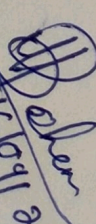


Discipline : Mechanical Engg.	Semester : 5th	Name of the Teaching Faculty : Mrs. Monalisha Behera
Subject : REFRIGERATION AND AIR CONDITIONING	No. of days/Per weeks Class Allotted Weeks :4	SEMESTER FROM DATE:15/09/2022 TO DATE:22/12/2022
Weeks	Class day	Theory
3rd(sept-2022)	1st	Definition of refrigeration and unit of refrigeration, Definition of COP, Refrigerating Effect
	2nd	Principle of working of open and closed air system of refrigeration. 1.3.1 Calculation of COP of Bell-Coleman cycle and numerical on it
	3rd	Numericals.
	4th	Schematic diagram of simple vapors compression refrigeration system
4th(sept-2022)	1st	Cycle with dry saturated vapours after compression
	2nd	Cycle with wet vapours after Compression
	3rd	Cycle with superheated vapors after compression.
	4th	Cycle with superheated vapors before compression & Cycle with sub cooling of refrigerant
2nd(oct-2022)	1st	Representation of above cycle on temperature entropy and pressure enthalpy diagram & Numerical on above (determination of COP, mass flow)
		CLASS TEST-1
	2nd	Representation of above cycle on temperature entropy and pressure enthalpy diagram & Numerical on above (determination of COP, mass flow)
	3rd	Representation of above cycle on temperature entropy and pressure enthalpy diagram & Numerical on above (determination of COP, mass flow)
	4th	Simple vapor absorption refrigeration system, Practical vapor absorption refrigeration system
3rd(oct-2022)	1st	COP of an ideal vapor absorption refrigeration system & Numerical on COP
	2nd	Psychrometric terms, Adiabatic saturation of air by evaporation of water, Psychrometric chart and uses.
	3rd	Sensible heating and Cooling 6.4.2 Cooling and Dehumidification 6.4.3 Heating and Humidification 6.4.4 Adiabatic cooling with humidification 6.4.5 Total heating of a cooling process 6.4.6 SHF, BPF, 6.4.7 Adiabatic mixing
	4th	Sensible heating and Cooling 6.4.2 Cooling and Dehumidification 6.4.3 Heating and Humidification 6.4.4 Adiabatic cooling with humidification 6.4.5 Total heating of a cooling process 6.4.6 SHF, BPF, 6.4.7 Adiabatic mixing

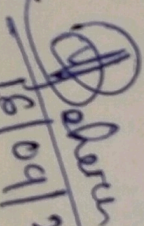


4th(Oct-2022)	1st	Sensible heating and Cooling 6.4.2 Cooling and Dehumidification 6.4.3 Heating and Humidification 6.4.4 Adiabatic cooling with humidification 6.4.5 Total heating of a cooling process 6.4.6 SHF, BPF, 6.4.7 Adiabatic mixing
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1st(Nov-2022)	1st	Problems on above
	2nd	Problems on above
	3rd	Factors affecting comfort air conditioning..
	4th	Equipment used in an air-conditioning.
2nd(Nov-2022)	1st	Classification of air-conditioning system
		CLASS TEST-2
	2nd	Winter Air Conditioning System
	3rd	Summer air-conditioning system
	4th	Numerical on above
3rd(Nov-2022)	1st	INTERNAL
	2nd	
	3rd	
	4th	
4th(Nov-2022)	1st	Principle of working and constructional details of reciprocating and rotary compressors, Centrifugal compressor only theory
	2nd	Important terms, Hermetically and semi hermetically sealed compressor.
	3rd	Principle of working and constructional details of air cooled and water cooled condenser
	4th	Heat rejection ratio, Cooling tower and spray pond.
1st(Dec-2022)	1st	Principle of working and constructional details of an evaporator
	2nd	Types of evaporator.
	3rd	Bare tube coil evaporator, finned evaporator, shell and tube evaporator
	4th	EXPANSION VALVES 5.1.1 Capillary tube
2nd(Dec-2022)	1st	Automatic expansion valve

  
 16/10/2022  
 Dr. B. B. B. B. B.  
 Sr. Asst. Mech.



	2nd	Capillary tube
	3rd	Automatic expansion valve 5.1.3 Thermostatic expansion valve
	4th	Classification of refrigerants , Desirable properties of an ideal refrigerant. Designation of refrigerant.
3rd(Dec-2022)	1st	Thermodynamic Properties of Refrigerants. 5.2.5 Chemical properties of refrigerants.
	2nd	commonly used refrigerants, R-11, R-12, R-22, R-134a, R-717 5.2.7 Substitute for CFC
	3rd	cold storage , dairy refrigeration , ice plant
	4th	water cooler , frost free refrigerator

  
16/09/2022  
 H. Bobaru.  
 Sr. Asst. Mech.