

SYNERGY POLYTECHNIC, BHUBANESWAR
A/P- Bhimpur, Phulnakhara Dist-Khorda Odisha-752101
Website: Synergypolytechnic.com

DEPARTMENT OF MINING ENGINEERING

(LESSON PLAN 6th SEM 2023-24)

Discipline: Mining Engg.	6th Semester	Name of the teaching faculty: Amaruneth Goud
Subject: Mineral Dressing	No. of Days/Week class allotted: 4	Semester from Date: 16.01.24 To Date: 30.04.24 No. of weeks: 15
Week	Class Day	Topic Cover
1st	1st	Describe the objective & scope of application of mineral dressing in surface & u/g mines.
	2nd	-do-
	3rd	Comprehend physical & chemical properties of ores, know the application in mineral dressing.
	4th	-do-
2nd	1st	-do-
	2nd	Explain the principle of Blake & dodge jaw crushers, gyratory & cone crushers, roll crusher.
	3rd	-do-
	4th	-do-
3rd	1st	Explain the principle of ball mill operation, open circuit grinding, close circuit grinding, dry & wet grinding
	2nd	-do-
	3rd	-do-
	4th	-do-
4th	1st	Explain the procedure for size analysis & use of standard screen as also screening techniques employed.
	2nd	-do-
	3rd	-do-
	4th	-do-
5th	1st	Explain the principle of lab.sizing.
	2nd	-do-
	3rd	Explain the principle of industrial screening, type of screening
	4th	-do-
6th	1st	-do-
	2nd	Explain the operation of classifier & their application.
	3rd	-do-
	4th	-do-
7th	1st	Explain the general principles of wilfly table & its operation.
	2nd	-do-

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	3rd	-do-
	4th	-do-
8th	1st	Develop elementary idea regarding the operation jigs.
	2nd	-do-
	3rd	-do-
	4th	-do-
9th	1st	Explain the fundamental principle of heavy media separation – Chance process.
	2nd	-do-
	3rd	-do-
	4th	-do-
10th	1st	Explain the principle of operation of industrial screening. Comprehend the principle of operation of classifiers & their application in the field
	2nd	-do-
	3rd	-do-
	4th	Explain the fundamental principle of heavy media separation – Chance process.
11th	1st	-do-
	2nd	-do-
	3rd	-do-
	4th	Comprehend elementary principle of froth floatation, practical utility of frother, collection, modifiers & depressants
12th	1st	-do-
	2nd	-do-
	3rd	Describe & illustrate floatation cell.
	4th	-do-
13th	1st	Explain the principle of operation of magnetic & electrostatic separators
	2nd	-do-
	3rd	-do-
	4th	-do-
14th	1st	Describe the application of separators in mineral dressing
	2nd	-do-
	3rd	-do-
	4th	Explain the principle & application of magnetic separators.
15th	1st	-do-
	2nd	-do-
	3rd	-do-

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Sign. of faculty

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HOD
Mining Engg.

Ang 11/01/24
Principal
Synergy polytechnic
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