

REFRIGERATION AND AIR CONDITIONING

Course code NARQ40042 – PROCESS : Session Plan

Day	Session	Subject
01	I	Registration & Inauguration
	II	About the Institute, rules & regulations of training/institute
	III & IV	Micro lab–Ice breaking exercise
02	I	Achievement Motivation–confidence building
	II	Why self employment–Advantages over wage employment, Entrepreneurship Development – What, Why & How?–(introduction)
	III & IV	Entrepreneurial competencies – Importance, explanation with examples, case study for identification of different competencies
03	I	Problem solving–Explanation through case studies and exercises, Creativity – Creative thinking
	II	Time management
	III & IV	Risk taking and Goal setting - Ring Toss exercise
04	I & II	An introduction to Basic electricals- Theory
	III & IV	Series Board Connection, Phase & Earth - Practical
05	I & II	Introduction to Refrigeration- Domestic, commercial and centralized
	III	Difference between Refrigeration & Refrigerator - Theory
	IV	Refrigeration Cycle - Domestic, commercial and centralized
06	I & IV	Tools & Equipments (Eco Friendly Kit) used for Repairing Refrigeration, Vacuum Pump, Refrigerant Recovery Machine & Recovery Cylinder - Theory & Demonstration
07	I	Tower building – Eradicating dependency syndrome
	II	Electrical Equipments and parts used in refrigeration & Air Conditioning
	IV	Usefulness of running capacitor, starting capacitor in compressor Motor
08	I & II	Definition of compressor and its types – Theory
	III & IV	Parts of Compressor Theory Demonstration
09	I	Disassembling of Compressor – Theory
	II	Disassembling of Compressor- Demonstration & Practical
	III & IV	Precaution during Compressor assembling – Theory & Practical

10	I & II	Uses of Copper tubes in refrigeration – Theory
	III & IV	Different Size of Copper tubes & its uses
11	I	Effective communication skills
	II	Copper tube swedging, cutting & flaring – Practical
	III & IV	Uses of swedging, cutting & flaring in refrigeration and Air Condition
12	I & II	Evaporation Condenser, Expansion - Theory
	III & IV	Evaporation Condenser, Expansion valve copper & Aluminum- Demo & Practical
13	I & II	Brazing - Theory
	III & IV	Brazing copper tubes - Practical
14	I	Refrigerant working process – Theory
	II	Eco friendly Refrigerant
	III	Harmful Effects of refrigerant service on Ozone Layer
	IV	Security of Ozone Layer and Eco friendly refrigeration
15	I	Direct cool and frost free refrigerator - Theory
	II	Electric and mechanical parts of Direct cool and frost free refrigerator - Theory
	III	Fault finding and solution, machine vacuum and refrigerant charging - Practical
	IV	Midterm evaluation test
16	I	Experience sharing – Interaction with successful entrepreneur
	II	Difference between Window Air Conditioner and Split Air Conditioner
	III	Domestic and Commercial refrigeration systems – Problem & Solutions
	IV	Window AC compressor change, vacuum and refrigerant charging - Practical
17	I	Split AC outdoor valve change – Practical
	II	Expansion (Capillary) tube change – Practical
	III	Compressor change, Vacuum and refrigerant charging –Practical
	IV	Market Survey - Theory
18	I to IV	Market Survey – Collection of information and field visit

19	I	Market survey – Report writing, presentation, group discussion & analysis
	II	Wait of refrigerant and correct vacuum process
	III & IV	Tools for Checking refrigerant leakage – Demo and Practical
20	I	Business Game - Boat Building exercise
	II	Practical of refrigerant charging and finding leakage
	III & IV	Exposure Visit to commercial & centralized Air Condition Plants
21	I & II	Mechanical and Evaporation leakage of system – Theory & Practical
	III	Presser Leakage in Mechanical condenser – Practical
	IV	Servicing of system with nitrogen drop presser machine
22	I & II	Common Problems of refrigerants and control mechanism
	III & IV	Fault finding in Brazing Chokes and solutions
23	I & II	Fault finding in mechanical parts and solutions
	III & IV	Fault finding in Low Presser side and High Presser side and Solution
24	I & II	Marketing Management – 4Ps of marketing, managing the customers ,Digital marketing and use of Social Media.
	III&IV	Electronic Air sensor, Air flow & Temperature, Types of Temperature sensor
25	I	Theoretical aspects on wiring of Split/Window Air conditioner
	II	Practical aspects on wiring of Split/Window Air conditioner
	III & IV	Automobile air conditioning Theory – Demo and Practical
26	I to IV	Dismantling and Assembling of window/Split air conditioner
27	I	Types of Secondary Refrigerant and uses
	II & III	Coolant and Braine air handling unit - Practical
	IV	Human Relations
28	I	Types of commercial Air Conditioner plants
	II & III	Centrifugal force compressor and scroll compressor
	IV	Revision and Brain Storming Session

29	I	Costing, pricing – Fixed Cost- Variable Cost, Break even point etc.
	II	Business plan/project report preparation
	III & IV	Banking–Deposits & advances, lending schemes/Government schemes
30	I	Maintenance of records & book keeping – methodology
	II	Launching formalities – steps in launching of an enterprises Pitfalls and their control
	III	Final Evaluation Test
	IV	Feedback & Valedictory