

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline : MINING	Semester: 5th	Name of the Teaching faculty: Rahul Kumar Das
Subject: UNDERGROUND METAL MINING	No of Days/Week class allotted: 3	Semester from Date-01.07.2026 To Date-05.11.2026 No of Weeeks-15
Week	Class Days	Topic
1ST	1st	Briefing About the Syllabus
	2nd	1.0. Access to ore body
	3rd	Classify modes of entries – Adits, applicability of entries.
2ND	1st	Classify modes of entries – inclines, applicability of entries.
	2nd	Classify modes of entries – shafts, applicability of entries.
	3rd	2.0. Development in Underground Metal Mines.
3RD	1st	Explain formation of blocks of mineral deposit.
	2nd	Explain formation of blocks of mineral deposit.
	3rd	Explain level interval
4TH	1st	Describe Open raising method
	2nd	Describe Two compartment method
	3rd	Jora raise lift Method
5TH	1st	Jora raise lift Method
	2nd	Describe Long hole drilling method.
	3rd	Vertical Crater retreat (VCR) method
6TH	1st	CLASS TEST-1
	2nd	Describe Alimak raise climber
	3rd	Describe Raise borer.
7TH	1st	Development of Ore passes system.
	2nd	Development of Ore passes system.
	3rd	3.0. Give a Comparative Study between coal and Metal
8TH	1st	Comparative study between coal and metal Mining.
	2nd	INTERNAL 1
	3rd	4.0. Stoping Method

9TH	1 st	Monthly Test-01 Test results & Discussion
	2 nd	Classify stoping methods with application
	3 rd	Factors affecting methods of stopping.
10TH	1 st	Preparatory arrangement for stoping
	2 nd	Describe the Open stoping methods with layout.
	3 rd	Shrinkage stoping methods with layout.
11TH	1 st	Shrinkage stoping methods with layout.
	2 nd	Cut & fill stoping methods with layout.
	3 rd	Square set stoping methods with layout.
12TH	1 st	Explain Block caving methods with layout.
	2 nd	CLASS TEST-2
	3 rd	Explain Sub-level caving methods with layout.
13TH	1 st	Explain Top slicing methods with layout.
	2 nd	Describe conventional methods of drifting
	3 rd	Find out direction gradient of drift.
14TH	1 st	Describe drilling and blasting, support, transportation, in mechanized method of drifting. Drainage, ventilation in mechanized method of drifting
	2 nd	Explain causes and prevention of rock burst.
	3 rd	Describe use of jumbo drill with air leg
15TH	1 st	Describe Loading & Transportation System of L.H.D.
	2 nd	Describe Loading & Transportation System of L.P.D.T.
	3 rd	Loading & Transportation System of rocker shovel. spiral chutes and draw points, Scraper etc.
		INTERNAL 2

RK Das
25/06/26
Signature of Faculty

Lect. (Stage-II) Mining Engg