GOVERNMENT OF TAMILNADU

DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI-25

STATE PROJECT COORDINATION UNIT

(Established under Canada India Institutional Cooperation Project)

CURRICULUM

Course Name	**DOMESTIC WIRING**
Course Code	**EE/2020/003**
Course Duration	50 Hours
Minimum Eligibility Criteria	8th/10th/+2 /ITI/Diploma/Graduates
Pre-requisites (if any)	-
Course Objectives	Training module has been designed for the participants to • Understand the concept of Domestic Wiring and Earthing. • List the name of the accessorises required for wiring work • Read electrical wiring Diagram and understand it. • Lay the PVC Pipes for Indoor wiring • Install Wiring accessories in residential building as per IE rules. • Identify and rectify the faults in wiring circuits.
Course Outcomes	At the end of training, the trainees will be able to • Explain the concept of Domestic Wiring and Earthing. • Estimate the list of accessories required for domestic wiring • Read Electrical wiring diagram. • Draw, wire-up & test different types of domestic wiring &Earthing. • Perform installation of wiring accessories in residential buildings • Rectify the fault in Domestic wiring
Expected Job Roles	Electrician

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
EE/2020/003	DOMESTIC WIRING APPLIANCES	Theory	20	10	20	3 Hours
		Practical	30	40	80	
		Total	50	50	100	

EE/2020/003- DOMESTIC WIRING

DETAILED SYLLABUS

Unit No	Modules	No.of.Hours	
		Theory	Practical
I	**Introduction to Wiring:**	**20 Hours**	
1.1	Concept of basic Electricity	15	05
1.2	Single phase & Three phase circuits		
1.3	Measurement of Electrical quantities like Voltage, Currents, Resistance and Power		
1.4	Identification of the electrical equipments cables, wires and electrical accessories		
1.5	Symbols used in basic Electrical Circuits – Reading of wiring diagram		
1.6	Different types of wires & cable		
1.7	Current carrying capacity of Load		
1.8	Concept of Earthing - Pipe Earthing		
1.9	Uses of fuses, MCB & its selection		
1.10	Practice in wire stripping, jointing, crimping and connecting with switches, sockets, holder etc.,		
1.11	Precaution to be taken in electrical wiring system for human safety		
II	**Wiring Installations:**	**15 hours**	
2.1	Selection and Installation of FDB and MCB DB	05	10
2.2	Practice in cutting and fixing of conduits in wall and ceiling		
2.3	Methods of laying PVC Conduit for surface conduit wiring and concealed wiring		
2.4	Method of laying wire over short distances		
2.5	Installation of outlets and switches – Installation of outdoor wiring		
2.6	Installation of wiring for multi sub-circuits		
2.7	Assembling of ceiling fan – Fixing of tube lights and calling bell		
2.8	Trouble shooting of open neutral		
2.9	Trouble shooting of fan, Tube light and Electric bell		
III	**Practical: Wiring Diagram:**	**15 Hours**	
3.1	Practice one lamp controlled from one point	-	15
3.2	Practice two lamps controlled by individual Switches from two different points using loop in methods		
3.3	Practice three lamps and one Socket outlet (Receptacle) controlled by Individual Switches		
3.4	Practice one lamp, one Fan and one Socket Controlled by Individual Switches		
3.5	Practice stair-case wiring circuit		
3.6	Wiring for connecting Inverter Circuit - Field Visit		
	Total Theory and Practical Hours	**20**	**30**
	Total hours	**50**	

HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1	Wiring Accessories
2	Electrical Tools
3	Wiring Wall/Board

SOFTWARE REQUIREMENT

NIL

REFERENCE BOOKS

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1	IET Wiring Regulations: Electric Wiring for Domestic Installers	Brian Scaddan	Routledge
2	Wiring a House	Rex Cauldwell	Taunton Press
3	Electric Wiring: Domestic	Brian Scaddan	Routledge
4	Domestic Central Heating Wiring Systems and Controls	Raymond Ward	Routledge

ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the CIICP Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the CIICP Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The passing criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training, Certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnics.

END EXAMINATION

ALLOCATION OF MARKS

S.NO	Description	Max. Marks
1.	Theory Examination	20
2.	Practical Examination	
	a)Objective and Circuit Diagram	20
	b)Procedure and Connections / Execution	20
	c)Result and Viva	20
	d) Record	20
	Total Marks	**100**

THEORY MODEL QUESTION PAPER

EE/2020/003 DOMESTIC WIRING

(Maximum Marks: 20)

(N.B: Answer any Twenty questions) **20x1= 20 Marks**

1. Define voltage.
2. What is unit of power?
3. What are the types of wiring materials?
4. Write any two wiring accessories.
5. List the power rating of any 2 electrical appliances used in houses.
6. Write any two Electrical Symbol.
7. Write any two Electrical wires.
8. Write any two Electrical cables.
9. What is current carrying capacity?
10. What is electric shock?
11. What is earthing?
12. What is Necessity of earthing?
13. What are the types of earthing?
14. Which material used in Rewirable fuse.
15. What is uses of fuse?
16. Expand MCB.
17. What is uses of MCB?
18. Expand FDB.
19. Write location of main board.
20. Write location of distribution board.
21. What is meant by sub-circuit?
22. What is diversity factor.
23. What is joint box wiring?
24. What is uses of outlet?
25. Explain why fuse is not provided in neutral.