

### Trade wise Raw Material Requirement

Trade **Refrigeration and Air Conditioner Technician**

Sector **CAPITAL GOODS AND MANUFACTURING**

Type of Trade **Engineering Non Machine Group**

NSQF Level **5**

Affiliated to **NCVT**

DGET Trade Code **DGT/1010**

Duration in Years **2**

Intake Per Unit **24**

Raw Material for **1st Years**

Total Items **596**

Total Amount **278847.5 Rs.**

Per Trainee Amount **11618.65 Rs.**

S.N.	Name of Item	Unit or Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
1	Fire extinguishers	no	500	1	500
2	M.S.Channel 75x41x155	kg	70	25	1750
3	File Handle 5"	nos	50	25	1250
4	Hack saw blade	nos	10	20	200
5	Round bar 6mm	kg	70	12	840
6	G.I. sheet 22 swg (4x6)	sheet	600	1	600
7	Aluminium revet 03	nos	2	200	400
8	PVC wire 1sq (Red,Blue,Green)	meter	17	270	4590
9	PVC wire 2.5sq (Red,Blue,Green)	meter	25	270	6750
10	PVC wire 1/18"	meter	20	20	400
11	PVC Wire 3/20	meter	30	20	600
12	PVC wire Cable 2.5sq.mm 4 core cable	meter	55	40	2200
13	Cable 35/40,40/36	meter	550	40	22000
14	Emery Paper 00 & 100 no	nos	15	20	300
15	Emery cloth Roll 00 grade	roll	4000	1	4000
16	Emery pest(Lapping past) smooth 250 gram	no	50	1	50
17	Testing prods	nos	10	10	100
18	connecting leads	nos	10	20	200
19	Bulb 15w,40W,100w,200w	nos	40	20	800
20	capacitors 10mfd 25v,270nf 100mfd 25v, 10kpf 25v,4700mf25v,1000mf 25v,	nos	5	100	500
21	inductors	nos	5	20	100
22	resistors 470Ω 1/2w,56Ω ,1/2w,410Ω ,1/2w, 1.5Ω 1/4w,3.3kΩ ,1/4w,820Ω 1/4w,1kΩ 1/4w,330Ω 1/4w	nos	5	160	800

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
23	resistors carban	nos	5	220	1100
24	diodes	nos	5	40	200
25	Zener diode	nos	5	80	400
26	Bridge diodes	nos	5	20	100
27	Transister SL 100,BC147	nos	5	40	200
28	SCRs c106	nos	5	20	100
29	UJTs 2N 2646	nos	5	20	100
30	Semiconductor Diodes 1N4007	nos	5	20	100
31	Tag board cod cod 109-02	nos	5	20	100
32	Led Red colour	nos	40	20	800
33	Step down transformer 240v:12-0-12v,24	nos	200	40	8000
34	Multi strand wire red and blue	roll	2000	1	2000
35	main chord with 2 pin	nos	50	20	1000
36	Nut,bolt and washers variable Size	nos	20	60	1200
37	Hook up wires Red & Black	nos	50	20	1000
38	Three pin voltage regulator ma7812	nos	75	20	1500
39	Heat sink 7812	nos	30	20	600
40	Potentiometer 470Ω	nos	150	20	3000
41	Rosin core solder	nos	20	20	400
42	Wire sleev red,Yellow,Green	nos	50	60	3000
43	Project power supply pcb	nos	50	20	1000
44	Terminal strip 2 pin	nos	15	20	300
45	Step down transformer 240v:12-0-12v,24	nos	200	20	4000
46	Plastic spacer 20mm	nos	10	20	200
47	Screw 3x25mm	nos	1	50	50
48	Screw 4x10mm	nos	1	50	50
49	Screw 3x15mm	nos	1	50	50
50	Banana socket switch Red,Yellow ,black	nos	3	30	90
51	General perpose pcb 4x8cm	nos	50	20	1000
52	Potentiometer 1mm	nos	150	20	3000
53	Wire wound resistor 56Ω 2w	nos	10	20	200
54	Lamp screw type with holder 24v0.3a	nos	10	20	200
55	Push button switch	nos	10	20	200

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
56	Ms- flat 50x3.5x150mm	kg	70	20	1400
57	Manual DOL starter 16amp	no	500	1	500
58	DOL starter 16amp	nos	850	1	850
59	ICDP switch 10amp/16amp	nos	450	1	450
60	SPDP switch 16amp	nos	350	10	3500
61	SP switch 5amp	nos	15	40	600
62	sp socket switch 5amp	nos	15	40	600
63	Three pin top 5amp	nos	25	10	250
64	Three pin top 5amp	nos	45	10	450
65	Insulation tap	nos	20	20	400
66	Foldeable mica board 12x16cm	nos	55	10	550
67	MCB 15amp	nos	80	10	800
68	Copper strip 50x3.5 150mm	kg	400	20	8000
69	Brezing Rod 500gm	No	1250	1	1250
70	Silver brezing rod 35% 500gm	No	1250	1	1250
71	Copper strip 50x2 x100mm	kg	400	124	49600
72	Stainless steel Ø12.5mm	kg	70	12	840
73	Brezing torch	nos	550	10	5500
74	brezing flux borax	gram	150	0.25	37.5
75	LPG gas tin 500gm	tin	80	10	800
76	Lighter	nos	50	5	250
77	Anti corrosion paint	liter	100	5	500
78	Adapter 1/4x1/4 (1/4x1/2)(1/4x3/8)(3/8x1/2)(1/4x5/8) (1/4x5/16)	nos	100	5	500
79	Allen Bolt Variable size	nos	10	5	50
80	Bend Copper tube 3/16,1/4,5/16,3/8,1/2,5/8	nos	150	5	750
81	Capillary Tube 0.028"	ft	25	25	625
82	Capillary Tube 0.031"	ft	30	50	1500
83	Capillary Tube 0.036"	ft	35	50	1750
84	Capillary Tube 0.040"	ft	35	25	875
85	Capillary Tube 0.050"	ft	35	25	875
86	Capillary Tube 0.055"	ft	35	25	875

S.N.	Name of Item	Unit or Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
87	Copper Tube 1/4"	ft	50	50	2500
88	Copper Tube 1/2"	ft	50	25	1250
89	Copper Tube 5/8"	ft	50	25	1250
90	Copper Tube 3/16"	ft	50	50	2500
91	Copper Tube 3/8"	ft	50	50	2500
92	Copper Tube 5/16"	ft	50	25	1250
93	Flare nut (3/16,1/4,5/16,3/8,1/2,5/8)	nos	50	5	250
94	Unian (3/16,1/4,5/16,3/8,1/2,5/8)	no	50	2	100
95	Tee (3/16,1/4,5/16,3/8,1/2,5/8)	no	100	2	200
96	Reducer (1/4x3/4),(3/8x1/4),(1/2x1/4),(5/8x1/4)	nos	50	2	100
97	Gauge adapter (1/4x1/4),(1/4x3/8)	each	50	2	100
98	Pressure Gauge 500psig	nos	250	2	500
99	Compound Gauge (-30 to250)	nos	350	2	700
100	Single Monifold Gauge	nos	450	2	900
101	Digital Monifold Gauge	nos	2000	2	4000
102	Insulation tap stillgrip	nos	20	20	400
103	Elbo brass 1/4"	nos	50	5	250
104	Dead nut 1/4"	nos	50	5	250
105	Half unian 1/4"	nos	50	5	250
106	Hand valve (1/4x1/4) ball valve	nos	150	5	750
107	NRV Process tube 1/4"	nos	20	20	400
108	Piercing Plier	nos	950	4	3800
109	Piercing valve1/4"	nos	450	4	1800
110	Pencil type drier filter for refrigerator	nos	65	10	650
111	Pencil type drier filter for deep Freezer & Bottle cooler	nos	110	10	1100
112	Pencil type drier filter for a/c	nos	150	10	1500
113	Thermostate For DC Refrigerator	nos	150	5	750
114	Thermostate For Refrigerator	nos	150	5	750
115	Thermostate for water cooler	nos	150	5	750
116	Thermostate deep freezer Refrigerator	nos	150	5	750
117	Thermostate bottle cooler	nos	150	5	750
118	Thermostate A/c	nos	150	5	750

S.N.	Name of Item	Unit or Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
119	Selector switch for w/ac	nos	150	2	300
120	Remote mounted relay for 300 ltr bottle cooler	nos	550	2	1100
121	Relay voltage relay for a/c 1.5 tr	no	250	5	1250
122	OLP 1/8&1/6hp	nos	250	5	1250
123	OLP 1Tr&1.5tr a/c	nos	250	5	1250
124	Starting Capacitors60/80mfd	nos	180	5	900
125	Starting Capacitors 80/100mfd	nos	180	5	900
126	Running Capacitors 25,36,45,50,55mfd	nos	70	5	350
127	Fan capacitor 4mfd	nos	25	5	125
128	Paper Type Gasket sheet 1/64"1/32"	meter	500	10	5000
129	Cell AAA	nos	10	10	100
130	Cell 9v	nos	25	5	125
131	Terminal clip (fasner clip) vertical & horizontal	box	50	2	100
132	Timer for frost free refrigerator samsang,godrej,lg,haier	nos	250	2	500
133	Defrost heater for FF refrigerator	nos	300	2	600
134	Thermal Fuse for FF refrigerator	nos	150	5	750
135	Bimetal switch for FF refrigerator	nos	150	5	750
136	Fan Motor for FF refrigerator	nos	250	5	1250
137	complete wiring kit for Dauble doar 300 ltr refrigerator pcb Inverter Model including all connectors,sensors,fan motor,heater bulb holder for samsung300ltr refrigerator	no	3000	1	3000
138	complete wiring kit for Three doar refrigerator pcb Inverter Model including all connectors,sensors,fan motor,heater bulb holder for samsung300ltr refrigerator	no	3500	1	3500
139	Complete wiring kit for samsung split ac 1.5 tr. Wiring kit with PCB sensors blower Motor display	no	3500	1	3500
140	Complete wiring kit for samsung inverter ac 1.5 tr Indoar pcb ,oudoar PCB ,wiring display kit all conectors ,sensors blower Fan motor	no	7500	1	7500

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
141	Refrigerant R- 134a,R - 600,R - 22,R - HC Blend	kg	850	10	8500
142	Refrigerant R- 600	kg	750	5	3750
143	Refrigerant R- 22	kg	1150	10	11500
144	Refrigerant R- Hc blend	kg	650	3	1950
145	Tap valve R-600 tap valve,R-134a tap valve	no	250	10	2500
146	Dry nitrogen 7cube mter	No	750	7	5250
147	Electronic operated exp valve for air conditioner 1.5tr	liter	850	1	850
148	Oil Minaral Oil for harmetic comp.,POE oil	liter	650	4	2600
149	Fins comb set	no	50	5	250
150	Single phase priventer	no	550	2	1100
151	Teflon tep	no	20	20	400
152	PUF liquid	no	200	10	2000

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NSQF Level **5**

Affiliated to **NCVT**

DGET Trade Code **DGT/1010**

Duration in Years **2**

Intake Per Unit **24**

Raw Material for **2nd Years**

Total Items **477**

Total Amount **980967 Rs.**

Per Trainee Amount **40873.6 Rs.**

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
1	G I Sheet 22 Gauge	sheet	300	0.5	150
2	Three pin socket 5Amp	Nos	25	6	150
3	Three pin socket 15Amp	Nos	45	6	270
4	Power point with indicator 15Amp	Nos	410	3	1230
5	MCB 15Amp	Nos	80	3	240
6	Butain cylender 200 gm	Nos	100	12	1200
7	Brazing torch (Butain sylender)	Nos	550	3	1650
8	Copper Brazing rod	kg	495	1	495
9	Silver Brazing rod	gm	2500	250	625000
10	Wire brush aluminum	Nos	200	3	600
11	Brezing flux	gm	150	250	37500
12	Fins comb	Nos	50	6	300
13	Capillary tube 31"	ft	30	55	1650
14	1/4 " Flare Nut	Nos	15	12	180
15	Laping paste (hard and soft )	gm	50	400	20000
16	Refrigeration oil (capila D)	Ltr	400	3	1200
17	Refrigeration oil (134 a) POE	Ltr	650	3	1950
18	Refrigeration oil (40 Number)	Ltr	650	1	650
19	Charging flexible line (2500 psi )	Nos	350	6	2100
20	Many fold gauge	Nos	2000	1	2000
21	Solenoid valve 1/4 "230 v	Nos	650	1	650
22	L.P.cutout 40psi	Nos	750	1	750
23	H.P.cutout 240psi	Nos	850	1	850
24	Oil pressure control 40psi	Nos	800	1	800
25	Tuflon tape	Nos	20	6	120

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
26	Refrigerant 134a (500g)	Tin	850	6	5100
27	Refrigerant hydrocarbon	Tin	650	6	3900
28	Universal Refrigerant chaging valve	Nos	250	3	750
29	Freon Refrigerant R22 (1000g)	Tin	1150	5	5750
30	Cell 12v	Nos	20	4	80
31	Gas lighter	Nos	80	3	240
32	Clening brush for shell and tube type con	Nos	200	2	400
33	Car AC coupler valve ( suction and dischar	Set	1220	1	1220
34	gasket sheet 1/64"		10	6	60
35	Straight type fastener clip	pocket	50	1	50
36	L Type fastener clip	pocket	50	1	50
37	Flare nut 3/8"	Nos	50	3	150
38	Straight uninon 1/4"	Nos	30	4	120
39	Straight uninon 3/8"	Nos	30	3	90
40	Elbow 1/4"	Nos	30	3	90
41	Tee 1/4"	Nos	30	3	90
42	Insulation tape	Nos	20	12	240
43	Runing capacitor 36mfd	Nos	70	1	70
44	Sarting capacitor 80-100 mfd	Nos	180	1	180
45	P.T.C.Relay 1/8	Nos	75	6	450
46	P.T.C.over load protector	Nos	75	6	450
47	Potential ralay	Nos	250	3	750
48	Shellace bottle	Nos	150	1	150
49	Soldering lead filler rod	Nos	50	26	1300
50	Copper coil	ft	50	25	1250
51	Flux	gm	150	0.5	75
52	Coal	kg	100	2	200
53	Kerosen	Ltr	20	5	100
54	Sand paper "00"grade 1' x 1'	pice	5	5	25
55	Glasswoll roll 2.5 " thickness	Roll	300	1	300
56	Tar felt 2"	Roll	200	2	400
57	Black enamel paint	ml	80	20	1600
58	Anti corrosive paint ( redoxied )	ml	40	200	8000



S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
59	Waxpolish	gm	100	0.2	20
60	PVC Insulated copper cable singel	ft	12	26	312
61	Trichloroethylene	Ltr	120	2	240
62	Thermostat medium temp.application	Nos	200	1	200
63	Hand shutoff valve 6mm (two way )	Nos	120	3	360
64	Sponge	Nos	50	2	100
65	Puf insultion	Ltr	200	1	200
66	Piearsing valve brass 6mm	Nos	180	1	180
67	Fire extinguisher ( dry power type )	Nos	2000	1	2000
68	Sealed component thermostat,door switch,realy,olp	each	700	1	700
69	Softy nylon brush flate 6 "	Nos	120	1	120
70	Plastic bucket 20 Ltr	Nos	100	1	100
71	Plastic handel mug	Nos	30	1	30
72	Paint brush 4" and round brush 1" dia	each	70	1	70
73	Liquid line drier	Nos	150	1	150
74	Thermostatic expansion valve	Nos	650	1	650
75	Electronic expansion valve	Nos	850	1	850
76	Sodium chloride	kg	340	2	680
77	Ethylene glycol	kg	700	2	1400
78	Propylene glycol	kg	970	2	1940
79	Calcium Chloride	kg	100	2	200
80	Duct clamp	Nos	1655	6	9930
81	Canvas cloth	mtr	15	2	30
82	L angle supports	Nos	250	6	1500
83	Damper, diffusers,grill	each	350	1	350
84	20 micron washable airfilter	Nos	1500	1	1500
85	Cotton waste	kg	20	5	100
86	Copper tube 1/4"	fit	1500	50	75000
87	Low side flow valve	Nos	4000	1	4000
88	High side flow valve	Nos	4000	1	4000
89	Water regulating valve	Nos	3500	1	3500

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
90	VRV (indoor unit ) Gas pipe sensor	Nos	400	1	400
91	VRVliquid line sensor	Nos	400	1	400
92	VRV return air sensor	Nos	500	1	500
93	VRV drain pump	Nos	5000	1	5000
94	VRV expansion motor	Nos	3500	1	3500
95	VRV indoor unit fan motor	Nos	5000	1	5000
96	VRV wireless remote	Nos	2000	1	2000
97	VRV Float valve and wire terminal strip	Nos	2200	1	2200
98	VRV control PCB	Nos	11000	1	11000
99	VRV main control PCB	Nos	12000	1	12000
100	VRV reversing valve	Nos	8000	1	8000
101	VRV crankcase heater	Nos	2000	1	2000
102	VRV H.P.switch sensor	Nos	2000	1	2000
103	VRV L.P.switch sensor	Nos	2000	1	2000
104	VRV fan motor	Nos	10000	1	10000
105	VRV Outdoor gas liquid sensor	Nos	2800	1	2800
106	VRV solenoid valve	Nos	3000	1	3000
107	VRV phase revised PCB	Nos	2000	1	2000
108	VRV over voltage PCB	Nos	3000	1	3000
109	VRV earth leakage PCB	Nos	1500	1	1500
110	VRV inverter PCB	Nos	22000	1	22000
111	VRV noise filter PCB	Nos	15000	1	15000
112	VRV transformer	Nos	5000	1	5000
113	Silica gel drier	Nos	65	6	390
114	digital pressure gauge	Nos	2500	1	2500
115	digital compound gauge	Nos	3000	1	3000
116	refrigerator schrader valve with100mm c		1500		0
117	vulkan lockring assembly tools	Nos	2000	1	2000
118	digital hygrometer	nos	500	1	500
119	R410 Refrigerant	kg	650	5	3250
120	R32 Refrigerant	kg	650	5	3250