

**BILL OF QUANTITY**

**Composite Tender for Removal & Buyback of Existing Air-conditioning Units and  
Replacement with Supply, Installation, Testing & Commissioning of New Air-conditioning Units at at NID-Gandhinagar Campus  
NIT No. 03/2022-23**

**SUMMARY**

SL.NO.	DESCRIPTION	AMOUNT AS PER BOQ (Rs)
1	<b>Part - A</b> Air-conditioning equipment supply & installation ( Part A1+A2)	
2	<b>Part - B</b> Existing Air-conditioning equipment Removal & Buy-back (Less)	
3	<b>Part - C</b> Electrical work	
	<b>Grand Total I = (PART A - PART B+ PART C )(excluding GST)</b>	
4	<b>Part-D</b> Comprehensive, all inclusive service warranty for Part-A+C above (including all necessary material, spare parts & labour for 5 years after completion of 1 year warranty) (including all necessary material, spare parts & labour)	
	<b>GRAND Total (PART D ): (excluding GST)</b>	

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE INR	AMOUNT INR
	<b>PART A1 : SCHEDULE OF VRF HVAC SYSTEM EQUIPMENT SUPPLY &amp; INSTALLATION PRICE BID (Excluding GST)</b>				
1 (1.1)(a)	Supply, Installation, Testing and commissioning of air cooled modular type (top-discharge) VRF / VRV System based outdoor units including the electrical cabling and control cabling, transportation and lifting, etc. all complete as per site conditions, complete with indoor & outdoor units with individual cordless remote controller as per the following capacities of the IDU and ODU. The outdoor ambient temperature range to be considered shall be 46 deg centigrade. Any derating of the compressor has to be considered if any. (i) <b>Outdoor Units : Supply, installation, Testing &amp; Commissioning of Modular type fully / partly Inverter based outdoor units complete with Rotary or Scroll Compressors, condenser coils, fans, microprocessor controller, etc.</b> (ii) <b>Indoor Units for above mentioned Outdoor Units :Supply, Installation, Testing and commissioning of VRF / VRV compatible Indoor units. Indoor units with pre-filter, low-noise fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, the filters shall be synthetic washable media type arranged for convenient cleaning and replacement, built in drain pump. Note : Configuration of ODU tonnage and numbers are to be selected as per manufacturer range -- VRF SYSTEM (High Side, supply) Out-door units - GF Clay Studio+TAD LAB : Min 20 HP &amp; Max 22 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)</b>	1	Nos.		
1.1 (b)	Same as above - (1.1) (a) <b>VRF SYSTEM (High Side, supply) : GF APPAREL WORKSHOP : Min 16 HP &amp; Max 18 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)</b>	1	Nos.		
1.1 (c)	Same as above - (1.1) (a) VRF SYSTEM (High Side, supply) : GF LAD Room : Min 16 HP & Max 18 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)	1	Nos.		
1.1(d)	Same as above - (1.1) (a) VRF SYSTEM (High Side, supply) : FF Photography Studio : Min 16 HP & Max 18 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)	1	Nos.		
1.1 e	Same as above - (1.1) (a) VRF SYSTEM (High Side, supply) :FF FDP Classroom: Min 16 HP & Max 18 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)	1	Nos.		
1.1 (f)	Same as above - (1.1) (a) VRF SYSTEM (High Side, supply) : FF Color Dark Rom,Dark Room And Photo Studio : Min 16 HP & Max 18 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)	1	Nos.		
1.1(g)	Same as above - (1.1) (a) VRF SYSTEM (High Side, supply) :FF Mechatronics Lab : 12 HP (As per availability of Model) (Minimum 2 Nos. Compressor with having minimum 01 No. Inverter Compressor)	1	Nos.		
1.2 (a1)	<b>In-door units</b> : GF Clay Studio+TAD LAB : 3.0 Cassette Units (4-way) - Remote Controller included	4	Nos.		
1.2 (a2)	<b>In-door units</b> : GF Clay Studio+TAD LAB : 4 HP Cassette Units (4-way) - - Remote Controller included	2	Nos.		
1.2 (b)	<b>In-door units</b> : GF Apparel Workshop : 4HP Cassette Units (4-way) - Remote Controller included	4	Nos.		
1.2 (c)	<b>In-door units</b> : GF LAD Room : 4.0 HP Cassette Units (4-way) - - Remote Controller included	4	Nos.		
1.2 d1	<b>In-door units</b> : FF Photography Studio : 3.0 Cassette Units (4-way) - - Remote Controller included	4	Nos.		
1.2 d2	<b>In-door units</b> : FF Photography Studio : 2.0 HP Cassette Units (4-way) - - Remote Controller included	2	Nos.		
1.2 e	<b>In-door units</b> : FF FDP Classroom: 4.0 HP Cassette Units (4-way) - - Remote Controller included	4	Nos.		
1.2 f1	<b>In-door units :FF Color Dark Rom,Dark Room And Photo Studio : 3.0 Cassette Units (4-way) - - Remote Controller included</b>	3	Nos.		
1.2 f2	<b>In-door units</b> : FF Color Dark Rom,Dark Room And Photo Studio : 2.0 HP Cassette Units (4-way) - - Remote Controller included	3	Nos.		
1.2 g	<b>In-door units</b> : FF Mechatronics Lab : 3.0 Cassette Units (4-way) - - Remote Controller included	4	Nos.		
1.3 a	All refrigerant Joints - GF Clay Studio+TAD LAB	1	lot		
1.3 b	All refrigerant Joints - GF Apparel Workshop	1	lot		
1.3 c	All refrigerant Joints - GF LAD Room	1	lot		
1.3 d	All refrigerant Joints - FF Photography Studio	1	lot		
1.3 e	All refrigerant Joints - FF FDP Classroom	1	lot		
1.3 f	All refrigerant Joints - FF Color Dark Rom,Dark Room And Photo Studio	1	lot		
1.3 g	All refrigerant Joints - FF Mechatronics Lab	1	lot		
2.2.1 a	Installation of Variable Refrigerant System : Out-door units : GF Clay Studio+TAD LAB : Min 20 HP & Max 22 HP as per item 1.1 (a) above	1	Nos.		
2.2.1 b	Installation of Variable Refrigerant System : Out-door units : : GF Apparel Workshop : Min 16 HP & Max 18 HP as per item 1.1 (b) above	1	Nos.		
2.2.1 c	Installation of Variable Refrigerant System : Out-door units : : GF LAD Room : Min 16 HP & Max 18 HP as per item 1.1 (b) above	1	Nos.		
2.2.1 d	Installation of Variable Refrigerant System : Out-door units : : FF Photography Studio : Min 16 HP & Max 18 HP as per item 1.1 (c) above	1	Nos.		
2.2.1 e	Installation of Variable Refrigerant System : Out-door units : : FF FDP Classroom : Min 16 HP & Max 18 HP as per item 1.1 (c) above	1	Nos.		
2.2.1 f	Installation of Variable Refrigerant System : Out-door units : : FF Color Dark Rom,Dark Room And Photo Studio : Min 16 HP & Max 18 HP as per item 1.1 (c) above	1	Nos.		
2.2.1 g	Installation of Variable Refrigerant System : Out-door units : : FF Mechatronics Labo : 12 HP as per item 1.1 (e) above	1	Nos.		
2.2 a-1	In-door units : GF Clay Studio+TAD LAB : 3.0 Cassette Units (4-way)	4	Nos.		
2.2a-2	In-door units : GF Clay Studio+TAD LAB : 4 HP Cassette Units (4-way)	2	Nos.		

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE INR	AMOUNT INR
2.2b	In-door units : GF Apparel Workshop : 4HP Cassette Units (4-way)	4	Nos.		
2.2c	In-door units : GF LAD Room : 4.0 HP Cassette Units (4-way)	4	Nos.		
2.2 d-1	In-door units : FF Photography Studio : 3.0 Cassette Units (4-way)	4	Nos.		
2.2 d-2	In-door units : FF Photography Studio : 2.0 HP Cassette Units (4-way)	2	Nos.		
2.2 e	In-door units : FF FDP Classroom: 4.0 HP Cassette Units (4-way)	4	Nos.		
2.2 f-1	In-door units : FF Color Dark Rom,Dark Room And Photo Studio : 3.0 Cassette Units (4-way)	3	Nos.		
2.2 f-2	In-door units : FF Color Dark Rom,Dark Room And Photo Studio : 2.0 HP Cassette Units (4-way)	3	Nos.		
2.2 g	In-door units : FF Mechatronics Lab : 3.0 or 3.2 HP Cassette Units (4-way)	4	Nos.		
2.3a	All refrigerant Joints - GF Clay Studio+TAD LAB	1	lot		
2.3b	All refrigerant Joints - GF Apparel Workshop	1	lot		
2.3c	All refrigerant Joints - GF LAD Room	1	lot		
2.3d	All refrigerant Joints - FF Photography Studio	1	lot		
2.3e	All refrigerant Joints - FF FDP Classroom	1	lot		
2.3f	All refrigerant Joints - FF Color Dark Rom,Dark Room And Photo Studio	1	lot		
2.3g	All refrigerant Joints - FF Mechatronics Lab	1	lot		
3.1 (a)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: GF Clay Studio+TAD LAB</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (b)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: GF Apparel Workshop :</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (c)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: GF LAD Room :</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (d)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: FF Photography Studio</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (e)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: FF FDP Classroom :</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (f)	<b>Comprehensive, all inclusive Installation of the following components of VRV system:FF Color Dark Rom,Dark Room And Photo Studio :</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
3.1 (g)	<b>Comprehensive, all inclusive Installation of the following components of VRV system: FF Mechatronics Lab:</b> i) All refrigerant piping between indoor & outdoor units of copper pipes neatly brazed and should be properly insulated with 19mm thick tube insulation. ii) Control cables between indoor and outdoor unit laid in PVC pipe and clamped. iii) M.S Structure for installing VRV outdoor units, duly epoxy coated. iv) Rigid PVC drain Piping with 6mm thick Closed Cell Elastomeric Nitrile Tube Insulation laid to slope as per length required on site and as per drainage route decided by NID authorities. v) Testing & Commissioning charges along with topping-up of refrigerant (R410)	1	Lot		
<b>Part - A1 VRF HVAC SYSTEM EQUIPMENT SUPPLY &amp; INSTALLATION :</b>					

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE INR	AMOUNT INR
<b>PART A2 : Non-VRF, Stand-Alone, Inverter-Based, Cassette Unit</b>					
1	Supply, Installation, Testing and commissioning of Non-VRF, Stand-Alone, Inverter based Cassette units. The cost will include installation brackets, or stands, electrical cabling between ODU & IDU, etc. as required. The quoted rates will include complete installation, connections, commissioning, etc. all complete. Freight as well as on-site delivery to location, etc. will all be included in the quoted price. <b>3 TR Cassette Units (With Remote Control Units) (i) Admin (GF)</b>	2	Nos.		
2	Supply, Installation, Testing and commissioning of Non-VRF, Stand-Alone, Inverter based Cassette units. The cost will include installation brackets, or stands, electrical cabling between ODU & IDU, etc. as required. The quoted rates will include complete installation, connections, commissioning, etc. all complete. Freight as well as on-site delivery to location, etc. will all be included in the quoted price. <b>3 TR Cassette Units (With Remote Control Units) (i) Lab (FF)</b>	2	Nos.		
3	<b>Piping &amp; Drainage</b> : Supply, installation, testing & commissioning insulated copper piping as per manufacturer's recommendation between ODU & IDU.	1	lot		
4	<b>Piping &amp; Drainage</b> : Supply, installation, testing & commissioning UPVC drainage lines as per manufacturer's recommendation as per site conditions.	1	lot		
<b>Part - A2 Non-VRF, Stand-Alone, Inverter-Based, Hi-wall split units Air-conditioning equipment supply &amp; Installation :</b>					
<b>PART A = Part A1 + Part A2</b>					
<b>Part - B SCHEDULE OF HVAC EQUIPMENT REMOVAL &amp; BUY-BACK PRICE BID</b>					
B1	Completely removing existing ductable AC units, hi-wall split units, window-type units, including out-door units, indoor units, control panels, ducting, supply & return air grills, internal electrical cabling, etc. all complete and offering buy-back price for the same including careful removal, storage, loading-unloading, carting away as directed. <b>Tenderers are required to inspect all the existing units and their condition before submission of tender &amp; Financial Bid. - ( 1.1 ) 3 Ton Multi Split AC.</b>	2	Nos.		
B2	same as as above for <b>2 Ton Split AC</b>	2	Nos.		
B3	same as as above for <b>2 Ton Split AC</b>	4	Nos.		
B4	same as as above for <b>2 Ton Split AC</b>	4	Nos.		
B5	same as as above for <b>1 Ton Window AC</b>	1	Nos.		
B6	same as as above for <b>8.5 Ton Ductable Split AC</b>	1	Nos.		
B7	same as as above for <b>5.8 Ton Ductable Split AC</b>	3	Nos.		
B8	same as as above for <b>2 Ton Split AC</b>	2	Nos.		
B9	same as as above for <b>8.5 Ton Ductable Split AC</b>	3	Nos.		
B10	same as as above for <b>2.8 Ton Ductable Split AC</b>	1	Nos.		
B11	same as as above for <b>2 Ton Window AC</b>	2	Nos.		
B12	same as as above for <b>1.5 Ton Window AC</b>	2	Nos.		
B13	same as as above for <b>1.5 Ton Window AC</b>	5	Nos.		
B14	Internal ducts	1	lot		
B15	Supply & return air-grills	1	lot		
<b>Part B Total price offered for removal &amp; buy-back as above</b>					
<b>Part - C SCHEDULE OF ELECTRICAL WORK PRICE BID (Excluding GST)</b>					
1	Fabrication works : Supply, Installation, testing & commissioning of fabrication of M.S. Material of standard sizes like ISMC 150, ISMC 125, ISMC 100, ISMC 75, ISMA 65x65x6, ISMA 50x50x6, ISMA 35x35x5, M.S. strips, square/rectangular/circular hollow tube/pipe of approved supplier of client / consultants / architect etc. including Fabrication of cable tray supports, Painting of supports by two coats of red oxide followed by two coats of sprayed enamel paint, Installation of steel supports including using of fasteners, hardware as per drawings, specification, instruction of Engineer-in-charge and as per the instruction of the manufacturer.	200	kg		
2.1-a	<b>Power Cabling Work : Medium Voltage Cables</b> : Supply & laying of Aluminum / Copper XLPE insulated medium voltage cables as per the specifications, drawings, instruction of Engineer-in-charge and as per the instruction of the manufacturer. The cable shall be laid in existing Cable tray or in trench or in hume pipe or buried in ground at a depth of 750 mm from finished ground level. The cable route maker shall be provided on entire route of the cable (buried in ground) at every 20 mtr. intervall, at every bend and whenever change of level takes place. All cables shall be provided with Aluminum tag indicating circuit number and size at both the ends. The unit rate shall also include: Supply of cables, Transportation from site store to place of installation, unpacking the drum and return of drum to the site store. Rate of Excavation, backfilling, sand & bricks should not be included. : <b>4.0 Cx 16 sq.mm. Armoured copper cable</b>	200	rmt.		
2.1-b	Power Cabling Work : Medium Voltage Cables : Supply & laying of Aluminum / Copper XLPE insulated medium voltage cables as per the specifications, drawings, instruction of Engineer-in-charge and as per the instruction of the manufacturer. The cable shall be laid in existing Cable tray or in trench or in hume pipe or buried in ground at a depth of 750 mm from finished ground level. The cable route maker shall be provided on entire route of the cable (buried in ground) at every 20 mtr. intervall, at every bend and whenever change of level takes place. All cables shall be provided with Aluminum tag indicating circuit number and size at both the ends. The unit rate shall also include: Supply of cables, Transportation from site store to place of installation, unpacking the drum and return of drum to the site store. Rate of Excavation, backfilling, sand & bricks should not be included. : <b>4.0 Cx 10 sq.mm. Armoured copper cable</b>	150	rmt.		
2.1-c	Power Cabling Work : Medium Voltage Cables : Supply & laying of Aluminum / Copper XLPE insulated medium voltage cables as per the specifications, drawings, instruction of Engineer-in-charge and as per the instruction of the manufacturer. The cable shall be laid in existing Cable tray or in trench or in hume pipe or buried in ground at a depth of 750 mm from finished ground level. The cable route maker shall be provided on entire route of the cable (buried in ground) at every 20 mtr. intervall, at every bend and whenever change of level takes place. All cables shall be provided with Aluminum tag indicating circuit number and size at both the ends. The unit rate shall also include: Supply of cables, Transportation from site store to place of installation, unpacking the drum and return of drum to the site store. Rate of Excavation, backfilling, sand & bricks should not be included. : <b>4.0 Cx 4 sq.mm. Armoured copper cable</b>	120	rmt.		
2.1-d	Power Cabling Work : Medium Voltage Cables : Supply & laying of Aluminum / Copper XLPE insulated medium voltage cables as per the specifications, drawings, instruction of Engineer-in-charge and as per the instruction of the manufacturer. The cable shall be laid in existing Cable tray or in trench or in hume pipe or buried in ground at a depth of 750 mm from finished ground level. The cable route maker shall be provided on entire route of the cable (buried in ground) at every 20 mtr. intervall, at every bend and whenever change of level takes place. All cables shall be provided with Aluminum tag indicating circuit number and size at both the ends. The unit rate shall also include: Supply of cables, Transportation from site store to place of installation, unpacking the drum and return of drum to the site store. Rate of Excavation, backfilling, sand & bricks should not be included. : <b>3.0 Cx 4 sq.mm unarmoured copper cable</b>	100	rmt.		
2.1-e	Power Cabling Work : Medium Voltage Cables : Supply & laying of Aluminum / Copper XLPE insulated medium voltage cables as per the specifications, drawings, instruction of Engineer-in-charge and as per the instruction of the manufacturer. The cable shall be laid in existing Cable tray or in trench or in hume pipe or buried in ground at a depth of 750 mm from finished ground level. The cable route maker shall be provided on entire route of the cable (buried in ground) at every 20 mtr. intervall, at every bend and whenever change of level takes place. All cables shall be provided with Aluminum tag indicating circuit number and size at both the ends. The unit rate shall also include: Supply of cables, Transportation from site store to place of installation, unpacking the drum and return of drum to the site store. Rate of Excavation, backfilling, sand & bricks should not be included. : <b>3.0 Cx 6 sq.mm unarmoured copper cable</b>	100	rmt.		
2.2-a	Cable Connections & Terminations : Supply, Connections & Termination of Medium voltage XLPE insulated cables as per the specification & instruction of Engineer-in-charge. The unit rate shall include supply & connection of adequate size single compression type brass cable glands and tinned copper / AL. lugs including cutting/stripping of cable insulation, fixing of cable glands, crimping the lugs, connection of cable armour with earth bar, necessary tools, hardware, PVC insulated tape and all other material required. : <b>4.0 Cx 16 sq.mm. Armoured copper cable</b>	20	nos.		
2.2-b	Cable Connections & Terminations : Supply, Connections & Termination of Medium voltage XLPE insulated cables as per the specification & instruction of Engineer-in-charge. The unit rate shall include supply & connection of adequate size single compression type brass cable glands and tinned copper / AL. lugs including cutting/stripping of cable insulation, fixing of cable glands, crimping the lugs, connection of cable armour with earth bar, necessary tools, hardware, PVC insulated tape and all other material required. : <b>4.0 Cx 10 sq.mm. Armoured copper cable</b>	20	nos.		
2.2-c	Cable Connections & Terminations : Supply, Connections & Termination of Medium voltage XLPE insulated cables as per the specification & instruction of Engineer-in-charge. The unit rate shall include supply & connection of adequate size single compression type brass cable glands and tinned copper / AL. lugs including cutting/stripping of cable insulation, fixing of cable glands, crimping the lugs, connection of cable armour with earth bar, necessary tools, hardware, PVC insulated tape and all other material required. : <b>4.0 Cx 4 sq.mm. Armoured copper cable</b>	10	nos.		
2.2-d	Cable Connections & Terminations : Supply, Connections & Termination of Medium voltage XLPE insulated cables as per the specification & instruction of Engineer-in-charge. The unit rate shall include supply & connection of adequate size single compression type brass cable glands and tinned copper / AL. lugs including cutting/stripping of cable insulation, fixing of cable glands, crimping the lugs, connection of cable armour with earth bar, necessary tools, hardware, PVC insulated tape and all other material required. : <b>3.0 Cx 4 sq.mm unarmoured copper cable</b>	10	nos.		
2.2-e	Cable Connections & Terminations : Supply, Connections & Termination of Medium voltage XLPE insulated cables as per the specification & instruction of Engineer-in-charge. The unit rate shall include supply & connection of adequate size single compression type brass cable glands and tinned copper / AL. lugs including cutting/stripping of cable insulation, fixing of cable glands, crimping the lugs, connection of cable armour with earth bar, necessary tools, hardware, PVC insulated tape and all other material required. : <b>3.0 Cx 6 sq.mm unarmoured copper cable</b>	10	nos.		



Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE INR	AMOUNT INR
2.3-a	Cable Trays : Supply, Fabrication & installation of readymade Perforated type G.I. cable tray (HDGI) as per drawing, specification & instruction of Engineer-in-charge including all materials & hardware. Thickness - 2mm., Length - 2.5 mtr. Colour shed to be approved from Client / Architect / Consultants prior to order. all accessories like bends / tee / coupler etc.. will be measured in RMT. Only Cable tray supports shall be considered in fabrication item separately <b>50 mm x 50 mm wide cable tray</b>	200	rmt.		
2.3-b	Cable Trays : Supply, Fabrication & installation of readymade Perforated type G.I. cable tray (HDGI) ... same as above ..... : <b>150 mm x 100mm wide cable tray</b>	100	rmt.		
2.3-c	Cable Trays : Supply, Fabrication & installation of readymade Perforated type G.I. cable tray (HDGI) ... same as above ..... : <b>300 mm x 100mm wide cable tray</b>	100	rmt.		
2.4-a	Conduiting & Raceway: Supply & laying of conduit / raceway open or concealed manner in Slab / floor / wall as per drawings, specification, instruction of Engineer-in-charge and as per the instruction of the manufacturer. Rate of PVC pipe / Raceway, flexible pipe, junction box, bend and all other accessories to be considered in unit rate. : <b>32 mm dia. PVC conduit</b>	10	rmt.		
2.4-b	Conduiting & Raceway: Supply & laying of conduit / raceway open or concealed manner in same as above : <b>25 mm dia. PVC conduit</b>	10	rmt.		
2.4-c	Conduiting & Raceway: Supply & laying of conduit / raceway open or concealed manner in same as above : <b>100X50MM UPVC wall Raceway white</b>	10	rmt.		
2.4-d	Conduiting & Raceway: Supply & laying of conduit / raceway open or concealed manner in same as above : <b>50X50MM UPVC wall Raceway white</b>	10	rmt.		
3.1	Maintenance Free Earthing Works : 25 mm x 6 mm G.I Earthing strip	50	rmt.		
3.2	Maintenance Free Earthing Works : 25 mm x 3 mm G.I Earthing strip	50	rmt.		
3.4	Maintenance Free Earthing Works : 8 SWG G.I.wire	600	rmt.		
3.4	Maintenance Free Earthing Works : 8 SWG CU.wire	100	rmt.		
3.5	Maintenance Free Earthing Works : Earthing Link (50mm x 6mm - Length 300mm GI)	2	nos.		
4.1-a	Internal Wiring: MCB Distribution Boards : Supply, installation, testing & commissioning of Three Phase/ Single Phase, Double Door type, powder coated readymade type Distribution Boards IP 43 grade, PPI type and Flexy Distribution board as per drawings & specifications. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Distribution board - ACDB TPN 6 Way Distribution Board. Incoming : 63A FP MCB Outgoing : 3 # 25A FP MCB</b>	2	Nos.		
4.1-b	Internal Wiring: MCB Distribution Boards : Supply, installation, testing & commissioning of Three Phase/ Single Phase, Double Door type, powder coated readymade type Distribution Boards IP 43 grade, PPI type and Flexy Distribution board as per drawings & specifications. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Distribution board - ACDB SPN 12 Way Distribution Board. Incoming : 25A DP ELCB (30mA) Outgoing : 6 # 6/10 A SP MCB</b>	0	Nos.		
4.1-c	Internal Wiring: MCB Distribution Boards : Supply, installation, testing & commissioning of Three Phase/ Single Phase, Double Door type, powder coated readymade type Distribution Boards IP 43 grade, PPI type and Flexy Distribution board as per drawings & specifications. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Distribution board - ACDB SPN 8 Way Distribution Board. Incoming : 25A DP ELCB (30mA) Outgoing : 6 # 6/10 A SP MCB</b>	4	Nos.		
4.1-d	Internal Wiring: MCB Distribution Boards : Supply, installation, testing & commissioning of Three Phase/ Single Phase, Double Door type, powder coated readymade type Distribution Boards IP 43 grade, PPI type and Flexy Distribution board as per drawings & specifications. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Distribution board - ACDB SPN 8 Way Distribution Board. Incoming : 40A DP ELCB (30mA) Outgoing : 6 # 6/10 A SP MCB</b>	3	Nos.		
4.2-a	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. : <b>Legrand Plexo3 box - 8 module</b>	4	Nos.		
4.2-b	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Legrand Plexo3 box - 12 module</b>	1	Nos.		
4.2-c	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Hensel Weather Proof DB - KV7109</b>	1	Nos.		
4.2-c	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Hensel Weather Proof DB - KV9112M</b>	1	Nos.		
4.2-d	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>63A FP MCB only</b>	3	Nos.		
4.2-e	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>40A FP MCB only</b>	5	Nos.		
4.2-f	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>32A DP MCB only</b>	1	Nos.		
4.2-g	<b>MCB / MCCB / ATS WITH ENCLOUSER</b> : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>20A DP MCB only</b>	3	Nos.		

Sr. No.	DESCRIPTION	QUANTITY	UNIT	RATE INR	AMOUNT INR
4.2-h	MCB / MCCB / ATS WITH ENCLOUSER : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Legrand Plexo3 box - 4 module</b>	2	Nos.		
4.2-i	MCB / MCCB / ATS WITH ENCLOUSER : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>Hensel Weather Proof DB - KV7104</b>	1	Nos.		
4.2-j	MCB / MCCB / ATS WITH ENCLOUSER : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>40A FP, ELCB+MCB only 100mA</b>	4	Nos.		
4.2-k	MCB / MCCB / ATS WITH ENCLOUSER : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>25A FP, ELCB+MCB only 100mA</b>	4	Nos.		
4.2-l	MCB / MCCB / ATS WITH ENCLOUSER : Supply, Installation, testing & commissioning of Three Phase / Single Phase - Thermoplastic outdoor type readymade MCB / MCCB enclosure with TPN, MCB / MCCB as per drawings, specifications & as per the instruction of engineer-in-charge. The unit rate shall include supply & fixing on wall / column, checking of wiring, connection and operation of MCBs and supply of necessary hardware. <b>25A DP, RCCB only 100mA</b>	4	Nos.		
4.3-a	<b>MAINS WIRING &amp; ACCESSORIES</b> : Supply, Laying & connection of 3#1.5 sq.mm copper flexible FRLS wires from DB/Panel to switch board / Power Point in 25mm Dia. MMS PVC conduit in wall / slab / floor. The unit rate shall include rate of Supply, Laying & connection of pipes & wires.	900	rmt.		
4.3-b	<b>MAINS WIRING &amp; ACCESSORIES</b> : Supply, Laying & connection of 2#2.5 sq.mm & 1#1.5 sq. mm copper flexible FRLS wires from DB/Panel to switch board / Power Point in 25mm Dia. MMS PVC conduit in wall / slab / floor. The unit rate shall include rate of Supply, Laying & connection of pipes & wires.	100	rmt.		
<b>Part C SCHEDULE OF ELECTRICAL WORK PRICE BID (Excluding GST)</b>					
<b>Part - D</b> Comprehensive, all inclusive service warranty for Part-A+C above (including all necessary material, spare parts & labour for 5 years after completion of 1 year warranty) (including all necessary material, spare parts & labour)					
1.1	<b>1st Year after completion of installation and / or commissioning, excluding GST ---</b> VRF HVAC System : : GF Clay Studio+TAD LAB (Min 20 HP & Max 22 HP) , 3.0 & 4.0 HP Cassette units	6	Nos.		Included cost above
1.2	<b>1st Year after completion of installation and / or commissioning, excluding GST ---</b> VRF HVAC System : : GF Apparel Workshop + GF LAD Room + FF Photography Studio+ FF FDP Classroom +FF Color Dark Rom,Dark Room And Photo Studio+ (Min 16 HP & Max 18 HP)	24	Nos.		Included cost above
1.3	<b>1st Year after completion of installation and / or commissioning, excluding GST ---</b> VRF HVAC System : : FF Mechatronics Lab : 12 HP	4	Nos.		Included cost above
1.4	<b>1st Year after completion of installation and / or commissioning, excluding GST : (i) Admin (GF) + (ii) Lab (FF)</b> 3 TR Hi-Cassett unit	4	Nos.		Included cost above
2.1	<b>2nd Year - VRF HVAC System : : GF Clay Studio+TAD LAB (Min 20 HP &amp; Max 22 HP)</b>	6	Nos.		0
2.2	<b>2nd Year - GF LAD Room + FF Photography Studio+ FF FDP Classroom +FF Color Dark Rom,Dark Room And Photo Studio+ (Min 16 HP &amp; Max 18 HP)</b>	24	Nos.		0
2.3	<b>2nd Year - FF Mechatronics Lab : 12 HP</b>	4	Nos.		0
2.4	<b>2nd Year - (i) Admin (GF) + (ii) Lab (FF) 3 TR Hi-Cassett unit</b>	4	Nos.		0
3.1	<b>3rd Year - VRF HVAC System : : GF Clay Studio+TAD LAB (Min 20 HP &amp; Max 22 HP)</b>	6	Nos.		0
3.2	<b>3rd Year - GF LAD Room + FF Photography Studio+ FF FDP Classroom +FF Color Dark Rom,Dark Room And Photo Studio+ (Min 16 HP &amp; Max 18 HP)</b>	24	Nos.		0
3.3	<b>3rd Year - FF Mechatronics Lab : 12 HP</b>	4	Nos.		0
3.4	<b>3rd Year - (i) Admin (GF) + (ii) Lab (FF) 3 TR Hi-Cassett unit</b>	4	Nos.		0
4.1	<b>4th Year - VRF HVAC System : : GF Clay Studio+TAD LAB (Min 20 HP &amp; Max 22 HP)</b>	6	Nos.		0
4.2	<b>4th Year - GF LAD Room + FF Photography Studio+ FF FDP Classroom +FF Color Dark Rom,Dark Room And Photo Studio+ (Min 16 HP &amp; Max 18 HP)</b>	24	Nos.		0
4.3	<b>4th Year - FF Mechatronics Lab : 12 HP</b>	4	Nos.		0
4.4	<b>4th Year - (i) Admin (GF) + (ii) Lab (FF) 3 TR Hi-Cassett unit</b>	4	Nos.		0
5.1	<b>5th Year - VRF HVAC System : : GF Clay Studio+TAD LAB (Min 20 HP &amp; Max 22 HP)</b>	6	Nos.		0
5.2	<b>5th Year - GF LAD Room + FF Photography Studio+ FF FDP Classroom +FF Color Dark Rom,Dark Room And Photo Studio+ (Min 16 HP &amp; Max 18 HP)</b>	24	Nos.		0
5.3	<b>5th Year - FF Mechatronics Lab : 12 HP</b>	4	Nos.		0
5.4	<b>5th Year - (i) Admin (GF) + (ii) Lab (FF) 3 TR Hi-Cassett unit</b>	4	Nos.		0
<b>Part D Comprehensive, all inclusive service (Excluding GST)</b>					