## **RECOMMENDED BOOK(S)**

Refrigeration and Air Conditioning Laboratory Manual

## **COURSE OBJECTIVES**

To demonstrate and develop understanding among the students about the basic working principles of HVAC with hands-on experience and to improve the psycomotor skills

S. No.	CLO/PLOS MAPPING	DOMAIN	PLO
1	<b>Operate</b> multiple RAC testing units to observe different properties of air and refrigerants after heating and cooling processes.	Р3	04
2	<b>Manipulate</b> different settings and parameters of RAC units and their control systems to investigate the effect of changing different parameters on refrigeration, cooling and heating.	Р3	04

## **COURSE CONTENTS**

To carry out the thermodynamic analysis of the Simple Compression Refrigeration Cycle Study of characteristics of automotive refrigeration cycle and to find coefficient of performance. Demonstration and Working of reverse air conditioning system and to find coefficient of performance.

Demonstration and working of Vapour Absorption Refrigeration System

Demonstration and working of Air Conditioning Laboratory Unit

Study of characteristics of air on psychrometric chart and to draw refrigeration cycle

Study of characteristics of air on psychrometric chart and to draw refrigeration cycle in recirculating air conditioning unit

General Observation of the Forced Draught Cooling Tower.

Investigation of the Effect of Cooling Load on Wet Bulb Approach.

Investigation of the Relationship between Cooling Load and Cooling Range.

Determination of power input, heat output and coefficient of performance of Mechanical Heat Pump

Production of heat pump performance curves over a range of source and delivery temperatures of Mechanical Heat Pump