

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline : MINING	Semester: 5th	Name of the Teaching faculty: Rahul Kumar Das
Subject: MINE HAZARD AND SAFETY:TH2	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	1 st	Briefing About the Syllabus
	2 nd	Composition of atmospheric air. Different mine gases, their properties and physical effects.
	3 rd	Composition of atmospheric air. Different mine gases, their properties and physical effects.
2ND	1 st	Composition of atmospheric air. Different mine gases, their properties and physical effects.
	2 nd	Composition of atmospheric air. Different mine gases, their properties and physical effects.
	3 rd	State fire damps in mines. State black damp in mines. State stink damp in mines. State white damp in mines. State after damp in mines
3RD	1 st	Explain gas testing by flame safety lamp by accumulation test & percentage test.
	2 nd	Explain gas testing by flame safety lamp by accumulation test & percentage test.
	3 rd	Describe various parts of flame safety lamp, special features.
4TH	1 st	Describe various parts of flame safety lamp, special features.
	2 nd	State limitations of flame safety lamp.
	3 rd	Describe gradual exudation, blower & outbursts of firedamp in U/g workings.
5TH	1 st	Describe gradual exudation, blower & outbursts of firedamp in U/g workings.
	2 nd	Define spontaneous heating and its causes and effects. Define incubation period.
	3 rd	State preventive measures against spontaneous heating.
6TH	1 st	CLASS TEST-1
	2 nd	Explain CO/O ₂ ratio.
	3 rd	Describe coal dust explosion with their causes & prevention.
	1 st	Describe coal dust explosion with their causes & prevention.

7TH	2 nd	State inflammability of coal dust. State inflammability of fire damp.
	3 rd	State prevention, suppression & treatment of dust.
8TH	1 st	INTERNAL-1
	2 nd	State prevention, suppression & treatment of dust.
	3 rd	Describe sampling of dust in Mines.
9TH	1 st	Stone dust barrier.
	2 nd	State sources of water in mines & its danger. State precaution against inundation.
	3 rd	Describe Burnside safety boring apparatus.
10TH	1 st	State precaution while approaching water logged area.
	2 nd	Describe water dams- its construction & design. (Without derivation of formula)
	3 rd	Explain water danger plan.
11TH	1 st	Statutory provision for working near water body.
	2 nd	Define illumination and its units.
	3 rd	Standards of lighting at different parts of mine as per mine regulation.
12TH	1 st	Explain the effect of noise & vibration on miners & mine structures & other surface structure with respect to statutory provision.
	2 nd	CLASS TEST-2
	3 rd	Describe lighting arrangements, organization and supervision in mechanized method of drifting.
13TH	1 st	Describe lighting arrangements, organization and supervision in mechanized method of drifting.
	2 nd	Explain Proto-IV
	3 rd	Smoke helmet
14TH	1 st	Explain Proto-V
	2 nd	INTERNAL-2
	3 rd	VST
15TH	1 st	REVISION/DOUBT CLEARING CLASS.
	2 nd	REVISION/DOUBT CLEARING CLASS.
	3 rd	REVISION/DOUBT CLEARING CLASS.

RNDW
25/06/26

Signature of Faculty

Lech (Stage-II) Mining Engg.