

<b>LESSON PLAN OF 5<sup>th</sup> SEMESTER(2022-23) CHEMICAL ENGINEERING</b>		
<b>DISCIPLINE:</b> CHEMICAL	<b>Semester:-5<sup>TH</sup></b>	<b>NAME OF THE TEACHING FACULTY</b> <b>RAJESH KUMAR DUTTA</b>
<b>SUBJECT:</b> MASS TRANSFER-II	<b>No of days per Week</b> <b>Allotted : 04</b>	<b>SEMESTER: SEPTEMBER TO DECEMBER</b> <b>No of Weeks:- 15</b>
<b>Week</b>	<b>Class/ Day</b>	<b>Theory/ Practical Topics</b>
1 <sup>ST</sup>	1 <sup>st</sup>	Define Humidification
	2 <sup>nd</sup>	Wet and dry bulb temperature
	3 <sup>rd</sup>	Principle of wet blub temperature theory
	4 <sup>th</sup>	Illustrate humidity chart
2 <sup>ND</sup>	1 <sup>st</sup>	Explain different methods of measurement of Humidity
	2 <sup>nd</sup>	Explain different methods of measurement of Humidity
	3 <sup>rd</sup>	Different methods of humidification
	4 <sup>th</sup>	Different methods of dehumidification
3 <sup>rd</sup>	1 <sup>st</sup>	The construction and working of natural and mechanical draft cooling tower
	2 <sup>nd</sup>	The construction and working of natural and mechanical draft cooling tower
	3 <sup>rd</sup>	The construction and working of natural and mechanical draft cooling tower
	4 <sup>th</sup>	The construction and working of natural and mechanical draft cooling tower
4 <sup>th</sup>	1 <sup>st</sup>	The construction and working of natural and mechanical draft cooling tower
	2 <sup>nd</sup>	Solve simple problems on Humidification
	3 <sup>rd</sup>	Define drying
	4 <sup>th</sup>	Equilibrium moisture curve
5 <sup>th</sup>	1 <sup>st</sup>	Equilibrium moisture curve
	2 <sup>nd</sup>	Moisture content-equilibrium, unbound, free moisture
	3 <sup>rd</sup>	Moisture content-equilibrium, unbound, free moisture
	4 <sup>th</sup>	The methods of removing liquids from solids
6 <sup>th</sup>	1 <sup>st</sup>	Illustrate constant rate and falling rate period ( simple problems)
	2 <sup>nd</sup>	Illustrate constant rate and falling rate period ( simple problems)
	3 <sup>rd</sup>	Illustrate constant rate and falling rate period ( simple problems)
	4 <sup>th</sup>	Construction and working principle of tray dryer
7 <sup>th</sup>	1 <sup>st</sup>	Construction and working principle of rotary dryer

	2 <sup>nd</sup>	Construction and working principle of spray dryer
	3 <sup>rd</sup>	Construction and working principle of tunnel dryer
	4 <sup>th</sup>	Construction and working principle of flash dryer
8 <sup>th</sup>	1 <sup>st</sup>	Construction and working principle of fluidized bed dryer
	2 <sup>nd</sup>	Dryer for heat sensitive materials
	3 <sup>rd</sup>	Visual representation of different types of dryers
	4 <sup>th</sup>	Visual representation of different types of dryers
9 <sup>th</sup>	1 <sup>st</sup>	Solve simple problems on Drying
	2 <sup>nd</sup>	Solve simple problems on Drying
	3 <sup>rd</sup>	Liquid extraction and leaching
	4 <sup>th</sup>	Different types of extraction
10 <sup>th</sup>	1 <sup>st</sup>	Principle of solid liquid extraction
	2 <sup>nd</sup>	Batch and continuous leaching
	3 <sup>rd</sup>	Batch and continuous leaching
	4 <sup>th</sup>	Solid-Liquid extraction equipment
11 <sup>th</sup>	1 <sup>st</sup>	Solid-Liquid extraction equipment
	2 <sup>nd</sup>	Solid-Liquid extraction equipment
	3 <sup>rd</sup>	Solid-Liquid extraction equipment
	4 <sup>th</sup>	Principle of liquid-liquid extraction
12 <sup>th</sup>	1 <sup>st</sup>	Parameter in choice of solvent for liquid-liquid extraction
	2 <sup>nd</sup>	Construction and working principle of liquid-liquid extraction equipment
	3 <sup>rd</sup>	Construction and working principle of liquid-liquid extraction equipment
	4 <sup>th</sup>	Construction and working principle of liquid-liquid extraction equipment
13 <sup>th</sup>	1 <sup>st</sup>	Solve simple problems on extraction
	2 <sup>nd</sup>	Solve simple problems on extraction
	3 <sup>rd</sup>	Solve simple problems on extraction
	4 <sup>th</sup>	Objective questions on Extraction
14 <sup>TH</sup>	1 <sup>st</sup>	Objective questions on Extraction
	2 <sup>nd</sup>	Define crystallization
	3 <sup>rd</sup>	Principle of crystallization
	4 <sup>th</sup>	Principle of crystallization
15 <sup>TH</sup>	1 <sup>st</sup>	Construction and working of different types of batch and continuous crystallizer
	2 <sup>nd</sup>	Construction and working of different types of batch and continuous crystallizer
	3 <sup>rd</sup>	Solve simple problems on Crystallization
	4 <sup>th</sup>	Objective questions on Crystallization