

### Trade wise Raw Material Requirement

Trade **Attendant Operator (Chemical Plant)**

Sector **CHEMICALS AND PETROCHEMICALS**

Type of Trade **Engineering Non Machine Group**

NSQF Level **5**

Affiliated to **NCVT**

DGET Trade Code **DGT/1046**

Duration in Years **2**

Intake Per Unit **24**

Raw Material for **First Year Training**

Total Items **190**

Total Amount **144605 Rs.**

Per Trainee Amount **6025.208 Rs.**

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
1	First aid kit industrial	box	800	2	1600
2	Safety sign & Safety slogan charts (eco vinyl) 12x18"	Nos	280	10	2800
3	Helmet safety	Nos	200	5	1000
4	Safety shoes with steel toe	Nos	500	5	2500
5	Safety goggles 3M	Nos	100	5	500
6	Hand gloves rubber 12"	Nos	100	5	500
7	Ear plug 3M	Nos	100	5	500
8	Dust /Nose mask 3m cotton	Nos	80	5	400
9	M.S. Flat 65x12 mm	kg	70	10	700
10	low carbon hacksaw blade 12x1/2x1/16"	NOS	10	50	500
11	H.S.S.hacksaw blade 12x1/2x1/16"	Nos	70	20	1400
12	Center drill 4 mm	nos	150	2	300
13	HSS Drill 8.5 mm, 10 mm	nos	120	4	480
14	Crude pentane (partial mixture content)	lit	250	5	1250
15	Rope for screw jack	mtr	100	5	500
16	Stop clock 2" dia	nos	400	2	800
17	Bob dia 20 mm	nos	20	6	120
18	Thread Thick cotton/ nylon lugs	Bundle	140	1	140
19	wooden scale 1 meter	nos	80	5	400
20	Notice board pins	Packet	50	4	200
21	Paper pin	Pkt	100	2	200
22	Blank Paper A4	Rim	220	1	220
23	Graph Paper A4	Rim	200	1	200
24	Mirror 1x2 ft	nos	200	1	200

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
25	Copper rod 1 mtr dia 8 mm	noos	400	2	800
26	Flexible Copper Wire two core	Mtrs	20	10	200
27	Battery eliminator 3to12 volt	nos	200	1	200
28	Voltmeter 0-250v	nos	50	2	100
29	Ammeter 0-50 A	nos	50	2	100
30	Resistance 2,4,5,6,10 ohm	nos	20	10	200
31	Copper Plate 50x3x100 mm	nos	250	4	1000
32	Cathode and anode electrode 100mm	nos	600	2	1200
33	Heating coil with stirrer	nos	150	1	150
34	Alluminium metal rod 1 mtr dia 5 mm	nos	300	2	600
35	Round bottom flask 1000 ml	nos	200	2	400
36	Spefcific Gravity bottle 25 ml	Nos	300	10	3000
37	Four sensitive thermometer 0-100	nos	150	4	600
38	Acetone (Lab Solvent)	lit	45	5	225
39	Glass Condensor ABG boro leng 300 mm	nos	1500	2	3000
40	M S Stand for flask	nos	100	2	200
41	Sulphuric Acid conc	lit	80	1	80
42	Distilled Water	lit	15	40	600
43	Hydrochloric Acid conc ind grade	lit	50	2	100
44	Sodium bi carbonate	gm	400	0.5	200
45	Silver nitrate	gm	800	0.5	400
46	Potassium chloride	gm	200	0.5	100
47	Phenolphthalin Indicator	ml	400	0.5	200
48	Methyl Orange indicator	ml	250	0.5	125
49	Sulphur powder	kg	45	1	45
50	Filter paper	nos	5	12	60
51	Stereomicroscope	nos	300	1	300
52	Toluene	lit	80	1	80
53	Lead acitate paper	nos	10	6	60
54	Nitropruside solution	ml	200	0.5	100
55	Iorn filling & powder	gm	300	0.5	150
56	Magnet bar 4"	pair	50	2	100
57	Copper Filling & powder	gm	300	0.5	150

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
58	Sodium Hydroxide Flux	gm	500	0.1	50
59	Coconut Oil	lit	200	1	200
60	Fatty acid	lit	400	20	8000
61	Additives for colours	gm	70	0.5	35
62	Sodium Silicate	kg	1000	2	2000
63	Sodium Chloride (Nacl)	kg	30	2	60
64	Copper Sulphate	kg	500	1	500
65	Copper oxide	gm	150	0.5	75
66	PH paper 1 -14 PH	pkt	300	10	3000
67	Buffer solution, 3,5, 7,9 PH	nos	200	2	400
68	Parafin oil	ml	70	0.5	35
69	Ethanol	ml	60	0.5	30
70	Methanol	ml	30	0.5	15
71	Capillary tube 30 mm	box	350	1	350
72	Lens cover glass	nos	50	2	100
73	Various types of fire extinguisher eg CO2 type ,DCP type, Foam type, ABC type Cartridge operated type	nos	1500	1	1500
74	Sand bucket 10-12 lit	nos	100	2	200
75	Fire blanket 10-12 lit	nos	100	2	200
76	Lighter	nos	150	1	150
77	Fire alarm	nos	500	2	1000
78	Fire detecting sensor	nos	500	2	1000
79	Smoke detector	nos	500	2	1000
80	Flame detector	nos	500	2	1000
81	Hazards chemical ( Alkali , Ammonia , Alcohol , Analyne ,Cynide, chloroform Nitrides , Nitrobenzene	ml	500	0.5	250
82	MSDS sheets of various chemicals	Nos	100	50	5000
83	C type Bourdon tube pressure guage 0-20 kg/cm2	nos	300	1	300
84	Capsule type pressure guage 0-2 kg/cm2	nos	300	1	300
85	Pressure regulator	nos	200	1	200
86	Nylon tube dia 6, 8mm	mtr	50	10	500

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
87	Alcohol in glass thermometer 0-70 c	nos	300	2	600
88	Mercury in glass thermometer 0-220 c	nos	300	2	600
89	Oil bath or Heater with kettle 0-1200 c	nos	200	2	400
90	Bimetal thermometer 0-300 c	nos	400	2	800
91	RTD thermometr	nos	1000	2	2000
92	Thermocouple	nos	400	2	800
93	Mercury Thermometer lab -10 to110 celcius	No	300	6	1800
94	U tube manometer Acralic 150-0-150	Nos	2600	4	10400
95	Manometric fluid mercury, alcohol	ml	400	0.5	200
96	Orificemeter 2"	nos	1000	1	1000
97	Venturimeter 2"	nos	1000	1	1000
98	Rotameter 2"	nos	1000	1	1000
99	Hydrometer 800-1300	Nos	600	2	1200
100	G.I./UPVC Pipe 3/4"	ft	125	20	2500
101	G.I./UPVC Pipe 1/2"	ft	100	20	2000
102	Pipe accessories G.I./UPVC.1/2 & 3/4" 1) union 2) Elbow 3) bend 4) socket 5)Reducer 6) cross 7)nipple 8) plug 9) cock	nos	50	5	250
103	Various types of valves 2",3" G.I./UPVCeg gate, globe, ball,needle,diaphragm,non return, butterfly	nos	100	2	200
104	Pencil	nos	5	6	30
105	Hemp packing	mtr	10	10	100
106	Shellac 200 ml	bottle	100	2	200
107	Plaster of Paris	Kg	125	40	5000
108	Glass wool	mtr	245	5	1225
109	Cotton jute fabric 5 mm	kg	55	5	275
110	Thin wire net	mtr	50	5	250
111	Alluminium sheet 1mm	mtr	250	5	1250
112	Screw 1/2 " ss	gm	100	0.5	50
113	Gasket Sheet Champion Make 3mm	Kg	150	10	1500
114	Rubber Gasket sheet 3 mm	Kg	60	5	300

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
115	Corck Sheet 915x610 mm	piece	125	2	250
116	Emry paper 80 grit	nos	600	10	6000
117	Oil paper gsm 100	roll	500	1	500
118	P.T.F.E Rubber & Graphite packing	sq	600	2	1200
119	Lock nut , Castel nut , Swan nut	nos	190	2	380
120	Locking pin , Spring lock Washer	nos	180	2	360
121	Thrust washer	nos	80	2	160
122	Nut & bolts of appropriate size	nos	20	24	480
123	Flanges 2", 3"	nos	150	4	600
124	Cleaning liquid carbon tetra chloride ccl4	lit	80	5	400
125	Asbestos rope	mtr	50	10	500
126	O ring as per shaft size	nos	100	4	400
127	Gland packing 2, 3 mm 1 ft long	pkt	20	2	40
128	Gland packing (Asebestos) 3 mm,10 mm	ft	100	5	500
129	Burette clamp	nos	10	12	120
130	Bunsen Burners	nos	80	8	640
131	Tripods Stand	nos	40	8	320
132	Asbestos wire gauge	nos	30	8	240
133	Gauge Wire without asbestos	nos	40	8	320
134	Burettes 25ml borosil	nos	100	8	800
135	Pipettes 10ml	nos	50	8	400
136	Measuring Pipette 5 ml	nos	50	8	400
137	Pipette Rubber Bulb	nos	20	8	160
138	H.D.P. Distil water bottle	nos	20	8	160
139	Clamp holders	nos	10	8	80
140	Stands with clamps for burette	nos	50	8	400
141	Triangles clay	nos	50	8	400
142	Measuring cylinder 250 ml Glass	nos	70	8	560
143	Measuring cylinder 500 ml Glass/ Plastic	nos	100	8	800
144	Measuring cylinder 1000 ml Glass/ Plastic	nos	150	8	1200
145	Volumetric flask 100 ml	nos	50	8	400
146	Volumetric flask 500 ml	nos	80	8	640

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
147	Volumetric flask 1000 ml	nos	150	8	1200
148	Funnels Dia 7.5cms	nos	40	8	320
149	Beaker 250ml corning	nos	60	8	480
150	Beaker 500 ml corning	nos	100	8	800
151	Bottles for solutions 1000 ml	nos	150	6	900
152	Bottles for solutions 2000 ml	nos	250	6	1500
153	Bottles for solutions 500 ml	nos	80	6	480
154	Conical flask – 500 ml	nos	80	24	1920
155	Conical flask - 250 ml	nos	60	24	1440
156	Evaporating dish -50 ml	nos	50	12	600
157	Watch Glass -3" dia.	nos	20	8	160
158	Tongs for laboratory - Flat - 200 mm	nos	20	8	160
159	Spatula - 8"	nos	10	8	80
160	Distilled water still 10 lit.	nos	500	1	500
161	Glass test tubes - 15 ml	nos	10	50	500
162	Round bottom Distillation flask with side neck	nos	150	6	900
163	Condenser for distillation lebig	nos	200	6	1200
164	Rubber cork of (2.5 cm, 3 cm) size various size	nos	40	10	400
165	Rubber Tubing (ID-5mm)	mtr	30	10	300
166	Rubber Bulbs for pipettes	nos	20	6	120
167	Dropper	nos	10	5	50
168	Porcelin dish	no	20	6	120
169	Alluminum Powder/metal	gm	400	0.5	200
170	Zinc Metal	gm	400	0.5	200
171	Copper Metal	gm	400	0.5	200
172	Digital chemical analytical balance 1-1000gm	nos	3000	1	3000
173	Kerosene/Disel	Ltr	80	5	400
174	Hammer handle (wooden)	nos	30	20	600
175	File handle	nos	30	20	600
176	File card	nos	60	4	240
177	cotton waste	kg	35	30	1050

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
178	soap bar	nos	10	10	100
179	Apron For trainee	nos	150	21	3150
180	Apron for instructor	nos	200	2	400
181	white chalk box	nos	50	10	500
182	colour chalk box	nos	50	10	500
183	Duster blackboard	nos	40	2	80
184	Plastic bucket 20 ltr with marking	nos	100	2	200
185	sketch pen set	nos	40	2	80
186	marker pen set	nos	100	1	100
187	Grease lubricating	kg	250	2	500
188	Lubricant Oil 40 no	lit	250	5	1250
189	Cleaning Brush( 1/2", 1" & 2")	nos	60	5	300
190	Cotton cloth	mtr	40	10	400

**Trade wise Raw Material Requirement**

Trade **Attendant Operator (Chemical Plant)**

Sector **CHEMICALS AND PETROCHEMICALS**

Type of Trade **Engineering Non Machine Group**

NSQF Level **5**

Affiliated to **NCVT**

DGET Trade Code **DGT/1046**

Duration in Years **2**

Intake Per Unit **24**

Raw Material for **Second Year Training**

Total Items **64**

Total Amount **100265 Rs.**

Per Trainee Amount **4177.708 Rs.**

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
1	Glycerine	kg	50	1	50
2	Hydrochloric acid ind grade 32 %	lit	5	5	25
3	Tissue paper	bundle	150	2	300
4	Acetone		50	20	1000
5	Glass tube dia 1"	ft	120	2	240
6	Capillary tube long	ft	360	2	720
7	Measuring cylinder plastic 1000 ml	nos	360	5	1800
8	Red colour powder	kg	125	1	125
9	Hose pipe rubber ID 3/4" 1",	mtr	20	5	100
10	Rubber tube 10 mm	mtr	150	5	750
11	Measuring cylinder plastic 1000 ml	nos	50	5	250
12	Plastic bucket 20 lit with marking	nos	125	2	250
13	U tube manometer glass 50-0-50	nos	1500	4	6000
14	Teflon tape	nos	15	24	360
15	HDPE / plastic Storage drum 100 lit	nos	500	2	1000
16	Pressure guage 0-10 kg/cm2	nos	50	2	100
17	Energy meter single phase	nos	500	1	500
18	Graph paper A4	rim	200	1	200
19	Pipe accessories G.I./UPVC.1",2",3" 1) union 2) Elbow 3) bend 4) socket 5)Reducer 6) cross 7)nipple 8) plug 9) cock	nos	50	5	250
20	Various types of valves 1",2",3"G.I./UPVC eg gate, globe, ball,needle,diaphragm,non return, butterfly,	nos	100	2	200
21	Steam trap thermostatic 1/2, 3/4"	nos	200	1	200



S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
22	Mercury Thermometer (-10 to 110celcious)	nos	200	6	1200
23	Long tube wire brush 1-2 meter long 10 mm	nos	30	10	300
24	Carbon tetra chloride	lit	70	5	350
25	Mini boiler lab	nos	200	1	200
26	Sodium carbonate	kg	50	5	250
27	Ethyl alcohol	lit	1800	30	54000
28	Asbestos gloves	nos	500	6	3000
29	Methyl iso butyl ketone solvant ( MIBK)	lit	125	5	625
30	Acetic acid	lit	30	10	300
31	Benzene	lit	50	10	500
32	Tower packing as saddle,pall ring,rasching	kg	100	1	100
33	Copper sulphate CuSO4	kg	40	7	280
34	Sodium chloride (Nacl)	kg	30	10	300
35	Lime stone (calcium carbonate)	kg	40	50	2000
36	Filter cloth fabric	mtr	100	6	600
37	Urea	kg	50	1	50
38	Saw dust wooden	kg	10	5	50
39	Digital weighing balance 10gm 25kg	nos	3000	1	3000
40	Light coal	kg	20	5	100
41	Cotton cloth	mtr	40	1	40
42	Sling thermometer( dry & wet bulb)	nos	600	2	1200
43	Distilled water	lit	30	5	150
44	Lubricating oil 15W40	ltr	300	5	1500
45	Thermocouple iorn / constant or cu/const	nos	400	1	400
46	Milivoltmeter 0-50 mv	nos	200	1	200
47	Candle big size	nos	10	6	60
48	Match box	nos	10	1	10
49	Potasium aluminum sulphate ( Turti ) Alum	kg	650	1	650
50	Conc Sulphuric Acid	ml	190	0.5	95
51	Barium chloride	gm	100	0.5	50
52	Glass rod long	nos	20	6	120
53	Asbestos gasket packing 3 mm	sq	250	2	500
54	Lubricant Grease	kg	80	2	160

S.N.	Name of Item	Unit of Measurement	Rate per Unit in Rs.	Qty	Amount in Rs
55	Cotton waste	kg	30	30	900
56	Soap bar	nos	10	10	100
57	Apron For trainee	nos	400	24	9600
58	Apron for instructor	nos	500	2	1000
59	White chalk box	nos	25	5	125
60	Colour chalk box	nos	25	5	125
61	Duster	nos	50	2	100
62	Scketch pen set	nos	40	2	80
63	Marker pen set permnant	nos	25	1	25
64	White board marker pen	nos	25	10	250