

# SYNERGY POLYTECHNIC, BBSR

## The Lesson Plan

Discipline: <u>Mechanical</u>	Semester: <u>5<sup>th</sup></u>	Name of the Teaching Faculty: <u>Ashutosh Sarpathy</u>
Subject: <u>RAC</u>	No of Days/per week class allotted: <u>05</u>	Semester from Date: <u>1.7.24</u> to Date: <u>18.11.24</u>
Week	Class Day	Theory/Practical Topics
1st	1st	Defination and unit of Refrigeration
	2nd	Defination of COP and (R.E.)
	3rd	Principle and working of Bell-
	4th	Coleman-cycle and its
	5th	Numerical
2nd	1st	→ DO ←
	2nd	→ DO ←
	3rd	Schematic Diagram of simple
	4th	vapour compression Refrigeration
	5th	system and its types
3rd	1st	→ DO ←
	2nd	Cycle with Dry saturated vapour after
	3rd	compression
	4th	Wet vapour after compression
	5th	superheated vapour before compression
4th	1st	Cycle with sub cooling Refrigerant.
	2nd	Cycle temperature entropy and pressure
	3rd	enthalpy diagram.
	4th	→ DO ←
	5th	Numerical on above.
5th	1st	→ DO ←
	2nd	Simple vapor absorption Refrigeration
	3rd	→ DO ←
	4th	Practical vapour absorption R. & S.
	5th	COP of Ideal VARS.

A. Sarpathy  
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Principal 22/6/24

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Week	Class Day	Theory/Practical Topics
1st	1st	Numerical on <del>be</del> COP
	2nd	—DO—
	3rd	Define working principle of reciprocating and
	4th	Rotary compressor.
	5th	Centrifugal compressor
2nd	1st	Hermetically and semi hermetically
	2nd	sealed compressor
	3rd	—DO—
	4th	Working and construction details of
	5th	air cooled and water cooled
3rd	1st	condensers.
	2nd	—DO—
	3rd	Heat rejection Ratio
	4th	Cooling tower
	5th	Spray pond.
4th	1st	Working and construction details of
	2nd	evaporator.
	3rd	Types of an evaporator.
	4th	Double tube coil evaporator
	5th	Finned evaporators
5th	1st	Shell and tube evaporator.
	2nd	Expansion valves (Capillary tube)
	3rd	Automatic expansion valve
	4th	Thermostatic expansion valve.
	5th	Classify and properties of Refrigerant

A. Jaiswal  
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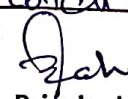
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Discipline: <u>Mechanical</u>	Semester: <u>5th</u>	Name of the Teaching Faculty: <u>Ashutosh Satpathy</u>
Subject: <u>RAC</u>	No of Days/per week class allotted: <u>05</u>	Semester from Date: _____ to Date: _____ No of Weeks: _____
Week	Class Day	Theory/Practical Topics
1st	1st	Designation of Refrigerant
	2nd	— DO —
	3rd	thermodynamic Properties of Refrigerant
	4th	Chemical Properties of Refrigerant.
	5th	— DO —
2nd	1st	Substitute for CFC.
	2nd	Cold storage
	3rd	Dairy refrigerator.
	4th	Ice plant
	5th	water cooler
3rd	1st	frost free refrigerator.
	2nd	Psychometric terms and Properties
	3rd	Psychometric Chart and uses.
	4th	Sensible heating and cooling.
	5th	Cooling and dehumidification.
4th	1st	Heating and humidification.
	2nd	Adiabatic cooling with humidification
	3rd	Total heating or cooling process
	4th	SHF, BPF.
	5th	Adiabatic Mixing
5th	1st	— DO —
	2nd	Effective temp. and comfort char.
	3rd	Factors affecting air condition.
	4th	Equipment used in air conditioning
	5th	winter Air conditioning.

A Satpathy  
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Subject:		No of Days/per week class allotted:		Semester from Date: to Date:	
Week		Class Day		Theory/Practical Topics	
1st	1st	DO			
	2nd	Summer air conditioning system			
	3rd	DO			
	4th	Numerical problem			
	5th	DO			
2nd	1st				
	2nd				
	3rd				
	4th				
	5th				
3rd	1st				
	2nd				
	3rd				
	4th				
	5th				
4th	1st				
	2nd				
	3rd				
	4th				
	5th				
5th	1st				
	2nd				
	3rd				
	4th				
	5th				

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