

TENDER & SPECIFICATIONS FOR PROPOSED ELECTRICAL & AIR-CONDITIONING
WORK'S CHAND BRANCH & E- LOBBY (RBO-Chhindwara)

**ABSTRACT SHEET FOR PROPOSED ELECTRICAL & AIR-CONDITIONING
WORK'S AT CHAND BRANCH & E-LOBBY (RBO- Chhindwara)**

<u>SNO.</u>	<u>SUBHEAD</u>	<u>AMOUNT</u>
1	TOTAL AMOUNT FOR ELECTRICAL WORK	
2	TOTAL AMOUNT FOR AIR-CONDITIONING WORK	
	GRAND TOTAL	
	+GST as Actual	

SIGNATURE OF CONTRACTOR

TENDER & SPECIFICATIONS FOR PROPOSED ELECTRICAL WORK'S CHAND BRANCH & E- LOBBY (RBO-
Chhindwara)

TENDER & SPECIFICATIONS FOR PROPOSED ELECTRICAL WORK'S CHAND BRANCH & E- LOBBY (RBO-Chhindwara)					
S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
1	Wiring for light point/ fan point/ wall fan point/ exhaust fan/ light sockets etc. with 1.5 sq.mm. PVC insulated 1100 V Grade copper conductor (FRLS) wires & 1.5 sq.mm. copper earth wire in concealed/ surface using 16 SWG MS conduits, accessories such as bends, tees, saddles, draw boxes, mounting boxes, inner plates, cover plates, ceiling rose etc (whereever required) and chromium plates brass screws/ rowel plug etc. The circuit wiring starting from DB to point control box/ switch box using 2 X 2.5 sq.mm PVC insulated 1100 V grade multi- stranded copper conductor wire & 2.5 sq.mm. PVC insulated earth wire (color code to be used). (Flexible conduit/ elbow not allowed). The conduit to be laid in ceiling with proper clamps/ wall/ floor and filling the chase with cement mortar and finishing the same in original form/ wooden partition/ above false ceiling with proper clamps etc. all complete.				
	(Wherever required as per standard specifications).				
	i) Each circuit shall have independent earth wire.				
	ii) Each point shall be earthed.				
	iii) Circuit wiring is to be included in point wiring rates.				
i	One light points controlled by one 6 amp. Modular switch.	Nos.	70.00		
ii	Two light points controlled by one 6 amp. Modular switch.	Nos.	10.00		
iii	Three light points controlled by one 6 amp. Modular switch.	Nos.	3.00		
iv	One call bell point with ceiling rose/ 6amp. 3 pin socket controlled by one 6 amp. Push Modular switch. With call bell	Nos.	1.00		
v	Celing fan point with one nos 6 amp switch and 2 module electronic regulator including wiring & ceiling rose	Nos	20.00		
vi	One 5 pin socket controlled by one 6 amp. Modular switch complete assembly includes plate box etc.				
a	same board	Nos.	18.00		
vii	Same as serial no 1 but using 2*2.5 + 1*2.5 Sqmm Copper Conductor FRLS wires from DB to first 6A, 5 Pin modular socket controlled by one 6A switch and looped to the nearest second point with same 2*2.5 + 1*2.5 Sqmm copper conductor wires FRLS insulated 1100V grade (max 3 points per circuit).				
a	Primary Point	Nos.	6.00		
b	Secondary Point looped	Nos.	4.00		

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Chhindwara)

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
2	POWER POINTS				
	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire with independent 1* 4.0 sq.mm earth wire from D.B. to first point 1 st socket and 1 st to 2 nd , socket with 2*2.5 sq.mm. and 1*2.5 earth wire including providing and fixing of 16 Amp, 6 –pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly) max 2 points per circuit.				
a)	Primary Point	Nos.	10.00		
b)	Secondary Point	Nos.	4.00		
3(a)	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire with modular type AC box(tiny trip type) with socket complete in all respects controlled by 25/32 A SP MCB to be provided near indoor unit. The point starts from DB to stabilizer to the point near the indoor unit including top.	Nos.	3.00		
B.	Same as serial no.1, but wiring for A/C socket by using 4*6 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*6.0 sq.mm. PVC insulated 1100 V grade copper conductor wire of weather proof type 4 way SPN DB complete in all respects controlled by with 40 Amp TPN (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit. (includes wires for terminal connection of outdoor unit from TPN)	Nos.	7.00		
4	COMPUTER POINTS				
a	Wiring with 2x2.5 sq.mm. + 1x2.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 3 nos. 6 amps. 5 pin modular type sockets, one 6 amps modular switch with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. The switch should be fixed above the top of counter with indicator and sockets under the counter b) Same as above but looped from the above 1st point to 2nd , point and 2nd point to 3rd point. (Maximum 3 points in a circuit)				
	Primary Points	Nos.	6.00		
	Secondary Points	Nos.	4.00		

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Chhindwara)

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
B.	CONDUITING FOR TELEPHONE, COMPUTER & CONDUITING, WIRING FOR T.V. SYSTEM.				
1.0	TELEPHONE SYSTEM				
1.1	Wiring for VOICE from Jack Panel in data rack to computer workstation with Cat-6 voice cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for Cat-6 with shutter, RJ 45 outlet, faceplate and mounting box complete of modular type. This work includes supply and laying of CAT-6 cable in PVC conduits throughout the length, from the I/O hub to the point.	Nos.	7.00		
1.2	Supplying, laying, effecting terminations, testing and commissioning of 0.51 mm dia Cu. Conductor, twisted, colour coded with polythene capor barrier, telephone cables in the existing tray or in conduit including providing & fixing conduit pipe or cable tray as required from building tag block to the floor as required.				
a)	Supplying & fixing 20 pair krone tag block with enclosure.	Nos.	1.00		
b)	P/L 10 Pair of PVC insulated PVC sheathed multi core jelly filled armored telephone.	Mtrs.	10.00		
2	COMPUTER NETWORKING				
2.1	Wiring for computer networking from Jack Panel in data rack to computer workstation with Cat-6 computer cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for Cat-6 with shutter, RJ 45 outlet, faceplate and mounting box complete of modular type, This work includes supply and laying of CAT-6 cable in PVC conduits throughout the length, from the I/O hub to the point.	Nos.	20.00		
2.2	Supplying and fixing 9 U (Rack with glass door, opening in the front power panel 1 (horizontal), cable manager 1 lock & key).	Nos.	1.00		
2.3 a	Supply, Installation, Testing & Commissioning of 24 port Jack Panel.	Nos.	1.00		
2.4	Supplying and fixing Patch Cord-2 Meter- (DBPS Mounting Cord)	Nos.	20.00		
2.5	Supplying and fixing Patch Cord-1 Meter-	Nos.	20.00		
3.0	Supply and fixing of 1.6 mm thick G.I. Box along with RG 6 T.V Co axial socket with Cover Plate.	Nos.	1.00		
4.0	Supply, drawing, connecting, testing and commissioning of T.V Coaxial cable RG 6 in existing conduit.	RM	10.00		

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Chhindwara)

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
C. CABLES, MAINS & SUBMAINS					
1	Supplying all materials and laying/ pulling 1100 volts grade PVC insulated copper conductor wires (FRLS) in MS conduit with all fixing accessories after cutting the floor, wall and the like etc. and replastering the floor level to original. Conduit must be 30 mm below the floor finish level.				
i	1 X 10 sq mm Cu wire for earthing.	RM	25.00		
ii	Supplying, laying, testing & commissioning of 4 C X 10 sq.mm. at 1100 volts grade PVC insulated copper conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification from main board to UPS Room	RM	35.00		
iii	Supplying, laying, testing & commissioning of 4 C X 16 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (Light DB).	RM	15.00		
iv	Supplying, laying, testing & commissioning of 4 C X 25 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (Power DB,AC DB & Server Room DB).	RM	20.00		
v	Supplying, laying, testing & commissioning of 4 C x 70 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (Mains).	RM	30.00		
D. DISTRIBUTION BOARD					
	Supplying, installing, testing & commissioning of surface/recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6mm thick dust phosphatized and painted, inclusive of 100 amps, tinned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland / knock out plate & with built in loose wire box, and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required.				

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S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, window and split AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
	Each DB shall have separate neutral links of rating not less than 100A for each phase. The main incoming neutral link shall be in addition to three outgoing neutral links and shall be of 125 A.				
	UPS DB's shall have a dedicated Earthing link fixed on insulated supports, which will be in addition to body earth link.				
	All internal inter connecting wiring with in the DB's shall be PVC insulated flexible copper conductor wires of adequate capacity as per the current rating.				
	Inside each DB, a DB chart is to be fixed.				
a	6-way TPN DB (LIGHT DB)	No.	1.00		
	Incomer:-				
	1 No. 40 Amp TPN (10 KA) MCB with 40 A DP RCCB (100 MA) each phase				
	Outgoing:-				
	10-12 Nos.6/10/25 Amp (10 KA) SP MCB				
B.	4-way TPN DB (POWER DB)	No.	1.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 KA) MCB with 40 A DP RCCB (100 MA) each phase				
	Outgoing:-				
	12-14 Nos.6/10/25 Amp (10 KA) SP MCB				
C.	4-way V-TPN DB (AC)	No.	1.00		
	Incomer:-				
	1 No. 80 Amp 4 Pole (16 KA) MCCB				
	Outgoing:-				
	7 No. 40 Amp (16 KA) TP MCB				
	4 Nos.10/16/25/32 Amp (10 KA) SP MCB				
D.	4-way TPN DB UPS ROOM	No.	1.00		
	Incomer:-				
	1 No. 40 Amp TPN (10 KA) MCB with 40 A DP RCCB (100 MA) each phase				
	Outgoing:-				
	10 -12Nos. 6/10/16/25/32 Amp (10 KA) SP MCB, For Lights, Power & spare, UPS etc				
E	4-way SPN DB with 2 No 40 A (10 KA) DP MCB (For UPS Input)	No.	2.00		

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Chhindwara)

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
F.	12-way SPN DB (For UPS Sub DB)	No.	1.00		
	Incomer:-				
	1 No. 25 Amp DP (10 KA) MCB with 25 A DP RCCB (100 MA)				
	Outgoing:-				
	8-10 Nos.6/10/16/25Amp (10 KA) SP MCB				
G.	8-way SPN DB (For ATM DB with lock & key arrangement)	No.	1.00		
	Incomer:-				
	1 No. 40 Amp DP (10 KA) MCB with 25 A DP RCCB (100 MA)				
	Outgoing:-				
	4 Nos.6/10/16/25Amp (10 KA) SP MCB				
E	(LIGHT FITTINGS & ACCESSORIES)				
	Supplying, installation with hanging support, testing and commissioning of following light fixtures with electronic Ballasts, Tubes, lamps, all fixing materials including connecting wires etc. all complete as per the directions of Engineer-in-charge (All LED Light Fixures should be covered with minimum 3 Years onsite replacement warranty).				
i	FULL GLOW 2 X 2 LED 36 W slim Smart Panel of make As specified in tender document or approved by SBI/Architect.	Nos.	22.00		
ii	FULL GLOW 1 X 1 LED 24 W slim Smart Panel of make As specified in tender document or approved by SBI/Architect.	Nos.	3.00		
iii	Supplying, fixing, testing and commissioning of 15 W LED commercial type down lighter of make As specified in tender document or approved by SBI/Architect.	Nos.	40.00		
iv	Supplying, fixing, testing and commissioning of 15 W LED commercial type surface down lighter of make As specified in tender document or approved by SBI/Architect.	Nos.	5.00		
v	Supplying, fixing, testing and commissioning of 3 W LED commercial type spot down lighter of make As specified in tender document or approved by SBI/Architect.	Nos.	5.00		
vi	LED 18 watt Tube Light with all accessories.make As specified in tender document or approved by bank	Nos.	18.00		
vii	LED Strip for cove lighting 15 W per 5 M with driver and necessary installation fittings Led strip light (5 mtr.) make as specified in tender document or approved by SBI/Architect.	RM	125.00		
viii	Supply, installation, testing and commissioning of following fans with all fixing materials like white Polycarbonate 2 mm Hylem sheet cover, down rods, fan box as required etc. all complete as per the directions of Engineer-in-charge.				
	ceiling fan 1200mm dia	Nos.	20.00		

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S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
ix	Supply & fixing of 230 mm exhaust fan 'Ventilair DX W' with self closing louvers and plastic body with all accessories etc. complete of make As specified in tender document or approved by SBI/Architect.	Nos.	2.00		
F. EARTHING SYSTEM					
1	Supply, Installation, Testing and Commissioning of Maintenance Free Earthing system made up of copper-bonded rod of 10 feet length, 23 mm dia. (Minimum copper bonding shall be 0.25mm) along with Rod-to-Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted along with the bill).	Nos	2.00		
2	Supply, Installation, Testing and Commissioning of Maintenance Free Earthing system made up of copper-bonded rod of 10 feet length, 17.2 mm dia. (Minimum copper bonding shall be 0.25 mm) along with Rod-to-Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted along with the bill).	Nos	2.00		
3	Providing and fixing of Copper/ GI strips in surface or in recess for loop earthing etc. as required.				
i	25 mm x 3 mm copper strip with proper clamps	RM	15.00		
ii	25 mm x 5 mm GI strip	RM	10.00		
iii	Providing and fixing 2 X 8 SWG dia. Cu earth wire in PVC conduit on surface or in recess for loop earthing along with the existing surface/ recess cable as required.	RM	15.00		

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S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
G.	MAIN PANEL AND METER BOARD				
	Designing, fabrication, supply, installation, testing and commissionings of front operated cubicle type compartmentalised, front access, free standing on 75MM "I" MS channel, dust and vermin proof (IP 42 degree protection) panel suitable for use at 415V, 3 phase, 4-wire 50Hz system suitable for fault level of required value symmetrical at 415V fabricated from 2mm thick CRCA MS sheets with hinged, gasketted (Metal based neoprene) locable doors having structural reinforcement including 3mm thick gland plates on top and bottom, lifting hooks, GI earth strip of required size with 2 nos earth terminals, 2 nos 230V AC operated 250mm X 250mm size axial fans for exhaust of heat with On-Off toggle switches including 2 coated primer and 2 power coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with interconnections etc as per specifications as required.main panel board of approved make (KRYPTON POWER CONTROLS/NEPTUNE/TRICOLITE/AMPTECH Or should be CPRI Approved, Type of Approval as instructed by the SBI/Architect)as per the following specifications,should be CPRI Approved.				
	All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be withheat shrinkable sleeves SMC/DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders doors and switch handles shall be locable in OFF position.				
	Suitable arrangement shall be made for termination of multiple incoming cables.				
	All kA values indicated shall be lcs breaking capacity				
	GA drawings shall be got approved by SBI				
a	Fabrication, supply, installation, testing and commissionings of cubicle type floor/wall mounted L.T. panel made out of 2 mm thick CRCA sheet including connection,inter-connection alongwith 4 strip aluminium busbar as per CPWD specifications,(Part IV-Sub-station) etc. as required. (Meter Board)				
	Incoming :-				
	i) 1no. 125 Amp 4P MCCB (25 KA) thermal over current, instantaneous, Short circuit release,Earth fault.				
	ii) Busbar :-200 Amps 4P aluminum conductor bus bar (BPTM type Heat-shrinkable busbar insulation) supported by DMC / FRP insulators.				
	Space shall be provide for the BSES Meter				
	Meter board shall be lockable.				
	Complete panel described as above.				

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S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
b.	Floor panel shall consists of :-				
	INCOMER				
	1no. 125 Amp 4P On Load Change over switch with 1 No. 125 Amps, TPN MCCB (25 KA) with extendible rotary handle each thermal over current, instantaneous, Short circuit release, Earth fault.				
	BUSBARS				
	160 amps TPN pole busbar chamber of suitable length with copper busbars. All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 100/5A ratio, 10 VA Class-1.0 metering. - 1 sets				
	Red/Green/Amber ON/OFF/TRIP indicating lamps with 2A SP MCB backup protection.				
	1 set of three phase indicating lamps along with 2A SP MCB backup protection.				
	Restricted Earth fault relay with 3 Nos. current transformers of 160/5 ratio, 15 VA Class 5P 10 (Numeric Relay not required.)				
	Undervoltage, Overvoltage & phase reversal relay for persisted voltage of 105-180% & 20-95% of rated voltage. (Numeric Relay not required.)				
	OUTGOINGS:-				
	2 Nos 63A TPN MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. For capacitor Bank AND AC VTPN,				
	1 Nos 63A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	1 Nos 100A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For PDB, UPS)				
	1 Nos 40A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For LDB)				
	2 Nos 40A DP MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	The electrical panel as described above and specifications complete.	Set	1.00		
	TOTAL AMOUNT FOR ELECTRICAL WORKS				
Note:- The rates quoted includes all other taxes , duties , loading, unloading , transportation, other expenses etc to site. only GST will be paid Extra					

AC ESTIMATE BRANCH

TENDER & SPECIFICATIONS FOR AIR-CONDITIONING WORKS FOR CHAND BRANCH & E- LOBBY (RBO-Chhindwara)					
S. No.	Description	Unit	Qty.	Rate	Amount
	AIR CONDITIONERS				
1	Supplying, erection, testing and commissioning following Inverter type Split Air conditioners (Toshiba/ Mitsubishi/ Hitachi/ Daikin/ O-General/ Carrier) with cordless remote complete with all necessary fittings duly insulated with 9 mm thick nitrile rubber pipe insulation with (All coils – copper only), fan and fan motor, machine control panel improved Refrigerant Joints, .Air conditioners shall be fitted with hermetically sealed type suction cooled reciprocating or discharge cooled rotary compressor or scroll compressor. Compressor unit operating on R32/ R-410. All complete as per drawing, approval and instructions of the Architect/ SBI				
a	1.0 TR wall mounted split unit (Minimum 5-Star rating inverter type) including all necessary fittings and mountings as specified by the manufacture (Five Star Rating)	Nos.	1.00		
b	1.5 TR wall mounted split unit (Minimum 5-Star rating inverter type) including all necessary fittings and mountings as specified by the manufacture (Five Star Rating)	Nos.	2.00		
c	Supply, installation, testing and commissioning of Higher Efficient models of CASSETTE TYPE AIR CONDITIONERS 4.0Ton Machines confirming to latest Indian Standards and suitable for operation on 415 Volts + 10 %, three Phase, 50 Hz AC supply with Scroll compressor, Refrigerant and capable to perform cooling, dehumidifying, Air Circulating, auto mode, auto swing, anti bacteria filtering, ventilation and with remote control with Cool/Fan/Dry/Auto mode, sleep mode & on/off timer with suitable thermostat.				
	The rate should include installation charges after making appropriate changes in existing false ceiling. Heavy ready made/fabricated M S Stand to house the out door unit as per site conditions including carpentry work, minor civil work and material including copper piping of hard & prime quality of min. 22 G upto 5 metres with class "o" Nitrile insulation 12mm , cabling from indoor to outdoor unit, heavy gauge PVC drain piping with insulation as per site requirement. The copper piping, drains piping and electrical cabling should be fixed with clamps and no loose piping/cabling is allowed. The rates inclusive of all repairs of civil and carpentry work The out door unit should be anti-rust powder coated. The cost includes original fill and additional top up of refrigerant gas as per site condition. The rate inclusive of all chisel work, plastering, finishing, painting & all civil related work pertaining to mentioned work. Make of ACs:- Daikin/Hitachi/Voltas/Bluestar/Carrier only				
	4.0 Tonne cassette AC (Five Star Rating)	Nos.	3.00		

AC ESTIMATE BRANCH

S. No.	Description	Unit	Qty.	Rate	Amount
d	Supply, installation, testing and commissioning of Higher Efficient models of CASSETTE TYPE AIR CONDITIONERS 2.0 Ton Machines conforming to latest Indian Standards and suitable for operation on 415 Volts + 10 %, three Phase, 50 Hz AC supply with Scroll compressor, Refrigerant and capable to perform cooling, dehumidifying, Air Circulating, auto mode, auto swing, anti bacteria filtering, ventilation and with remote control with Cool/Fan/Dry/Auto mode, sleep mode & on/off timer with suitable thermostat. Make of ACs:- Daikin/Hitachi/Voltas/Bluestar/Carrier only				
	The rate should include installation charges after making appropriate changes in existing false ceiling. Heavy ready made/fabricated M S Stand to house the out door unit as per site conditions including carpentry work, minor civil work and material including copper piping of hard & prime quality of min. 22 G upto 5 metres with class "o" Nitrile insulation 12mm , cabling from indoor to outdoor unit, heavy gauge PVC drain piping with insulation as per site requirement. The copper piping, drains piping and electrical cabling should be fixed with clamps and no loose piping/cabling is allowed. The rates inclusive of all repairs of civil and carpentry work The out door unit should be anti-rust powder coated. The cost includes original fill and additional top up of refrigerant gas as per site condition. The rate inclusive of all chisel work, plastering, finishing, painting & all civil related work pertaing to mentioned work.				
	2 Tonne Cassette AC (Five Star Rating)	Nos.	3.00		
2	EXTRA REFRIGERANT PIPING				
a	S.I.T.C. of 19 mm dia & 16 mm dia Copper Refrigerant Pipes with Foam insulation between Indoor & Outdoor units.with breaking of wall wherever required for 3/4Tr Cassette/ Inverter Air conditioners.	Mtr.	115		
b	S.I.T.C. of 12.5 sq.mm. & 6.25 Sq.mm. dia. Copper refrigerant pipe with foam Insulation between Indoor & Outdoor units with breaking of wall for making hole wherever required For Split Air- Conditioners.	Mtr.	35		
3	DRAIN PIPING				
	Providing and fixing drain piping up to drain as directed by the engineer incharge with all accessories e.g. elbows, unions, sockets, reducers, reducing tees, nipples etc. Complete job including cutting chiseling in walls, floor and making good of all chases/ cuts etc. and discharging the drain into a floor trap/ gully as per site conditions with insulation, both as specified by the manufacturer.				
a	25 mm dia PVC drain pipe for Split AC	Mtr.	45.00		
b	32 mm dia PVC drain pipe for Cassette AC	Mtr.	75.00		
4	Providing and fixng Stabilizer with 3 step relay and input voltage range of 140-280 V and output to be 230 V (Blue bird/ Logic state/ Inline/ V-gourd) (copper winding).				
a	3 KVA (For 1.0 TR Split AC)	Nos.	1.00		
b	4 KVA (For 1.5 TR Split AC)	Nos.	2.00		
5	Control Cable For AC- Supply & laying, testing & commissioning of following sizes of copper conductor contorl cables on existing tray icluding fixing clamps & proper connections to equipment etc complete as required.				
	4 Cx 1.5 Sqmm	Mtr.	35.00		
	4Cx2.5 sqmm	Mtr.	130.00		

AC ESTIMATE BRANCH

S. No.	Description	Unit	Qty.	Rate	Amount
6	Supplying, installation and commissioning of automatic 24 HRS. programmable TIMER of required capacity to run A.C. alternately (MDS/ L&T/ Other reputed make).	Nos.	1.00		
TOTAL AMOUNT FOR AIR-CONDITIONING WORK					
Note:- The rates quoted includes all other taxes , duties , loading, unloading , transportation, other expenses etc to site. only GST will be paid Extra					