Lesson Plan

Department of Metallurgical Engineering

UGIE Rourkela

UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA Session: 2022-23			
Discipline: **Metallurgical Engineering**	Semester: **3rd**	Name of the Teaching Faculty: **SUMEETA RANI SARAP**	
Subject: **Mineral processing(TH-03)**	No. of days/per week class allotted:**4**	Semester from Date: **15. 09. 2022** to Date: **21.01.2023** No. of weeks: 15	
Week	**Class No.**	**Module**	**Lecture Topics**
1	1	Chapter -1: Unit Operations : Oredressing	Introduction
	2		Various mineral resources of India
	3		Distinction between Mineral and Ore
	4		scope and objective of Ore dressing
2	5	Chapter -2: Crushing	crushing operations
	6		Various type of crushers
	7		-do-
	8		-do-
3	9		-do-
	10		Capacity and reduction ratio of crusher
	11		-do-
	12		Angle of nip of a crusher
4	13		Gyratory and roll crushers
	14		Principle of operation of gyratory and roll crushers
	15		-do-
	16	Chapter-3: Grinding	Types of grinding equipment
5	17		-do-
	18		Ball mill operations
	19		-do-
	20		-do-
6	21		Difference between open circuit and close circuit grinding
	22		-do-

	23	Chapter-4: Laboratory Sizing Technique	methods of size analysis
	24		types of standard screens
7	25		Rotap sieve shaker
	26		-do-
	27	Chapter-5: Industrial Screening	principle of screening
	28		Types of screening
8	29		Industrial screens
	30		-do-
	31		classifiers and their applications
	32		-do-
9	33	Chapter-6: Gravity Concentration	principles of flowing film concentration
	34		wilfley table
	35		-do-
	36		Jigging
10	37		stratification in jigs
	38		-do-
	39		Types of jigs
	40	Chapter-7: Heavy Media Separations :	principle of heavy media separations
11	41		different industrial process
	42		-do-
	43		Du - Pont process
	44		chance process
12	45	Chapter-8: Flotation	froth and skin flotation
	46		principle of froth flotation
	47		-do-
	48		practical utility
13	49		-do-
	50		-do-
	51	Chapter-9: Magnetic & Electrostatic Separator	Magnetic separator
	52		-do-
14	53		Electrostatic Separator
	54		-do-
	55		Applications of Magnetic & Electrostatic Separator
	56		-do-
15	57		Revision class
	58		Revision class
	59		Revision class
	60		Important question discussion