DEPARTMENT OF MECHANICAL ENGINEERING
REFRIGERATION AND AIR CONDITIONING LABORATORY
COLLEGE OF TECHNOLOGY
Sardar Vallabhbhai Patel University of Agriculture & Technology Meerut 250110 (UP)
List of Equipment's

S. No.	Name of Equipment	List of Item	Figure of Device
01	Basic Refrigeration and Air Conditioning Training System	1. Cut Section Model of Air Conditioning & Refrigeration System	
02	Window Type Air Conditioner Test Rig	The test rig. consists of a window type air conditioner Compressor: Rotary type 1.0 Ton. Condenser: Fins and copper tube type air cooled Evaporator: Fins and copper tube type Chamber: The chamber of test rig consists of four heaters with a fan placed in the chamber for applying heat load Electrical Control: Switch for AC, Switch for Heaters, Switch for Kettle, Voltmeter (Digital type with L.C.1V), Ampere meter (Digital type with L.C. 0.1Amp), Switch, Thermocouple Experimental Capabilities: 1. Calculation of Room Sensible heat load. 2. Calculation of Room latent heat load. 3. Calculation of C.O.P.	

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03	Ice Plant Tutor (20 Kgs Capacity)	Compressor: hermetically sealed Condenser: Forced convection air cooled; Expansion valve: Thermostatic expansion valve Evaporator: Immerse type direct expansion; Cooling capacity: 20kg/ day ; Insulation : PUF insulation Number of ice cans : 4; Size of tank : 2' x 1 ½' x 9" Size of ice can : 2" x 1 ½" x 6"; Evaporator : Shell & coil type Experimental Capabilities: To study the Ice-plant, its working cycle and determine its COP.	
04	Vapour Absorption Refrigeration Trainer	Consisting of refrigeration cycle Type : mf 20-60 Volume : 41 ltrs; Mains operation : 220-240 volts; AC Input : 90 W; Energy consumption : 1.07 kw-hr Refrigerant: 245 NH_3 + H_2O. Experimental Capabilities: To determine the C.O.P. of the unit	

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05	Air Washer Test Rig	As per Standard	
06	Vapor Compression Refrigeration Test Rig	Consisting of refrigeration cycle Compressor: Hermetically sealed reciprocating type 1/3 Ton Condenser :Fins and copper tube type air cooled Evaporator: Compact once through concentric tube with refrigeration load supplied by separate electric heating elements. Control Panel: The test rig consists of all instruments mounted on board. Capillary tube expansion device, Automatic expansion valve, Pressure Gauges, Variac for heat load balancing, Solenoid valve, Filter, LP/HP cut out switch Experimental Capabilities: 1. Demonstration of Vapour Compression Refrigeration Cycle To determine the C.O.P. of the unit	

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07	Cut Section Model of Domestic refrigerator	Actual Cut Section Model	
08	Cut Section Model of Reciprocating Compressor	Actual Cut Section Model	

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09	Cut Section Model of Rotary Hermetic Compressor	Actual Cut Section Model	
10	Cut Section Model of Hermetic Compressor	Actual Cut Section Model