



Gujarat Council of Vocational Training Gandhinagar



1. Name of Course:

Electrical & House-wiring Technician

N.C.O. No. for Skills Covered:
(Please refer National Classification of
Occupations -2004 available
on www.dget.nic.in)

2. Engineering OR Non-engineering: Engineering

3. No. of students per batch: 20

4. Duration in Hours. : 616 Hours : 16 Weeks : 4 Months

5. Duration in Month: 4 month @ 38.5 hours/Week.

6. Examination Scheme:

No.	Name of Subject	Teaching Hours during full course.	Maximum Marks. (Excluding Sessional)	Minimum Marks required for Passing (Excluding Sessional).	Sessional Marks if any.
Subject-1	Theory (176 hours) & Soft Skills (88 hours)	264	100	40	-
Subject-2	Practical	352	300 150	180 90	-
Subject-3					
Subject-4					
Subject-5					

7. Entry qualification for Trainee:

Minimum entry qualification (Essential):	Minimum 5 th Standard and Minimum Age 18Yrs.
Desirable:	

3. Minimum qualification for Trainer:

Minimum qualification (Essential):	ITI/Certificate Course/Diploma
Desirable:	Experience of working in a Concrete Products Manufacturing unit





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2. Syllabus Committee Member:

Sr. No.	Name	Organization	Designation	Technical Qualification	Experience in Years	Signature
1.	Mr. Rajesh Chadha	GIZ-IS, India Branch	Technical Expert	B.E. - I.C.	20	
2.	Lt.col.A.Sekar	Atul Institute Of Vocational Excellence	Director	MSC (Chemistry) MA(English)	30 Years	
3	Mr. Makarand Deshpande	Atul Ltd	Senior Manager	B.E. (Electrical)	33 years	
4	Mr.H.K.Chaudhari	Industrial Training Institute	(PRINCIPAL)	Diploma (Automobile)	27 Years	
5	Mr .D.P.Patel	Industrial Training Institute Khergam	Supervisor Instructor	Diploma(Electrical)	21 Years	





10. Terminal Skills of trainee: (Should be well defined and having reference to NCO):

Broad Content of the course

- Basic Electrical Terminology
- Electrical safety
- Repair of home appliances
- House-wiring techniques

The trainee, after successful completion of training, will have following skills...

- Provide first aid and give artificial respiration to save a person from electrical shock.
- Plan, carry out and Test various kinds of domestic wiring of an Installation according to Indian standards & Regulations.
- Install fittings, Accessories, Safety devices and electrical gadgets in domestic wiring.
- Repair, Replace components and Maintain Single Phase Domestic Appliances.
- Observe safe working practices in carrying out different operations in the job.
- Rewind single phase/ three phase motors, Test them and prepare an estimate of materials and cost.

Modules covered under this training

- Basic Electrical Training .
- Redair of home appliance.
- House Wiring

(please attach separate sheet, if more space is required)





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11. Approximate cost of Tools
/ Equipments / Machinery for
Starting one batch of the course:

Rupees
9,00,000

Reference Year
2014

12. Area required for practical / Workshop for one batch.

68 Sq. Meter

13. Minimum Power connection required

3 K.W.

14.1 No of items in Standard list of Machinery:

As per List

14.1.1. Page NO from ___ to ___.

14.2 No of items in Standard list of Shop outfit:

As per List

14.2.1. Page NO from ___ to ___.

14.3 No of items in Standard list of Trainee Tool-Kit:

As per list

14.3.1. Page NO from ___ to ___.

***** FOR OFFICIAL USE *****

Approved by GCVT in ~~Governing Body~~ meeting on

: **12-12-2014**

Syllabus implemented w.e.f. admission session

: **Next session**

Revision History :

1. Revision No..... Revision Date.
2. Revision No..... Revision Date.
3. Revision No..... Revision Date.



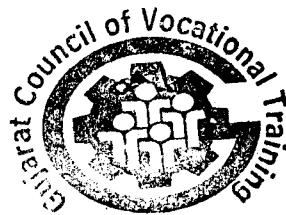
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Standard List of Machinery - Equipment / Shop-outfit / or Trainee Toolkit
For Trade of Electrical & House-wiring Technician

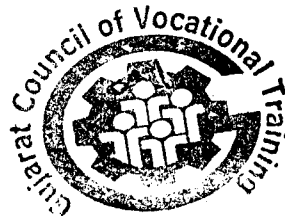
Sr. No.	Description of Item with detailed specifications	Item type i.e. Machinery / Equipment OR Shop Outfit OR Trainee Toolkit	Quantity Required per one Batch of Students	Quantity Required per one Batch of Students for Instructor	Total Quantity Required (Total of previous two columns)
1	Screwdriver 8 [⊙]	Toolkit	13Nos	1 Nos	14Nos
2	Screwdriver 10 [⊙]	Toolkit	13Nos	1 Nos	14Nos
3	Screwdriver 12 [⊙]	Toolkit	13Nos	1 Nos	14Nos
4	Heavy duty screwdriver 10 [⊙]	Toolkit	13Nos	1 Nos	14Nos
5	Heavy duty screwdriver 12 [⊙]	Toolkit	13Nos	1 Nos	14Nos
6	Cutting pliers set 6 [⊙]	Toolkit	13Nos	1 Nos	14Nos
7	Cutting pliers set 8 [⊙]	Toolkit	13Nos	1 Nos	14Nos
8	Nose pliers 6 [⊙]	Toolkit	13Nos	1 Nos	14Nos
9	Neon tester	Toolkit	13Nos	1 Nos	14Nos
10	Crimping tool	Toolkit	3Nos	1 Nos	4 Nos
11	Ball peen hammer 250g	Toolkit	5Nos	1 Nos	6 Nos
12	Ball peen hammer 500g	Toolkit	5Nos	1 Nos	6 Nos
13	Electrician knife 10cm	Toolkit	13Nos	1 Nos	14Nos
14	Cold chisel 15cm	Toolkit	5Nos	1 Nos	6 Nos
15	Fermer chisel 14cm	Toolkit	5Nos	1 Nos	6 Nos
16	Fermer chisel 20cm	Toolkit	5Nos	1 Nos	6 Nos
17	Fermer chisel 25cm	Toolkit	13Nos	1 Nos	14Nos
18	Hacksaw frame 300mm	Toolkit	5Nos	1 Nos	6 Nos
19	Hacksaw blades HCS	Toolkit	5Nos	1 Nos	6 Nos





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20	Wire skipper 10cm	Toolkit	13Nos	1 Nos	14Nos
21	Volt meter 0-600V (MC type)	Toolkit	5Nos	1 Nos	6 Nos
22	Volt meter 0-600V (MI type)	Toolkit	5Nos	1 Nos	6 Nos
23	Ammeter 0-5 (MC type)	Toolkit	5Nos	1 Nos	6 Nos
24	Ammeter 0-5 (MI type)	Toolkit	5Nos	1 Nos	6 Nos
25	Watt meter 0-2.5KW	Toolkit	5Nos	1 Nos	6 Nos
26	Energy meter 0-10A, 240V	Toolkit	2Nos	1 Nos	3 Nos
27	Multimeter	Toolkit	5Nos	1 Nos	6 Nos
28	Megger 500V	Toolkit	5Nos	1 Nos	6 Nos
29	Line Tester	Toolkit	2Nos	1 Nos	
30	Tri square 30cm	Toolkit	5Nos	1 Nos	6 Nos
31	Steel measuring tape 5meters	Toolkit	5Nos	1 Nos	6 Nos
32	Tri square 30cm	Toolkit	5Nos	1 Nos	6 Nos
33	Wire gauge – standard	Toolkit	5Nos	1 Nos	6 Nos
34	Motorised coil winding machine	Toolkit	1No	1 Nos	2 Nos
35	Hand operated coil winding machine	Toolkit	1No	1 Nos	2 Nos
36	Soldering iron 25W, 240V	Toolkit	3Nos	1 Nos	4 Nos
37	Power drilling machine 6mm	Toolkit	2Nos	1 Nos	3 Nos
38	Electric heater	Toolkit	1No	1 Nos	2 Nos
39	Electric Iron	Toolkit	1No	1 Nos	2 Nos
40	Electric kettle	Toolkit	1No	1 Nos	2 Nos
41	Ceiling Fan	Toolkit	2Nos	1 Nos	3 Nos
42	Table Fan	Toolkit	2Nos	1 Nos	3 Nos





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43	Washing machine	Toolkit	1No	1 Nos	2 Nos
44	Automatic Iron	Toolkit	1No	1 Nos	2 Nos
45	Storage heater	Toolkit	1No	1 Nos	2 Nos
46	Wet grinder	Toolkit	1No	1 Nos	2 Nos
47	Cooking stove	Toolkit	1No	1 Nos	2 Nos

(As many sheets as required should be used to accommodate all items)



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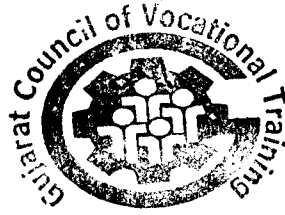
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Name of Syllabus: Electrical & House-wiring Technician

Sector: Electrical

Terminal Competency:

Unit #	Module	Contents	Practical to be carried out	No. of Weeks
1	Basics of electricity	<ul style="list-style-type: none">• Conductors and types of conductors.• Insulators and types of insulators.• Terms and concepts used in Electrical technology like voltage, current, resistance and their units.• Various hand tools related to electrical applications and their uses	<ul style="list-style-type: none">• Demonstrate various hand tools.	1 week
2	Simple circuits	<ul style="list-style-type: none">• Combination of resistances.• Series and parallel circuits.• Crimping and soldering	<ul style="list-style-type: none">• Simple electrical connections using resistance, voltmeter, ammeter and multimeter need to be practiced.• Connecting number of lamps in series and parallel connections.	2 weeks
3	General safety and Electrical safety	<ul style="list-style-type: none">• Lifting and handling safety.• Knowledge about types of fire and fire extinguishers and their applications.• General safety of tools and equipments.• Electrical safety.	<ul style="list-style-type: none">• Safe practices of lifting and handling to be demonstrated.• Various types of fire fighting equipments need to be demonstrated.• Demonstrations on rescuing a person who is in contact with live wire and treating a person for electrical shock need to be organised and make them to practice in groups.	1 week



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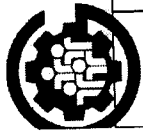
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Electrical wire	<ul style="list-style-type: none"> • Skinning different types of cables. • Types of joints and their applications. • Crimping and its applications. • Soldering and its applications. 	<ul style="list-style-type: none"> • Preparation of terminations by skinning different types of cable ends. • Making various joints in cable. • Crimping and soldering practice. 	1 week
Theoretical and Practical test on above modules			
5	<ul style="list-style-type: none"> • Direct current and testing polarity. • Alternating current and identifying phase, neutral and earth terminals. • Basic electrical accessories and its applications 	<ul style="list-style-type: none"> • Testing the polarity of DC supply. • Identification of phase and neutral in single phase supply. • Various types of accessories and their connections to be demonstrated. 	1 week
6	<ul style="list-style-type: none"> • Basic electrical accessories and its applications 	<ul style="list-style-type: none"> • Identify the wiring accessories as per symbols. • Identification and repairing of house wiring faults. • Prepare a T.W board for fixing flush type accessories. 	1 week
7	<ul style="list-style-type: none"> • ISI rules related to wiring. • Simple house wiring circuits. • Diagrams and systems used in domestic wiring installation. 	<ul style="list-style-type: none"> • Making a wiring lay outs for various models like bedroom of a house with 6 points. • Carryout the wiring in PVC casing as per the lay out. 	2 weeks
8	<ul style="list-style-type: none"> • Purpose of earthing • Types of earthing –Pipe earthing and plate earthing. • Earthing for domestic applications. • I E rule for energy meter installation. 	<ul style="list-style-type: none"> • Carryout both types of earthings practically as per IE rule. • Prepare and mount energy meter board. • Carryout domestic installation testing. 	1 week
Theoretical and Practical test on above modules			
9	<ul style="list-style-type: none"> • Repair of home • Install, service and repair basic electrical home 	<ul style="list-style-type: none"> • General repair of heating iron, kettle, 	2 weeks



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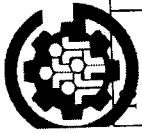
<p>appliance</p>	<p>appliances.</p> <ul style="list-style-type: none"> • Assemble and install a fluorescent lamp. • Repair and rectification of an automatic electric iron, servicing and repair of mixer, ceiling and table fan. • Thermostat heat controls of automatic electric iron, steam iron, spray irons. • Understand home appliances like heater, iron, kettle, ceiling fan table fan, washing machine etc. 	<ul style="list-style-type: none"> • ceiling fan, washing machine etc. • Testing if fan capacitors. • Clean and lubricate the bearing of ceiling and table fan and check the speed. • Regulator of ceiling fan table fan. • Oscillation mechanism of table fan. • Measure the insulation resistance between the terminals and body of the appliance. • Selection of the fuse size according to the load of circuit. • Dismantle and reassemble automatic iron, ceiling fan, table fan, cooking range, storage heater, washing machine and wet grinder etc. 	<p>1 week</p>
	<ul style="list-style-type: none"> • Maintenance of decorative serial lamp for a required supply voltage. • Assemble connect and install a twin fluorescent lamp with accessories. • Repair and service techniques of cooking range, storage water heater, washing machines, wet grinders. 	<ul style="list-style-type: none"> • Determine the number of lamps to be connected in series for particular supply voltage for making decorative serial lamps. • Check the internal connections of cooking range selector switch and circuits. Connections in different temperature arrangements. • Check the simple mechanical timer, small water pump of washing machines and regular service and faults. • Repair of house wiring. 	



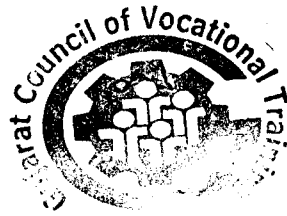
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<p>Motor winding</p> <ul style="list-style-type: none"> • Terminology used in single phase and three phase winding like pole pitch, coil pitch etc. • Insulating materials used in motor winding. • Preparation of winding data for a given motor. • Testing procedures after rewinding. 	<ul style="list-style-type: none"> • Testing the motors before finalising for rewinding. • Preparing of winding former and the coils. • Inserting coils in the slots. • Stripping of the old winding and preparing the winding former and coils. • Making the end connections. • Testing the motor after rewinding. 	<p>1 week</p>
<p>Industrial Attachment</p>		<p>2 weeks</p>
<p>TOTAL</p>		<p>16 Weeks</p>



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कराळुडु डलडु

Soft Skills

SR NO	TOPIC	Weeks
1	Personality Development	1 Weeks
	Introduction (Speaking about yourself)	
	Strengths, Weaknesses & Hobbies	
	Role model (Idol)	
2	Communication Skills	1 Week
	Nouns, Types of Nouns & Rules of forming Plural Nouns	
	Rules of forming Plural Nouns	
	Verbs	
3	Forms of Verbs	1 Week
	Team Work	
	Present Tense	
	Verbs	
4	Future Tense	1 Week
	Skill to develop Personal Relations	
	The Sentence	
	Negative Sentences	
5	Self Confidence	1 Week
	Good manner words in English	
	Exclamation words in English	
	Frequently used phrases	
6	Team Spirit	1 Week
	Words often confused	
	Conversation Skills - from books & newspaper articles	
7	Group Discussion	1 Week
	Speaking about relevant topics in daily life	

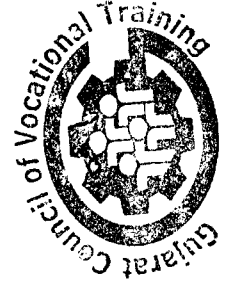
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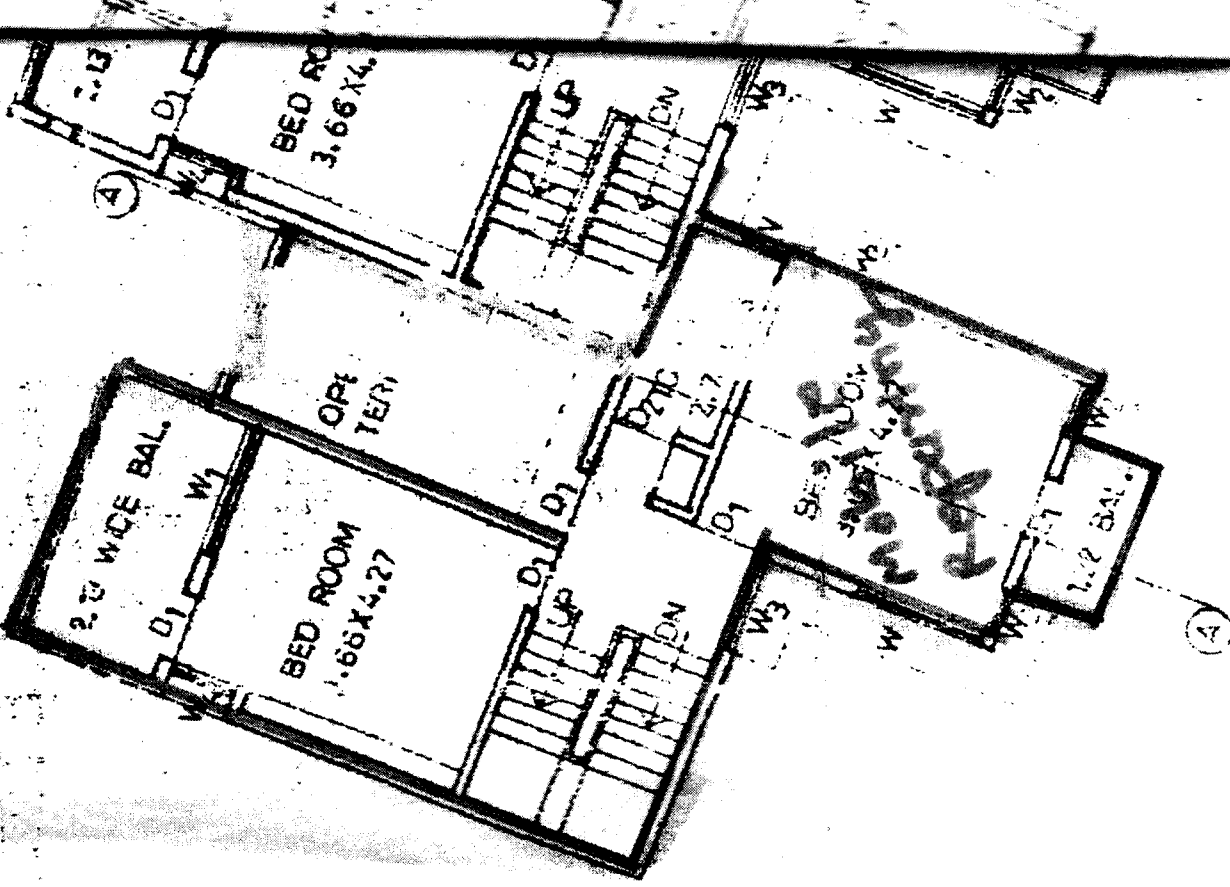
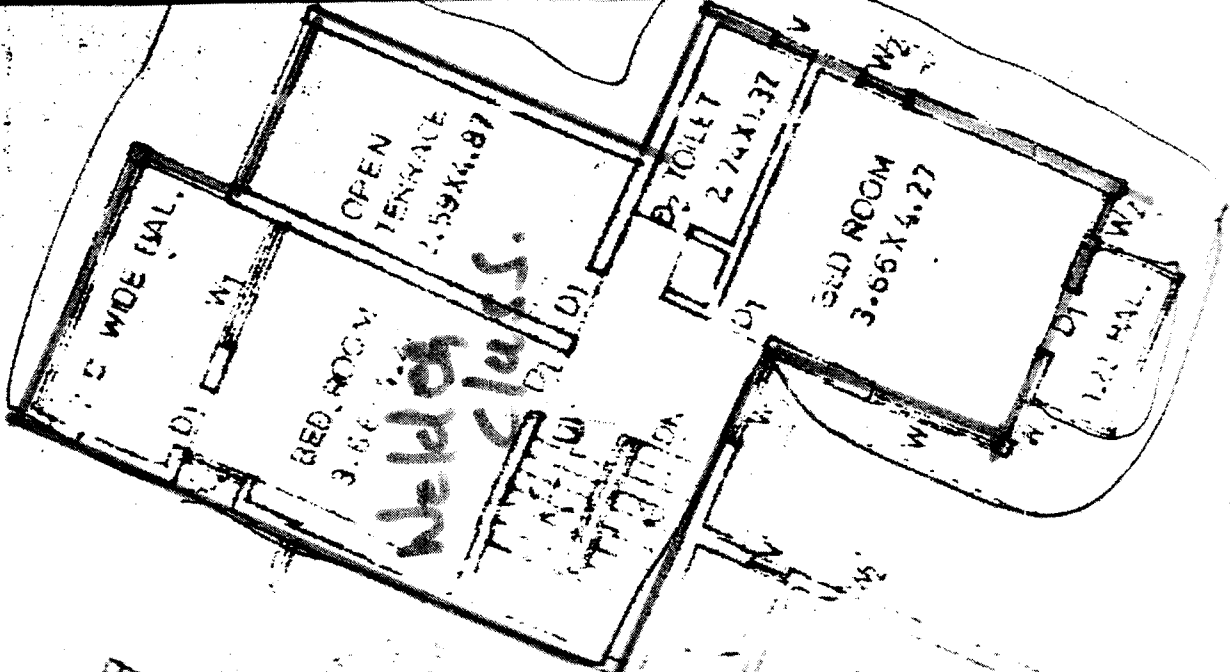
	Application for leave	
	Application for job	
	Invitation	
	Interview	
	Conversational Skills - on company visits practical training etc.	
8	Speaking in Hindi	1 Week
	Interview Questions	
	Body Language	
9	Writing Short Stories	1 Week
	Frame Sentences	
	Positive Attitude	
10	Imaginative Sentences	1 Week
	Names of different items	1 Week
11	Time Management	1 Week
12	Health and Hygiene	1 Week
13	Leadership	1 Week
14	Dressing (Hygiene and Safety)	1 Week
15	Developing skills in life	1 Week
16	Key to live a successful life	1 Week





JND FLOOR

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FIRST FLOOR PLAN



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