Space & Power norms will be as under in cases, where VTPs are operating more than one Module simultaneously:

No of Modules	Space Norms	Power Norms
01	60 sq m	02 KW
02	120 sq m	03 KW
03	180 sq m	04 KW

GENERAL INFORMATION FOR ELECTRICIAN DOMESTIC

Name of Sector	**ELECTRICAL**
Name of Module	**Electrician Domestic**
MES Code	**ELE 701**
Competency **as per N C O Code**	**7137.10, 7137.20**
Duration of Course	**600 Hrs**
Entry Qualification of Trainee	8^{th} Pass + 14 yrs of age
Unit size (No. Of trainees)	20
Power Norms	2.0 KW
Space Norms (Workshop and Class Room)	60 sq.m Minimum size of one side to be 04m.
Instructors Qualification	Degree in Electrical Engineering with one year Experience **OR** Diploma in Electrical Engineering with two year Experience **OR** NTC/ NAC in Electrical Trade Group with three

	years of Experience
Desirable	Craft Instructor Certificate (CIC)

Course Contents for Module Electrician Domestic (ELE701)

Underpinning Knowledge (Theory)	Practical Competencies
Safety Practices • Fires in electrical Circuits & Precautions • Fire Extinguishers & its Types • General Safety of Tools &equipment • Rescue of person who is in contact with live wire • Treat a person for electric shock/ injury	• Fire Fighting • Safely handling Tools &Equipment • Use of proper Tools &equipment& its maintenance • Rescue of person who is in contact with live wire • Treat a person for electric shock/ injury
Introduction to Electricity • Concept of basic Electricity, Single phase & three phase circuits • Electrical terms like Voltage, Currents, Resistance, Impedance & power factor	• Simple electrical Connections using resistance, voltmeter, ammeter & multimeter. • Practice on simple three phase circuit
Introduction to Electronics • Familiarization with electronic components like Capacitor, Choke coil, Diode, Transistor, Thyristor	• Using electronic components in basic Electrical circuits • Electronic choke & CFL assembly
Symbols, Diagram & Rules • Studies of diagram & Symbols used in basic Electrical Circuits, Wiring & installations. • Colour Code of carbon Resistors • IE rules for General Electricity	• Identifying accessories/ symbols as per symbols • Making plan of wiring and marking light, power and other points accordingly. • Practicing the colour coded resistor value, verifying with multimeter.
Simple electrical Circuits • Series & Parallel Circuits • Direct current & Polarity testing • Alternating Current & identifying phase neutral and earth terminals • Interpret the components as per circuits and laying components on PCB • Testing of assembled PCB	• Connecting number of lamps in series and parallel circuits • Testing DC supply polarity • Identifying phase, neutral and earthing in three phase supply. • Laying components as per layout & soldering on PCB • Trouble shooting of assembled circuit
Earthing • Concept of earthing, purpose & types • Pipe earthing & Plate earthing • Earthing of domestic installation	• Carry out pipe earthing & plate earthing • Carry out domestic installation testing for earthing
House wiring & its concepts • Conductors, Insulators & its types • Crimping & Crimping Tools, Soldering • Joints in Electrical Conductor • Concept of gauge of wire, conductor	• Skinning different types of cable ends • Making various joints like twist joint, married joint, Tee joint in stranded conductors • Prepare T.W. Board for fixing Flush type

material & its current carrying capacity • Determination of Fuse size according to the load of circuit and its location • Study of different components used in house wiring. • Use of Megger & Test lamps in fault location • Energy meter installation • Concept of different types of switchgears used in general Electrical installations.	accessories • Make the wiring layout for a bedroom with light, fan & Power points • Carryout the wiring such as cleat, conduit, PVC casing and capping & concealed as per layout. • Assembly & installation of single & twin fluorescent lamp, Use of two way switches. • Wiring in two way or three way systems as prescribed and makes electrical connections through plugs and switches to different points. • Determine the number of lamps to be connected in series for particular supply voltage for making decorative serial lamp • Erection of switch boards & fixing of switch box casings cleats, conduit ceiling roses, switches etc. • Testing of electrical installations &equipment and locating faults using Megger, Test lamps & its removal. • Prepare & mount Energy meter board • Dismantling and assembling of switchgears in simple electrical installations
Home Appliances and its Repair • Voltage and Power requirement of all kinds of home appliances • Basic construction and assembly of electric iron, heater and fan • Basic construction and assembly of mixer, grinder, blender and OTG • Basic construction and electrical parts of washing machine, microwave oven, refrigerator and dish washer • Repair and service technique of home appliances	• Clean lubricate and replace bearing of ceiling fan • Test and replace capacitor and regulator of ceiling fan • Check and repair oscillator mechanism of table fan • Check and replace thermostat of electric iron and geyser • Dismantle and reassemble mixer and grinder • Check and replace thermostat and relay of refrigerator • Check water pump, timer and switches of washing machine • Check the internal connections and identify the fault in microwave oven
Battery Maintenance • Types/rating of batteries and their application in inverter and UPS	• Preparation of electrolyte • Preparation of cells and their arrangement

• Construction and parts of lead acid/ maintenance free battery. Specific gravity of battery • Process of discharging and recharging of battery • Battery chargers and precaution to be taken while charging	• Prepare terminals by using anti corrosive agent • Check specific gravity of lead acid battery • Check and note change in specific gravity while charging the battery

List of Tools & Equipment for module Electrician Domestic (ELE701)

Sl No	Name of Tool/ Equipment	Quantity (nos)
1	Measuring tape 5 meters	05
2	Connector, 6”	05
3	Electrician Knife 10	05
4	Screw Driver 8” 10”, 12”	05
5	Combination Pliers 6”, 8”	05 each
6	Hacksaw 30 cm	05
7	Neon Tester	05
8	Heavy Duty Screw Driver10”, 12”	05 each
9	Nose Pliers 6”, 8”	05 each
10	Round Nose Plier 15 cm	05
11	Heavy duty Cutter	05
12	Crimping tool	05
13	B.P.Hammer 1/2Kg,1/4Kg	05 each
14	Fermer chisel 14cm,20cm,25cm	05 each
15	Cold Chisel 15 cm	05
16	Tri Square 30 cm	05
17	Pocker 15cm	05
18	Wire stripper 10 cm	05
19	13mm two speed driller	2
20	Power drilling Machine 6 mm	2
21	DE Spanner Set 8 Nos	2
22	Pipe Wrench 22mm	2
23	Portable cut-off saw	2
24	Volt meter 0-600 V (MC Type)	2
25	Volt meter 0-600 V (MI Type)	2
26	Ammeter 0-5 (MC Type)	2
27	Ammeter 0-5 (MI Type)	2
28	Watt meter 0-2.5KW	2
29	Energy meter 0-10A,240V	2
30	Multimeter	2
31	Megger 500V	2
32	Line Tester	2

33	Fire extinguishers	2each
34	Electrical & Electronic components	As required
35	Soldering iron 25W, 250V	2
36	Hydrometer	2
37	High Discharge tester	1
38	Battery charger	1
Domestic Equipments		
39	Electric Heater 1000 W (min)	1
40	Electric Iron 750 W (min)	1
41	Electric Kettle 500 W (min)	1
42	Ceiling Fan	1
43	Table Fan	1
44	Washing Machine	1
45	Automatic Iron 750 W (min)	1
46	Induction Heater	1
47	Storage Heater/ Geyser 1000w (min)	1
48	Wet Grinder	1
49	100mm Heavy duty mini Grinder	1
50	150mm Straight Grinder	1
51	Dual speed flexible grinder	1
52	180mm Sander/Polisher	1
53	Blower	1
54	Choke and CFL assembly	1each
55	Battery 100 Ah	1
56	Single phase transformer	1
57	Single phase motors like permanent capacitor, capacitor start induction run, capacitor start capacitor run& Universal motors.	1each
58	Domestic pump with starters 0.5 HP (min)	1