

PART: II – FINANCIAL BID						
Name of work : Supply and Installation of Air-conditioning systems at various Department at Gujarat University.						
SCHEDULE B						
Sr. No.	S.O.R. 23-24	HVAC WORK	Unit	Qty.	Rate without GST	Amount
1.0	8-4-1	Providing and erecting approved make ductable split Air Conditioning unit each consist of remote located condensing unit and an evaporating unit complete with interconnecting insulated refrigerant piping up to 10 RMT. rigid PVC, drain piping of 10 kg / cm2 dully insulated with nitrile rubber insulation of 10 RMT with ECO Friendly Green gas. The condensing unit is complete with hermetically sealed scroll compressor & condenser unit which effectively achieves heat rejection by utilizing air of fan and coil type condenser. The evaporating unit will be complete with DX evaporator centrifugal blower, blower motor along with microprocessor biased remote controller with memory backup etc.				
		For 16.5 Ton	No	4	297592	1190368
		For 11 Ton	No	2	211931	423862
		For 5.5 Ton	No	1	124466	124466
2.0		SPLIT AIRCONDITIONING				
	8-3-2	Providing & erecting <u>Inverter</u> based approved make split air-conditioning unit consisting of condensing unit with variable speed fan motor, inverter type hermetically sealed rotary compressor with accessories etc. duly connected separately erected evaporating unit and blower motor with its accessories by means of extra supplied proper insulated copper tubing, drain PVC pipes suitable for (cost includes Eco Friendly green gas charging and 15A plug top & Remote Control & MS Stand) with necessary core cutting.				
		for 1.5 ton capacity	No	7	34476	241332
		for 1.7 to 2 ton capacity	No	16	42679	682864
3.0	8-3-4	Providing and erecting <u>Inverter based</u> approved make Cassette type split air-conditioning unit consisting of condensing unit with fan motor, hermetically sealed scroll/rotary compressor with accessories etc. duly connected separately erected evaporating unit and blower motor with its accessories by Eco friendly Green gas charging & Internal copper wiring & Remote control (3 star and above of current year) with necessary core cutting.				

		for 3 ton capacity- 3Phase	No	1	76958	76958
4.0	8-3-5.	Supplying and erecting insulated pair of soft copper tubing including power and control cable , necessary PVC drain pipes for Split AC machine up to 4 TR capacity	RM T	250	814	203500
5.0	8-3-5	Supplying & installing MS standard type stand mounting for outdoor unit of Split A.C. upto 4 TR capacity erected with necessary hardware materials as directed.	No	24	637	15288
6.0		Refrigerant Piping & Cabling for Air cooled Ductable units.				
	MR	Supply, Installation, Testing and Commissioning of hard /soft 16 Gauge Copper Refrigerant piping with 19 mm thick Black Nitrile Rubber & Electric Power & Control Cabling Between indoor units and outdoor unit per Unit Per Rmt. Basis. The Entire Piping shall be further covered with UV & Fire Resistant Glass Cloth Coating & G.I.sheet metal weather Protection cover				
		Ductable Split Unit	RM T	100	1400	140000
7.0	8-8-4	Rigid UPVC drain pipe of 10 Kg/cm2. rating with 9 mm thick. Nitrile rubber insulation.				
		32 mm Dia.	RM T	60	77	4620
8.0	MR	Supply and Installation for Canvass connections with zip to Ductable Ac Unit	No	7	3500	24500
9.0		SHEET METAL DUCT				
	8-11-2	Supply, installation, balancing and commissioning of fabricated at site GSS sheet metal rectangular/round ducting complete with neoprene rubber gaskets, elbows, splitter dampers, vanes, hangers, supports etc. as per approved drawings and specifications of following sheet thickness complete as required.				
		(A) Thickness 0.63 mm sheet (24 Gauge)	Sq. Mtr	500	1069	534500
		(B) Thickness 0.80 mm sheet (22 Gauge)	Sq. Mtr	200	1246	249200
10.0	8-11-5	Supplying & fixing of powder coated extruded aluminum Supply Air Grills with aluminum volume control dampers complete as per specifications and size & shape as per site requirement and approved design.	Sq. Mtr	15	8747	131205
11.0	8-11-6	Supplying & fixing of powder coated extruded aluminum Return Air Grills with louvers but without volume control dampers complete as per specifications	Sq. Mtr	15	5976	89640

		and size & shape as per site requirement and approved design.				
12.0	8-11-7	Supplying, fixing testing commissioning of supply air diffuser of powder coated aluminum with aluminum volume control dampers with anti-smudge ring & removable core and size & shape as per site requirement and approved design.	Sq Mtr	14	11434	160076
13.0	8-11-8	Supplying, fixing testing commissioning of Return air diffuser of powder coated aluminum without volume control dampers with anti-smudge ring & removable core and size & shape as per site requirement and approved design..	Sq Mtr	14	7891	110474
		INSULATION WORK				
14.00	8-11-13	Supplying and fixing of following thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class "O") insulation on existing duct after applying suitable adhesive for Nitrile rubber. The joints shall be sealed with 50 mm wide and 3 mm thick self-adhesive nitrile rubber tape insulation complete as per specifications and as required.				
		19 MM Thick	Sq Mtr	700	738	516600
15.00	8-11-14	Supplying and fixing 50 mm thick aluminum foil faced resin bonded fiber glass insulation (on duct) of density 24 kg/cu.m or mineral wool insulation(noncombustible) of density 44 kg/cu m after applying two coats of cold setting adhesive (CPRX compound) sealing all joints with self-adhesive aluminum tape & covering with 0.63mmx19mm GI wire mesh netting butting all joints and laced with GI wire complete as per specifications and as required. (For indoor applications).	Sq Mtr	200	467	93400
16.00	8-6-1	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), microprocessor based Controller, top discharge type condensing unit(s), with R410 A Refrigerant (Or Eco Friendly Green Gas if any), vibration isolators, with suitable foundation, MS Stand for Unit with necessary paint etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEER not less than 6.5. (Design should be got approval before	PER HP	114	18521	2111394

		execution from engineer in charge)				
17. 00	8-6-2	Supply, installation, testing and commissioning of following minimum capacity 4-way/2 way/radial flow as per approval VRV Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, cord less remote control etc., suitable for operation on single phase 230 V \pm 10%, 50Hz AC supply, max noise level 60dB @ 400 cfm per TR(minimum) complete, as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature fresh air provision compatible for Remote Operation System				
18. 00		.....(do).....(a.)2.00 TR	Ea.	4	24176	96704
19. 00		.....(do).....(b.)2.4 TR	Ea.	8	24684	197472
20. 00		.....(do).....(c) 2.8 TR	Ea.	1	25133	25133
21. 00		.....(do).....(d) 3.2 TR	Ea.	2	25694	51388
22. 00		.....(do).....(e) 4.0 TR	Ea.	14	26762	374668
23. 00	MR	All refrigerant Joints and Ref Header for the system	Lot	1	139200	139200
24. 00	8- 6 7	Central Control System (A) Cord type remote control with thermostat, LED Display and internal wiring for Cassette, FCU & CSU	Nos.	29	1560	45240
25. 00		(B) Central wired Remote Control System	PER HP	114	1400	159600
26. 00	8-6-5	Supply, Installation, testing and commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/hard drawn copper refrigerant piping for VRV system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-0 tubular insulation/with Class-0 closed cell elastomeric nitrile rubber tubular sleeves sections of specified thickness as given below for Suction and Liquid lines, all accessories as per specifications etc with necessary refrigerant joint as required : (A) 6.4 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	30	230	6900

27. 00		.....(do).....(B) 9.5 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	50	314	15700
28. 00		.....(do).....(C.) 12.7 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	67	433	29011
29. 00		.....(do).....(D) 15.86 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	88	561	49368
30. 00		.....(do).....(E) 19 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	95	662	62890
31. 00		.....(do).....(F) 22.2 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	109	814	88726
32. 00		.....(do).....(G) 25.4 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	125	959	119875
33. 00		.....(do).....(H) 28.58 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr.	140	1018	142520
34. 00		.....(do).....(I) 31.8 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	Mtr.	164	1069	175316
35. 00		.....(do).....(J) 34.9 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	Mtr.	193	1128	217704
36. 00		.....(do).....(K) 38.1 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	Mtr.	214	1162	248668
37. 00		.....(do).....(L) 41.27 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	Mtr.	225	1230	276750
38. 00	MR	M.S.Structure for installing VRV outdoor units duly Painted with synthetic enamel paints.	Kg.	1950	130	253500
39. 00	8-8-4	Rigid UPVC drain pipe of 10 Kg/cm2. rating with 9 mm thick.nitrile rubber insulation.A) 32 MM DIA.	Rmt	200	77	15400
40. 00	8-8-4	Rigid UPVC drain pipe of 10 Kg/cm2. rating with 9 mm thick.nitrile rubber insulation.A) 25 MM DIA.	Rmt	180	77	13860
41. 00	8-7-2	Testing & Commissioning Charges along with topping-up of R-410a refrigerant.	Kgs.	114	763	86982
42. 00	8-6-6	Supply installation testing commissioning Shielded Shielded Control Cables for VRV System with necessary ISI mark Medium class rigid PVC pipes with necessary accessories with termination in machine and control equipments..	Rmt	2250	128	288000
43. 00	4-4-5	Providing and erecting XLPE(IS:7098)(I)-88 ISI armored cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables. (A)4 core 16 Sq. mm	Rmt	1800	975	1755000
		(B) 4 core 10 Sq.mm	Rmt	500	667	333500
44. 00	MR	25 X 3 mm GI Strip	Rmt	460	125	57500

45.00	MR	6 SWG GI Wire	Rmt	685	105	71925
46.00	8-9-1	Supplying & fixing 50mm thick TF quality expanded polystyrene for underdeck insulation on slab/wall /shaft exposed to sun/atmosphere as per specifications.	Sq Mtr	850	353	300050
45.00	MR	Supplying and erecting approved make GRP / FRP Perforated type Cable Tray Material – Corrosion Resistant Polyester Flame Retardant U.V. Stabilized Resin System - Manufactured from Pultruded Sections- Polyester Resin System, Glass Content : 55 – 60 % - - Standard Length : 3000mm- Support Span – 1500mm, Deflection L/200 - Specification NEMA FG1 1993- UV Resistant - Flame Retardant – IS 6746 - Appendix K/UL 94, Very Low Flammability - Specification Followed NEMA FG1 1993 Oxygen Index – Minimum 30% as per ASTM D 2863 - Flame Spread (Extent of Burning) – 20mm as per Standard ASTM D 635 - Tensile Strength – 4000 – 8000 Kg/Cm2 as per Standard ASTM D 638 - Flexural Strength – 2500 – 10000 Kg/Cm2 as per Standard				
	MR	(F) Width - 300mm, Pultruded “C” Channel with 50mm Sides 4mm Thickness, Loading 30 Kg./Mtr.	Rmt	250	526	131500
46.00	MR	Electrical panel board vrv system in compartmentalized and weather proof construction with copper bus bar, star delta starter, sfu, tpm mcb, push buttons, indicating lamps, a meters, v meters, digital load manager, indicating lamps, delay timers, ryb led lamps, control wiring and protection system etc.	Nos.	4	79200	316800
47.00	8-13-1	Providing and erecting water cooler having storage capacity 80Ltr. & cooling capacity 40 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15° C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating coil, thermostats, relay etc. complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel.	Nos.	2	40933	81866
48.00	8-13-2	Providing & erecting water cooler having storage capacity 150 Ltr. & cooling capacity 150 Ltr.per hour @ an ambient temp of 45° C. The outlet temp. of the water should drop by 15°C within a hour, The water cooler should be comprising of hermetically sealed compressor, fan motor, condensing unit, water tank surrounded by evaporating, coil, thermostats, relay etc.complete with necessary inlet & outlet connection. The body of water cooler will be made from Stainless Steel.	Nos.	2	46187	92374

49.00	8-13-3	Providing & Erecting full SS Body (SS 304) Split type water cooler having storage capacity 160 to 175 Ltr.(Tank SS 304) & Cooling capacity 150 ltr. Per hour @ an ambient temp of 35 ⁰ C.The outlet temp. of the water should drop by 15 ⁰ C within a hour,The water cooler should be comprising of hermetically sealed Reciprocating compressor with R134A, fan motor, Copper Condensing unit with company fabricated Outdoor Unit water tank surrounded by evaporating coil, thermostats, relay etc.complete with necessary copper tube & Insulation, M.S Chancel Stand with Painting for water tank & M.S. Powder Coated Stand for Outdoor unit with Installation. With DPELCB and 4 Way DB Box with accessory Three core Cord for connection.	Nos.	2	50637	101274
Total Amount						13445337

