

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

DISCIPLINE: MINING				SEMESTER: 4TH	NAME OF THE TEACHING FACULTY: RAJIV LOCHAN BAL	
SUBJECT: UNDERGROUND COAL MINING				NO OF DAYS/WEEK CLASS ALLOTTED: 4	SEMESTER FROM DATE: 14/2/23 TO DATE: 23/5/23 NO OF WEEKS: 15	
Month	Week	Nos. of Period Available	Class Day	CHAPTER	Topics	
FEB	1st	1	15.02.23	Introduction to UCM	Introduction to the subject & Syllabus, Define mine and different methods of mining.	
	2nd	4	20.02.23		Classify Underground Coal Mining Methods.	
			21.02.23	Describe the various application of Bord & Pillar method.		
			22.02.23		Describe various layouts of Bord & Pillar method.	
			25.02.23		Describe depillaring method with stowing & depillaring method with caving.	
	3rd	4	27.02.23		Bord and Pillar Method	State precautions against fire during and after depillaring.
			28.02.23	State precautions against water during and after depillaring.		
			02.03.23	State and describe various machineries used in working face.		
			03.03.23	Define contiguous seam.Describe working of contiguous seams.		
	MAR	4th	2	06.03.23	Bord and Pillar Method	Describe working of seams above goaved out area.
10.03.23				Define contigeous seam.Describe working of contiguous seams.		
5th		4	13.03.23	Bord and Pillar Method		Describe working of seams above goaved out area.
			14.03.23			State advantages and disadvantages of Bord & Pillar method.
			16.03.23		Longwall Method	Describe Longwall advancing methods.
			17.03.23			Describe Longwall retreating methods.
6th		4	20.03.23	Define single unit and double unit face.		
			21.03.23	Describe cyclic L/W layouts & non-cyclic L/W layouts.		
			23.03.23	Describe mechanized longwall working with armoured flexible conveyor, shield support and shearer loader		
			24.03.23			
7th		3	27.03.23	Thick seam Mining	Define Thick seams.Classify Thick seam Mining & Describe layouts of horizontal slicing.	
			28.03.23		Describe layouts of incline slicing.	
			31.03.23		Describe layouts blasting gallery.	

APR	8th	3	03.04.23	Horizon Mining	Describe layouts sublevel caving.
			04.04.23		MONTHLY CLASS TEST-1
			06.04.23		State conditions of Horizon Mining. State advantages, disadvantages of Horizon Mining.
	9th	3	10.04.23	Hydraulic and Pneumatic stowing	State limitations of Horizon Mining.
			11.04.23		Describe hydraulic stowing.
			13.04.23		Describe Pneumatic stowing. State properties of various types of roof & roof behavior.
	10th	4	17.04.23	Support and roof control in Mines	Describe Pressure arch theory in B&P.
			18.04.23		Describe Pressure arch theory in Longwall working.
			20.04.23		Describe testing of roof.
			21.04.23		Classify support system in Mines construction.
	11th	4	24.04.23		Describe principle of operation application of support system
			25.04.23		Describe load bearing capacity assessment of support system.
			27.04.23		Define angle of draw, State factors of subsidence.
			28.04.23		Define critical area of extraction.
MAY	12th	4	01.05.23	Subsidence due to Mining	Describe the factors affecting subsidence
			02.05.23		State & describe precautionary measures against damage due to subsidence.
					Define shaft pillar
			04.05.23		Describe vertical shaft & Describe inclined shaft. Determine shape and size of shaft.
	13th	4	08.05.23	Shaft Sinking	Determine location of shaft. Describe sinking through normal ground,
			09.05.23		MONTHLY CLASS TEST-2
			11.05.23		State shaft plumbing.
			12.05.23		Describe cementation method & freezing Method.
	14th	4	15.05.23		Explain mechanized shaft sinking. sinking upward.
			16.05.23		Widening and deepening of shafts.
			18.05.23		Previous year question paper discussion
	15th	5	22.05.23		Previous year question paper discussion
			23.05.23		Previous year question paper discussion

Prepared By-
Rajiv Lochan Bal
Sr. Lect.(Mining)
OSME,Keonjhar


HOD
Mining Engg.
OSME,Keonjhar


Principal
OSME,Keonjhar