of old plaster and re-plastering admixed with water proofing compound for ceiling, internal and external wall.
2. Dismantling of damaged RCC roof slab of kitchen and providing steel truss and precoated galvanised iron profile sheets.
3. Dismantling of damaged CC, RCC and brickwork and reconstruction of same in flooring, shelves, slabs etc.
4. Making plinth protection 50mm thick of cement concrete 1:3:6 all round the building.
5. Taking out damaged door frames, doors, windows and ventilators.
6. Replacement of G.I. Pipes (water line), C.I. Pipe line, S.W., and R/W Pipe line.
7. Providing sanitary items and fittings.
8. Providing of water storage tank of 2000 litres capacity PVC Tanks.
9. Providing 1.5mm thick Trapezoidal profile corrugation Polycarbonate clear sheet in open cafeteria area.
10. Providing and Fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture spintone/ cosmos / Hexa or equivalent of size 595 x 595 mm.
11. External painting of wall with Premium Acrylic Smooth exterior paint with Silicane additives of required shade after application of wall putty.
12. Internal painting with acrylic emulsion paint after application of wall putty and cement primer.
13. Synthetic enamel paint with primer for truss, doors and grills.
14. Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part-1) non-decorative type for doors and cupboards with new frame.
15. Providing and fixing factory made 30 mm thick Decorative finish (both side wood grained finish) door shutter made of solid PVC foam profile for bath & w/c.
16. Providing and laying Ceramic glazed floor and wall tiles for bath & w/c and vitrified floor tiles for executive dining hall, common dining hall, refreshment area and kitchen and granite in kitchen counter slab. 60 mm thick interlocking paver block in cafeteria and open space.
17. Water-proofing treatment of roof by grading roof with Cement concrete 1:2:4 and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane.
18. Providing & fixing Anodised aluminium for windows, doors, ventilators and partition. 12 mm thick frameless toughened glass door shutter for main entry, kitchen entry, refreshment area and executive dining hall entry.
19. Providing steel for grills in windows, ventilators, partition, gate and truss for cafeteria and kitchen.
20. Providing rolling shutter in main entry of dining hall.
21. Providing and fixing vertical blinds in windows of executive dining hall.

B. Rates:

The rates has been arrived based on DSR-14 and WBPWD -15.

C. Specifications:

CPWD Specification of items for the execution of the said work shall be followed.

D. Works Manual:

The said proposal has been prepared based on CPWD Works Manual 2014.

E. Method:

The method proposed for carrying out the project is Item Rate Contract.

F. Time:

The estimated time of completion from the date of receipt of work order shall be Four (04) months.

Submitted by

A.K. Gupta
(AEE, Civil)

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26/11/18

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26/11/18

CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)
M.G.AVENUE, DURGAPUR- 713209, INDIA
Name of the work: "Upgradation of Dining hall buildings of Executive Hostel at CMERI Colony, Dgp-9".

LIST OF APPROVED MAKES FOR CIVIL WORK.

1. The Contractor shall obtain approval from the Engineer-In-Charge before placing order for any specific material or engaging any of the specialized agencies.
2. Wherever applicable. The Engineer-In-Charge may approve any material equivalent to that specified in the tender subject to proof being offered by the Contractor for equivalence to his satisfaction.
3. Unless otherwise specified, in the tender document all the materials which are ISI marked shall be used in the work and if the ISI marked materials are not available, materials conforming to IS shall be used, and for the materials which are neither ISI marked not conform to IS, the manufacturer's Specification shall be followed.

S. No.	Description	Approved Makes
1	CEMENT	ACC, LAFARGE, ULTRATECH,
2	COARSE SAND	CONFORMING TO ZONE -III
3	Water-proofing material	Dr. FIXIT, FOSROC, SIKA
4	APP (Atactic Polypropylene Polymer)	Dr. FIXIT, BITUMAT
5	PRIMER, PAINTS, CEMENT PAINT	1st Quality paints of Asian/ Berger /Nerolac / AkzoNobel.
6	G.I.PIPES	TATA MAKE
7	G.I. Fittings	UNIK/R brand/KS/Zoloto-M/KENT/ISI MARKED
8	GUNMETAL WHEEL VALVE	HM/LEADER/SHAKTI
9	REINFORCEMENT & STRUCTURAL STEEL	TATA MAKE
10	C.P.BIBCOCK & STOP COCK	JAGUAR BRAND
11	P.V.C. WATER STORAGE TANK	SINTEX
12	SANITARY ITEMS	PARRYWARE
13	PVC RW PIPES, C.I. & S.W. ITEMS	IS:13592 & IS:5382, CONFORMING TO IS:1729 & BIS APPROVED
14	CERAMIC GLAZED WALL, FLOOR AND VITRIFIED TILES	KAJARIA
15	FLUSH DOOR	IS:2202 & 2046 GREEN PLY, CENTURY PLY
16	SOLID PVC FOAM PROFILE SHUTTER	RAJSHRI
17	ALUMINIUM	JINDAL, JINDAL, HINDALCO, ALOM
18	GLASS	SAINT GOBIN, MODIGUARD
19	PRE-COATED GALVANISED STEEL SHEET	TATA
20	VERTICAL BLINDS	VISTA LEVELOR
21	FALSE CEILING	ARMSTRONG, HUNTER DOUGLAS

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APPENDIX – 25

(Reference para 22.5(1))

GUARANTEE TO BE EXECUTED BY CONTRACTORS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

The Agreement made this day of two thousand and between son of of (hereinafter called the Guarantor of the one part) and the PRESIDENT OF INDIA (hereinafter called Government of the other part).

WHEREAS this agreement is supplementary to a contract (hereinafter called the Contract) dated and made between the GUARANTOR of the one part and the Government of the other part, whereby the Contractor, *inter alia*, undertook to render the buildings and structures in the said contract recited completely water and leak-proof.

AND WHEREAS GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water and leak-proof for five years from the date of giving of water proofing treatment.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak-proof and the minimum life of such water proofing treatment shall be five years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

(a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof;

(b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is removed in parts;

(c) The decision of the Engineer-in-Charge with regard to cause of leakage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found, render the building water-proof to the satisfaction of the Engineer-in-Charge at his cost, and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer-in-Charge calling upon him to rectify the defects, failing which the work shall be got done by the Department by some other contractor at the GUARANTOR'S cost and risk. The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if GUARANTOR fails to execute the water proofing or commits breach thereunder then the GUARANTOR will indemnify the Principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Government the decision of the Engineer-in-Charge will be final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligor and by and for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

Signed, sealed and delivered by OBLIGOR in the presence of—

1.
2.

Signed for and on behalf of THE PRESIDENT OF INDIA by in the presence of—

1.
2.

May L. Singh
18/11/16