

C GENERAL.MACHINERY&INSTALLATION					
Name of the trade -Trade1 ELCTRICIAN					
No.of units in 1st SHIFT 2		In2nd shift 2		In3rd shift 2	
Total Units 6					
A. TRAINEES TOOL KIT FOR 21 TRAINEES					
Sl.no	Name of the general Machinery and Installation	Number required for one unit as per NCVT norms syllabus	Total Number of equipment required for the total affiliated	Total number actually available for all the units	Indicate shortage if any
1	2	3	4	5	6
1	Steel Tape, 10 m length	21nos	126nos		
2	Plier Insulated, 150 mm	21nos	126nos		
3	Plier Side Cutting, 150 mm	21nos	126nos		
4	Screw Driver, 100 mm	21nos	126nos		
5	Screw Driver, 150 mm	21nos	126nos		
6	Electrician Connector, screw driver insulated handle thin stem, 100 mm .	21nos	126nos		
7	Heavy Duty Screw Driver , 200 mm	21nos	126nos		
8	Electrician Screw Driver thin stem insulated handle, 250 mm	21nos	126nos		
9	Punch Centre , 150 mm X 9 mm	21nos	126nos		
10	Knife Double Bladed Electrician	21nos	126nos		
11	Neon Tester	21nos	126nos		
12	Steel Rule 300 mm	21nos	126nos		
13	Hammer, cross peen with handle	21nos	126nos		
14	Hammer, ball peen With handle	21nos	126nos		
15	Gimlet 6 mm.	21nos	126nos		
16	Bradawl	21nos	126nos		
17	Scriber (Knurled centre position)	21nos	126nos		
18	Pincer 150 mm	21nos	126nos		

B. SHOP TOOLS ,INSTRUMENTS AND MACHINERY

1	C- Clamp 200 mm, 150 mm and 100 mm	2 nos each	12		
2	Spanner Adjustable 150 mm, 15 degree	2 nos each	4		
3	Blow lamp 0.5 ltr	1 no	4		
4	Melting Pot	1 no	2		
5	Ladel	1 no	2		
6	Chisel Cold firmer 25 mm X 200 mm	2 nos	4		
7	Chisel 25 mm & 6 mm	2 nos each	8		
8	Hand Drill Machine 0 to 6 mm capacity	1 no	2		
9	Portable Electric Drill Machine 6 mm capacity	1 no	2		
10	Pillar Electric Drill Machine 12 mm capacity	1 no	2		
11	Allen Key	1 set	2		
12	Oil Can 0.12 ltr	1 no	4		
13	Grease Gun	1 no	2		
14	Out Side Micrometer 0 to 25 mm	2 no	4		
15	Motorised Bench Grinder	1 no	2		
16	Rawl plug tool & bit	2 set	4		
17	Pully Puller	2 no	4		
18	Bearing Puller	2 no	4		
19	pipe vice	4 no	8		
20	Thermometer 0 to 100 deg Centigrade	1 no	2		
21	Scissors blade 150 mm	4 no	8		
22	Crimping Tool	2 set	4		
23	Wire stripper 20 cm	2 no	4		
24	Chisel Cold flat 12 mm	2 no	8		
25	Mallet hard wood 0.50 kg	4 no	8		
26	Hammer Exeter type 0.40 kg	4 no	16		
27	Hacksaw frame 200 mm 300 mm adjustable	2 no each	8		
28	Try Square 150 mm blade	4 no	8		
29	Outside & Inside Divider Calliper	2 no each	8		
30	Pliers flat nose 150 mm	4 no	8		
31	Pliers round nose 100 mm	4 no	8		
32	Tweezers 100 mm	4 no	8		
33	Snip Straight & Bent 150 mm	2 no each	8		

34	D.E. metric Spanner	2 no	4		
35	Drill hand brace 0 to 100 mm	4 no	8		
36	Drill S.S. Twist block 2 mm, 5 mm 6 mm set of 3	4 set	8		
37	Plane, smoothing cutters 50 mm	2 no	8		
38	Gauge, wire imperial	2 no	4		
39	File flat 200 mm 2nd cut	8 no	16		
40	File half round 2 00 mm 2nd cut	4 no	8		
41	File round 200 mm 2nd cut	4 no	8		
42	File flat 150 mm rough	4 no	8		
43	File flat 250 mm bastard	4 no	8		
44	File flat 250 mm smooth	4 no	8		
45	File Rasp, half round 200 mm bastard	4 no	8		
46	Soldering Iron 25 watt, 65 watt, 125 watt	2 no each	12		
47	Copper bit soldering iron 0.25 kg.	2 no	8		
48	Desoldering Gun	4 no	8		
49	Hand Vice 50 mm jaw	4 no	8		
50	Table Vice 100 mm jaw	8 no	16		
51	Pipe Cutter to cut pipes upto 5 cm. dia	4 no	8		
52	Pipe Cutter to cut pipes above 5 cm dia	2 no	4		
53	Stock and Die set for 20 mm to 50 mm G.I. pipe	1 set	2 set		
54	Ohm Meter; Series Type & Shunt Type	2 no each	8		
55	Stock and Dies conduit	1 no	2		
56	Multi Meter (analog) 0 to 1000 M Ohms, 2.5 to 500 V	2 no	4		
57	Digital Multi Meter	6 no	12		
58	A.C. Voltmeter M.I. 0 –500V A.C	1 no	2		
59	Milli Voltmeter centre zero 100 – 0 – 100 m volt	1 no	2		
60	D.C. Milliammeter 0 -500m A	1 no	2		
61	Ammeter MC 0-5 A, 0- 25 A	1 no	4		
62	A.C. Ammeter M.I.. 0-5A, 0-25 A	1 no	4		
63	Kilo Wattmeter 0-1-3 kw	1 no	2		
64	A.C. Energy Meter,Single phase 5 amp. Three Phase 15 amp	1 no	4		
65	Power Factor Meter	1 no	2		
66	Frequency Meter	1 no	2		
67	Tachometer with watch	1 no	2		

68	Current Transformer 415 v 50hz C.T RATIO 150/5A,5VA	1 no	4		
69	Potential Transformer 415V 50HZ P.T RATIO 11KV/110V,10VA	1 no	4		
70	Growler	1 no	2		
71	Tong Tester / Clamp Meter 0 – 100 amp. AC	1 no	2		
72	Megger 500 volts	1 no	2		
73	Wheat Stone Bridge with galvanometer & battery	1 no	2		
74	Contactora & auxiliary contacts 3 phase, 440volt, 16amp	1 no each	4		
75	Contactora & auxiliary contacts 3 phase, 440 volt, 32 amp.	1 no each	4		
76	Limit Switch	1 no	4		
77	Rotary Switch 16 A	1 no	4		
78	Load Bank5 KW(Lamp / heater Type)	1 no	4		
79	Brake Test arrangement with two spring balance 0 to 25 kg rating	1 no	2		
80	Knife Switch DPDT fitted with fuse terminals 16 amp	4 no	8		
81	Knife Switch TPDT fitted with fuse terminals 16 amp	4 no	8		
82	DC Power Supply 0-30V,2A	1 no	4		
83	Inverter- 1 KVA with 12 V Battery Input- 12 volt DC, Output- 220 volt AC	1 no	1no		
84	Voltage Stabiliser Input: 150 – 230 volt AC Output: 220 volt AC	1no	2no		
85	Rheostat 0 -1 Ohm, 5 Amp 0 -10 Ohm, 5 Amp 0- 25 Ohm, 1 Amp 0- 300 Ohm, 1 Amp	1no each	16		
86	Domestic Appliances – a. Electric Hot Plate 1500 watt b. Electric Kettle, 100 watts c. Electric Iron 1200 watts d. Immersion Heater 500/100/2000 watt e. A.C. Fan f. Geyser (Storage type) 15 ltr minimum g. Mixture & Grinder				
		1no	2no		
		1no	2no		
		1no	2no		
		1no	2no		
		1no	2no		
		1no	1no		
1no	1no				

87	Flux meter	1no	4		
88	Laboratory Type Induction Coil	1no	2no		
89	3- point D.C. Starter	1no	6		
90	4- point D.C. Starter	1no	6		
91	Relays.				
	Cut out	1no	2no		
	b. Reverse current	1no	2no		
	c. Over current	1no	2no		
	d. Over load	1no	2no		
	e. Under voltage	1no	2no		
92	Starters for 2 to 5 H.P. A.C Motorsa.				
	Resistance type starter	1no	2no		
	b. Direct on line Starter	1no	2no		
	c. Star Delta Starter- manual, semi-automatic and automatic	3no	6no		
	d. Auto Transformer type	1no	2no		
93	Electrical Machine Trainer – Suitable for demonstrating the construction and functioning of different types of DC machines and AC machines (single phase and three phase). Should be fitted with friction brake arrangement, dynamo meter, instrument panel and power supply unit	1 no	1 no		
94	Motor-Generator (AC to DC) consisting of : Squirrel Cage Induction Motor with star delta starter and directly coupled to DC shunt generator and switch board mounted with regulator, air breaker, ammeter, voltmeter, knife blade switches and fuses, set complete with case iron and plate, fixing bolts, foundation bolts and flexible coupling. Induction Motor rating: 7 HP, 400V, 50 cycles, 3 phase DC Shunt Generator rating: 5 KW, 440V	1 no.	1 no.		
95	Motor Generator(DC to AC) set consisting of - Shunt Motor with starting compensator and switch directly coupled to AC generator with exciter and switch board mounted with regulator, breaker, ammeter, voltmeter frequency meter, knife blade switch and fuses etc. Set complete with cast iron bed plate, fixing bolts, foundation bolts and flexible coupling Shunt Motor rating :	1 no	1no		

	5 HP, 440V AC Generator rating : 3-Phase, 4 wire, 3.5 KVA, 400/230 Volts, 0.8 pf, 50cycles				
96	Used DC Generators-series, shunt and compound type for overhauling practice	1no each	6		
97	D.C. Shunt Generator with control panel, 2.5 KW, 230 V	1no	1no		
98	D.C. Compound Generator with control panel including fitted rheostat, voltmeter, ammeter and breaker, 2.5 KW, 230 V	1no	1no		
99	Diesel Generator Set with change over switch, over current breaker and water-cooled with armature, star-delta connections AC 3 phase, 5 KVA, 230 volt	1no	1no		
100	DC Series Motor coupled with mechanical load 0.5 to 2 HP, 220 Volts	1no	1no		
101	DC Shunt Motor 2 to 3 HP, 220 volts	1no	1no		
102	DC compound Motor with starter and switch 2 to 3 HP, 220 volts	1no	1no		
103	AC Squirrel Cage Motor with star delta starter and triple pole iron clad switch fuse. 2 to 3 HP, 3-phase ,400 volts, 50 cycles	1no	1no		
104	AC phase-wound slip ring Motor with starter and switch 5 HP, 400 volts, 3-phase, 50 cycles	1no	1no		
105	A.C. Series type Motor with mechanical load ¼ HP, 230V, 50 cycles	1no	1no		
106	Single Phase Capacitor Motor with starter switch 1 HP 230 volt 50 cycles	1no	1no		
107	Universal Motor with starter/switch 230 volt, 50 cycles ¼ HP	1 no	1 no		
108	Stepper Motor with Digital Controller	1 no	1 no		
109	Shaded Pole Motor	1 no	1 no		
110	Single phase Transformer, core type, air cooled	1 no	1 no		
111	Three phase transformer, shell type oil cooled	1 no	1 no		
112	Variable Auto Transformer	1 no	2 no		
113	Oscilloscope Dual Trace,30 MHZ	1 no	1 no		
114	Function Generator	1 no	1 no		
115	Discrete Component Trainer	1 no	1 no		
116	Linear I.C.Trainer	1 no	1 no		
117	Digital I.C.Trainer	1 no	1 no		
118	Bath Impregnating	1 no	1 no		
119	Oven Stove	1 no	2 no		
120	Oil Testing Kit	1 no	1 no		

121	Battery Charger	1 no	2 no		
122	Hydrometer	1 no	2 no		
123	Miniature Breaker 16 amp	1 no	2 no		
124	Thyristor/IGBT controlled D.C. motor drive with tacho-generator feedback arr.1h.p	1 no	1 no		
125	hygrometer	1 set	2 set		
126	Thyristor/IGBT controlled A.C. motor drive with VVVF control 3 Phase, 2 HP	1 no	1 no		
127	Working Bench 2.5 m x 1.20 m x 0.75 m	4 no	8 no		
128	Fire Extinguisher	2 no	4 no		
129	Fire Buckets	2 no	4 no		
	FURNITURE				
130	Instructors table	2no	4 no		
131	Instructors chair	2no	4no		
132	Metal Rack 100cm *15cm*45cm	4 no	8 no		
133	Lockers with 21 drawers standard size	2 no	6 no		
134	Almirah 2.5*1.20m	1 no	4 no		
135	Black board / white board	2 no	4 no		
	TOOLS AND EQUIPMENT NEEDED ADDITIONAL TO EXISTING TOOLS LIST				
136	Pentium iv Computer or latest (server - linux), 2.8GHZ & above , 1GB, RAM, 80GB HDD , DVD COMBO drive ,15/17" mointonr , optical scroll mouse , multimedia key board, 32 bit LAN card with UPP port necessary drivers ,etc	2NOS.	2nos.		
137	ink jet / lascr printer	1 no	1no		
138	washing machine	1 no	1no		
139	motor pump set 1 HP 1 phase , 240V	1no	1no		
140	pin type , shackle type & suspension type insulators	2 no each	6 no		
141	synchronus motor 3 phase , 3 HP , 415V, 50HZ, 4 pole ,with accessories	1no	1no		
142	lux meter	1no	1no		

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