

**LESSON PLAN.**

**W.E.F:- 01/08/2023 WINTER**

**Subject :-RAC , Subject code - Th-5**

**Total Period.- 60 per Sem**

Teacher :-

**DHARMA PRAKASH SAMAL(LECT., MECHANICAL ENGINEERING DEPT.)**

Theory :- 4p/week  
SEMESTER:-5TH

SL NO	MONTH	Week	DATE	UNIT NO/PERIOD ALLOTTED	Syllabus to be covered	Syllabus actually covered	Short fall	
1	AUGUST	1ST	01-08-23	5	AIR REFRIGERATION CYCLE. Definition of refrigeration and unit of refrigeration			
2			2-08-23		Definition of COP, Refrigerating effect (R.E )			
3			3-08-23		Principle of working of open and closed air system of refrigeration.			
4		2ND	7-08-23	10	Calculation of COP of Bell-Coleman cycle and numerical on it			
5			8-08-23		Calculation of COP of Bell-Coleman cycle and numerical on it			
6		3RD	9-08-23	10	SIMPLE VAPOUR COMPRESSION REFRIGERATION SYSTEM,schematic diagram of simple vapors compression refrigeration system'			
7			10-08-23		Cycle with dry saturated vapors after compression.			
8			14-08-23		Cycle with wet vapors after compression			
9			16-08-23		Cycle with superheated vapors after compression			
10			17-08-23		Cycle with superheated vapors before compression			
11			4TH		21-08-23	Cycle with sub cooling of refrigerant		
12					22-08-23	Representation of above cycle on temperature entropy and pressure enthalpy		
13					23-08-23	Representation of above cycle on temperature entropy and pressure enthalpy diagram		
14		24-08-23		Numerical on above (determination of COP,mass flow				
15		5TH	28-08-23	Numerical on above (determination of COP,mass flow				
16			29-08-23	VAPOUR ABSORPTION REFRIGERATION SYSTEM,Simple vapor absorption refrigeration system				

17			31-08-23		Practical vapor absorption refrigeration system		
18	SEPTEM BER	2ND	4-09-23	7	Practical vapor absorption refrigeration system		
19			5-09-23		COP of an ideal vapor absorption refrigeration system		
20			7-09-23		COP of an ideal vapor absorption refrigeration system		
21			3RD		11-09-23	Numerical on COP	
22		12-09-23		Numerical on COP			
23		3RD	13-09-23	8	Types of evaporator.		
24			14-09-23		REFRIGERATION EQUIPMENTS, Principle of working and constructional details of reciprocating and rotary compressors.		
25		4TH	18-09-23	Centrifugal compressor only theory			
26			21-09-23	Important terms. Hermetically and semi hermetically sealed compressor.			
27		5TH	25-09-23	CONDENSERS, Principle of working and constructional details of air cooled and water cooled condenser			
28			26-09-23	Heat rejection ratio, Cooling tower and spray pond.			
29			27-09-23	EVAPORATORS, Principle of working and constructional details of an evaporator.			
30			28-09-23	Bare tube coil evaporator, finned evaporator, shell and tube evaporator			
31		OCTOBE R	1ST	3-10-23	10	EXPANSION VALVES, Capillary tube	
32	4-10-23			Automatic expansion valve, Thermostatic expansion valve			
33	5-10-23			REFRIGERANTS, Classification of refrigerants			
34	2ND		9-10-23	Desirable properties of an ideal			
35			10-10-23	Designation of refrigerant.			
36	11-10-23		Thermodynamic Properties of Refrigerants.				
37	12-10-23		Chemical properties of refrigerants.				
38	3RD		16-10-23	commonly used refrigerants, R-11, R-12			
39			17-10-23	Applications of refrigeration, cold storage, dairy refrigeration			
40			18-10-23	ice plant, water cooler			
41			19-10-23	frost free refrigerator			

42	4TH	25-10-23	10	Psychometric terms, Adiabatic saturation of air by evaporation of w		
43		26-10-23		Psychometric chart and uses		
44	5TH	30-10-23		Sensible heating and Cooling		
45		31-10-23		Cooling and Dehumidification		
46	1ST	1-11-23		Heating and Humidification		
47		2-11-23		Adiabatic cooling with humidification		
48	2ND	6-11-23		Total heating of a cooling process		
49		7-11-23		SHF, BPF,		
50		8-11-23		Adiabatic mixing		
51		9-11-23		Problems on above		
52	3RD	13-11-23	Effective temperature and Comfort chart			
53		14-11-23	AIR CONDITIONING SYSTEMS			
54		15-11-23	Factors affecting comfort air conditioning. .			
55		16-11-23	Equipment used in an air-conditioning.			
56	4TH	20-11-23	Classification of air-conditioning system			
57		21-11-23	Winter Air Conditioning System			
58		22-11-23	Summer air-conditioning system.			
59		23-11-23	Numerical on above.			
60	5TH	28-11-23	Numerical on above.			
61		29-11-23	Revision			
62		30-11-23	Revision			

*Dharmaprasanna Samal*