

Discipline : Mechanical Engg.	Semester : 5 <sup>th</sup>	Name of The Teaching Faculty: Er. SANKAR PRASAD PRADHAN
Subject : REFRIGERATION AND AIR CONDITIONING	No Of Days/Week Class Allotted <b>05</b>	Semester From : <b>01.08.2023</b> To <b>30.11.2023</b>
		No. Of Weeks : <b>17</b>
<b>WEEKS</b>	<b>CLASS DAY</b>	<b>THEORY</b>
01.08.2023 TO 05.08.2023	1 <sup>ST</sup>	Definition of refrigeration and unit of refrigeration
	2 <sup>nd</sup>	Definition of COP
	3 <sup>rd</sup>	Define Refrigerating effect (R.E )
	4 <sup>TH</sup>	Define ton of refrigeration
	5 <sup>TH</sup>	Principle of working of open and closed air system of refrigeration
07.08.2023 TO 12.08.2023	1 <sup>ST</sup>	Calculation of COP of Bell-Coleman cycle and numerical on it.
	2 <sup>nd</sup>	Solve the problem and calculate cop on BCC
	3 <sup>rd</sup>	schematic diagram of simple vapors compression refrigeration system'
	4 <sup>TH</sup>	Cycle with dry saturated vapors after compression
	5 <sup>TH</sup>	Cycle with wet vapors after compression
14.08.2023 TO 19.08.2023	1 <sup>ST</sup>	Cycle withsuperheated vapors after compression
	2 <sup>nd</sup>	<b>INDEPENDENCE DAY</b>
	3 <sup>rd</sup>	Cycle with superheated vapors before compression
	4 <sup>TH</sup>	Cycle with sub cooling of refrigerant
	5 <sup>TH</sup>	Representation of above cycle on temperature entropyand pressure enthalpy diagram
21.08.2023 TO 26.08.2023	1 <sup>ST</sup>	Numerical on above (determination of COP, mass flow )
	2 <sup>nd</sup>	Simple vapor absorption refrigeration system
	3 <sup>rd</sup>	Practical vapor absorption refrigeration system
	4 <sup>th</sup>	Numerical on COP of Vapor cycle
	5 <sup>th</sup>	Principle of working and constructional details of reciprocating and rotary compressors
28.08.2023 TO 02.09.2023	1 <sup>st</sup>	Centrifugal compressor only theory and Important terms.
	2 <sup>nd</sup>	Principle of working and constructional details of air cooled and water cooled condenser
	3 <sup>rd</sup>	<b>RAKSHYA BANDHAN</b>
	4 <sup>TH</sup>	Heat rejection ratio. and Cooling tower and spray pond.
	5 <sup>TH</sup>	Heat rejection ratio. and Cooling tower and spray pond.

04.09.2023 TO 09.09.2023	1 <sup>ST</sup>	Types of evaporator
	2 <sup>TH</sup>	Bare tube coil evaporator, finned evaporator, shell and tube evaporator
	3 <sup>TH</sup>	JANMASTAMI
	4 <sup>TH</sup>	Expansion valves and Capillary tube
	5 <sup>TH</sup>	Automatic expansion valve
11.09.2023 TO 16.09.2023	1 <sup>ST</sup>	Thermostatic expansion valve
	2 <sup>TH</sup>	Definition of Refrigerant and Classification of refrigerants
	3 <sup>TH</sup>	Desirable properties of an ideal refrigerant
	4 <sup>TH</sup>	Designation of refrigerant and convert to chemical name
	5 <sup>TH</sup>	Designation of refrigerant and Chemical properties of refrigerants
18.09.2023 TO 23.09.2023	1 <sup>ST</sup>	commonly used refrigerants, R-11, R-12, R-22, R-134a, R-717
	2 <sup>nd</sup>	GANESH CHATURTHI
	3 <sup>rd</sup>	NUA KHAI
	4 <sup>TH</sup>	Substitute for CFC
	5 <sup>TH</sup>	Applications of refrigeration, cold storage dairy refrigeration and ice plant
25.09.2023 TO 30.09.2023	1 <sup>ST</sup>	Water cooler
	2 <sup>nd</sup>	frost free refrigerator
	3 <sup>rd</sup>	Psychrometry
	4 <sup>TH</sup>	Comfort Air Conditioning system
	5 <sup>TH</sup>	BIRTHDAY OF MOHAMMAD
02.10.2023 TO 07.10.2023	1 <sup>ST</sup>	GANDHI JAYANTI
	2 <sup>nd</sup>	Psychrometric terms
	3 <sup>rd</sup>	Psychrometric chart and uses
	4 <sup>TH</sup>	Psychrometric processes
	5 <sup>TH</sup>	Sensible heating and Cooling
09.10.2023 TO 14.10.2023	1 <sup>st</sup>	Cooling and Dehumidification
	2 <sup>nd</sup>	Heating and Humidification
	3 <sup>rd</sup>	Adiabatic cooling with humidification
	4 <sup>TH</sup>	Total heating of a cooling process SHF, BPF
	5 <sup>TH</sup>	Adiabatic mixing
16.10.2023 TO 21.10.2023	1 <sup>st</sup>	Problems on Heating and Humidification
	2 <sup>nd</sup>	Effective temperature and Comfort chart
		Factors affecting comfort air conditioning
	3 <sup>TH</sup>	Revision
	4 <sup>TH</sup>	SHF, BPF Concept
	5 <sup>TH</sup>	Problems on Heating and Humidification

23.10.2023 TO 28.10.2023	1 <sup>ST</sup>	DRUGA PUJA HOLIDAY
	2 <sup>TH</sup>	
	3 <sup>TH</sup>	
	4 <sup>TH</sup>	
	5 <sup>TH</sup>	
30.10.2023 TO 04.11.2023	1 <sup>ST</sup>	
	2 <sup>TH</sup>	Classification of air-conditioning system
	3 <sup>TH</sup>	Equipment used in an air-conditioning
	4 <sup>TH</sup>	Winter Air Conditioning System
	5 <sup>TH</sup>	Different between winter and summer air conditioningsystem
06.11.2023 TO 11.11.2023	1 <sup>ST</sup>	Solve Numerical on above Air Conditioning System
	2 <sup>TH</sup>	Solve the numerical with the help of TS and PH digram
	3 <sup>TH</sup>	Solve the numerical with the help of TS and PH digram
	4 <sup>TH</sup>	Solve the numerical with the help of TS and PH digram
	5 <sup>TH</sup>	Simple vapor compression refrigeration system Revision
13.11.2023 TO 18.11.2023	1 <sup>ST</sup>	Practical vapor compression refrigeration system Revision
	2 <sup>TH</sup>	Simple vapor absorption refrigeration system Revision
	3 <sup>TH</sup>	Solve the numerical on previous year question
	4 <sup>TH</sup>	Solve the numerical on previous year question
	5 <sup>TH</sup>	Revision
		Revision
20.11.2023 TO 25.11.2023	1 <sup>ST</sup>	Discuss the long type of theory previous year asked question
	2 <sup>TH</sup>	ANALA NAVAMI
	3 <sup>TH</sup>	Discuss the long type of theory previous year asked question
	4 <sup>TH</sup>	Discuss the long type of theory previous year asked question
	5 <sup>TH</sup>	Discuss short type of previous year asked question
27.11.2023 TO 30.11.2023	1 <sup>ST</sup>	RAHASA PURNIMA
	2 <sup>TH</sup>	Discuss short type of previous year asked question
	3 <sup>TH</sup>	Discuss short type of previous year asked question
	4 <sup>TH</sup>	Revision