

<b>Discipline: Metallurgy</b>		<b>Semester:</b> <b>4<sup>th</sup></b> <b>semester</b>	<b>Name of the Teaching Faculty:</b> <b>Mr Subrat Kumar Behera, Lecturer</b>
<b>Subject: Extractive Metallurgy</b> <b>Sub code- TH 3</b>		<b>No of days /week class allotted:04</b>	<b>Semester from Date: 10-03-2022 to 10-06-2022</b>  <b>No. Of Weeks :15</b>
Month	week	Class Day	Theory topics
MAR	3rd	1 <sup>st</sup>	Explain drying Define and explain calcination
		2 <sup>nd</sup>	Explain different agglomeration process
		3rd	Explain different agglomeration process
		4th	Explain different agglomeration process
	4 <sup>th</sup>	1 <sup>st</sup>	Pyrometallurgical processes
		2 <sup>nd</sup>	Pyrometallurgical processes
		3rd	Pyrometallurgical processes
		4th	Explain roasting and different roasting methods
	5 <sup>th</sup>	1 <sup>st</sup>	Explain Ellingham diagram
		2 <sup>nd</sup>	Explain smelting and different smelting practices
		3rd	Explain the method of distillation and sublimation
APRIL	1 <sup>st</sup>	1 <sup>st</sup>	Explain hydrometallurgical process
	2nd	1 <sup>st</sup>	flow diagram of hydrometallurgical extraction
		2 <sup>nd</sup>	Explain leaching and different leaching methods
		3 <sup>rd</sup>	Electrometallurgical process
		4 <sup>th</sup>	Electrometallurgical process
	3rd	1 <sup>st</sup>	Electrometallurgical process
		2 <sup>nd</sup>	Define electrolysis, ionic conductivity, EMF series, faraday's law of electrolysis
		3 <sup>rd</sup>	Define electrolysis, ionic conductivity, EMF series, faraday's law of electrolysis
		4 <sup>th</sup>	Explain electro wining, electro refining
	4 <sup>th</sup>	1st	Explain refining, process
		2nd	Explain refining, process
		3rd	zone refining, fire refining
		4th	Explain principles of metallurgical thermodynamics
	5 <sup>th</sup>	1st	Revision
		2nd	Explain principles of metallurgical thermodynamics
		3rd	Explain principles of metallurgical thermodynamics
		4th	Explain principles of metallurgical thermodynamics
MAY	1st	1 <sup>st</sup>	Explain principles of metallurgical thermodynamics
	2nd	1st	Explain principles of metallurgical thermodynamics
		2 <sup>nd</sup>	Explain principles of metallurgical thermodynamics
		3rd	zeroth law of thermodynamics
		4th	1st, 2nd, and 3rd law of thermodynamics
	3rd	1 <sup>st</sup>	1st, 2nd, and 3rd law of thermodynamics
		2 <sup>nd</sup>	1st, 2nd, and 3rd law of thermodynamics
		3 <sup>rd</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical

			reaction
		4th	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
	4th	1 <sup>st</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		2 <sup>nd</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		3 <sup>rd</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		4 <sup>th</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
	5th	1 <sup>st</sup>	Revision
		2 <sup>nd</sup>	Revision
JUNE	1st	1 <sup>st</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		2 <sup>nd</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		3 <sup>rd</sup>	Explain on details the concept of Internal Energy, enthalpy, entropy and entropy change, Free energy of a chemical reaction
		4 <sup>th</sup>	Henry's law and Siver's Law
	2nd	1 <sup>st</sup>	Explain first order reaction and its significance
		2 <sup>nd</sup>	Revision
		3 <sup>rd</sup>	Revision
		4 <sup>th</sup>	Revision