

## REFRIGERATION AND AIR CONDITIONING LAB

Name of Lab In-charge: Mr. Pradeep Kumar

Name of technical assistant: Mr. Ranjeet Kumar

Course Outcomes:

CO Code	COURSE Outcome(CO)
1	<b>Acquire</b> the knowledge about the basic components of refrigeration system and calculate its performance with different configurations.
2	<b>Acquire</b> the knowledge about the basic components of air conditioning and investigate the effect of psychometric processes on the performance of air conditioners.
3	<b>Acquire</b> the knowledge of psychometric processes and applications of air washer.
4	<b>Acquire</b> the knowledge about the thermodynamic cycle of air compressors and compute the volumetric efficiency.

**List of Equipment:**

1. Vapour compression test rig
2. Refrigeration test rig
3. Air-conditioning test rig
4. Air washer test rig
5. Window air conditioning test rig
6. Cut section compressor

**List of Experiments:**

Sr. No.	As per AKTU	Performed/ Not performed
1	Experiment on refrigeration test rig and calculation of various performance parameters.	YES
2	Study of different types of expansion devices used in refrigeration system.	YES
3	Study of different types of evaporators used in refrigeration systems.	YES
4	To study basic components of air-conditioning system.	YES
5	Experiment on air-conditioning test rig & calculation of various performance parameters.	YES
6	Experiment on air washers	YES
7	Study of window air conditioner.	YES
8	Study & determination of volumetric efficiency of compressor.	YES
9	Visit of a central air conditioning plant and its detailed study.	
10	Visit of cold-storage and its detailed study.	

11	Experiment on Ice-plant.	
12	Experiment on two stage Reciprocating compressor for determination of volumetric efficiency , PV diagram and effect of intercooling.	
13	Study of Hermetically sealed compressor.	
14	Experiment on Desert coolers.	

**Pictures of Labs:**