



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Diploma in Vocation (D.Voc), 2nd Semester

Branch: All Branches

Subject Name: Automation & Control Technician II

Subject Code: 1220008

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	OJT		Theory		Tutorial / Practical		
			University exams (ESE)	Progressive Assessment (PA)	External Practical /viva Exam(ES E)	Internal evaluation n Practical /viva Exam(PA)		
-	-	15	15	-	-	100	100	200

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	Demonstrate the process of assembling the electrical sub system as per the standard operating procedure. Demonstrate how to report defective or inadequate number of components. Demonstrate how to report about inadequate quantity of consumables such as wires, connectors, screws, nuts, etc. Demonstrate how to report any problems in the assembly line in time. Prepare sample records related to defects/inadequacies identified during the assembly process.	30	20
2.	Identification of evaporators in refrigerators, bottle cooler, water coolers, window and split A.C, Installation, Leak test, remove oil from evaporator, Flushing, Defrosting. Working principle, Function, types of evaporators used in refrigerator, water coolers, bottle coolers, window and split A.C, Super heating in evaporators, Function of accumulator and types. Methods of defrosting, heat exchanger.	40	30
3	Explain the company's policies on code of conduct, organisation's culture, customer care, reporting structure and documentation policy. Explain the company's products and recurring problems reported in consumer appliances. State the precautions to be taken while handling field calls and dealing with customers. Explain the importance of personal grooming with proper etiquettes at the customer's premises. Explain the basic electrical, mechanical modules of various appliances and electronics involved in the type of appliance. List models of different appliances, their common and distinguishing features, functionality of different features of appliances and new features.	25	10
4	Replacing drier, capillary tube, in refrigerator and window AC. Function of drier & Expansion valve used in domestic refrigeration and air conditioning systems. Capillaries, Automatic and Thermostatic Ex. Valves. Filling	25	25



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	insulation materials in refrigeration systems Function, types, thermodynamic properties of heat insulation materials used in refrigeration and Air Conditioning systems.		
5	Perform the steps of basic tests to check fundamental components of functioning. Demonstrate how to perform functional tests on cooler components after disassembling it. Perform Troubleshooting procedure of minor external faults such as loose connections, improper mounting, etc. Perform Troubleshooting procedure on faults in motor, pump. Role play on how to operate the appliance and explain appliance functioning to the consumer. Prepare sample documents to close customer complaint and receive payment	30	15
Total		150	100

Suggested Specification Table with Marks (OJT):

Distribution of OJT Marks					
R Level	U Level	A Level	N Level	E Level	C Level
50	45	30	45	30	0

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

- https://essc-india.org/images/OPs/MC_Electrical%20Technician.pdf
- https://skillmissionbihar.org/user/pages/files/courses/rtd/MC_Junior%20Field%20Technician%20Home%20Appliances%20ELEQ3117.pdf
- <https://dgt.gov.in/sites/default/files/2024-02/RAC.pdf>
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