

REFRIGERATION AND AIR CONDITIONING LAB

LIST OF EXPERIMENTS

1. To determine the COP of heat pump and production of heat pump performance curves.
2. Comparison of practical and ideal cycles on PH diagram & determination of energy balance.
3. Production of heat pump performance curves at a variety of condensing conditions
4. Effect of compressor pressure on volumetric efficiency
5. Investigation of variation of refrigeration duty
6. Investigation of variation of refrigerator COP
7. Investigation of heat delivered to cooling water with variations in condensing temperatures
8. Effect of pressure ratio on volumetric efficiency
9. Determination of overall heat transfer coefficient for condenser cooling coil.
10. To draw the cooling and dehumidification process on psychometric chart and to determine latent, sensible and total heat loss
11. To estimate the volumetric efficiency of the compressor
12. To determine the energy balance for the steam injector and find out moisture increase in air
13. Demonstration of VCC refrigeration cycle and evaluation of its coefficient of performance
14. To draw mixing process on psychometric chart and compare observed and calculated mixed air point
15. To calibrate one orifice against another
16. Cooling load calculations and duct sizing using soft wares.

RECIRCULATING AIR CONDITIONING UNIT



NOZZLE PRESSURE DISTRIBUTION UNIT



TEMPERATURE MEASUREMENT UNIT



REFRIGERATION LABORATORY UNIT



