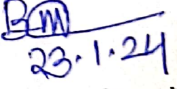


SCHOOL OF ENGINEERING		
DEPARTMENT OF MINING ENGINEERING		
LESSON PLAN		
Disciplin MINING	Sem:4TH	Name of the Teaching faculty: BINAY MOHAPATRA
Subject: UNDERGR OUND COAL MINING	No of Days/We ek class alloted:4	Semester from Date:16/01/24 To Date:26/04/24 No of weeks:15
Week	Class Day	Topics
1st ✓	1st	Define mine and different methods of mining
	2nd	Classify Underground Coal Mining Methods
	3rd	Describe the various application of Bord & Pillar method
	4th ✓	Describe various layouts of Bord & Pillar method
2nd ✓	1st	Describe depillaring method with stowing
	2nd	Describe depillaring method with caving
	3rd	State precautions against fire during and after depillaring
	4th ✓	State precautions against water during and after depillaring
3rd ✓	1st	State and describe various machineries used in working face
	2nd	State and describe various machineries used in working face
	3rd	State and describe various machineries used in working face
	4th ✓	Define contigeous seam. Describe working of contiguous seams
4th ✓	1st	Describe working of seams above goaved out area
	2nd	Describe working of seams below goaved out area
	3rd	CLASS TEST -I
	4th ✓	State advantages and disadvantages of Bord & Pillar method
5th ✓	1st	Describe Longwall advancing methods.
	2nd	Describe Longwall retreating methods.
	3rd	Define single unit and double unit face.
	4th ✓	Describe cyclic I/W layouts.
6th ✓	1st	Describe non-cyclic L/W layouts.
	2nd	Describe mechanized longwall working with armoured flexible conveyor, shield support and shearer loader
	3rd	Describe mechanized longwall working with armoured flexible conveyor
	4th ✓	Define Thick seams.
7th ✓	1st	Classify Thick seam Mining.
	2nd	Describe layouts of horizontal slicing.
	3rd	Describe layouts of incline slicing
	4th ✓	Describe layouts blasting gallery.
8th ✓	1st	Describe layouts sublevel caving.
	2nd	INTERNAL-1
	3rd	State conditions of Horizon Mining.
	4th ✓	State advantages, disadvantages of Horizon Mining
9th ✓	1st	State limitations of Horizon Mining.
	2nd	Describe the layout of Horizon Mining.
	3rd ✓	Describe hydraulic stowing

10th	4th	Describe Pneumatic stowing.
	1st	State properties of various types of roof & roof behavior
	2nd	Describe Pressure arch theory in B&P.
	3rd	Describe Pressure arch theory in Longwall working.
11th	4th	Describe testing of roof.
	1st	Classify support system in Mines construction.
	2nd	Classify support system in Mines construction.
	3rd	Describe principle of operation application of support system
12th	4th	Describe load bearing capacity assessment of support system.
	1st	CLASS TEST-II
	2nd	Define angle of draw, State factors of subsidence
	3rd	Define critical area of extraction.
13th	4th	Describe the factors affecting subsidence
	1st	State & describe precautionary measures against damage due to subsidence.
	2nd	State & describe precautionary measures against damage due to subsidence
	3rd	Define shaft pillar, Describe vertical shaft
14th	4th	Describe inclined shaft.
	1st	Determine shape and size of shaft
	2nd	Determine location of shaft.
	3rd	INTERNAL -II
15th	4th	Describe sinking through normal ground, State shaft plumbing.
	1st	Describe sinking through difficult ground.
	2nd	Describe cementation method.
	3rd	Describe freezing Method.
	4th	Explain mechanized shaft sinking, sinking upward, widening and deepening of shafts.

S1.NO	Title of the Book	Name of Authors
1	Coal Mining	S.Mathur
2	EMT VOL I,II	D.J.Deshmukh
3	Modern Coal Mining	SK.Das
4	Advanced Coal Mining	RT Deshmukh & B.Borovjev
5	UMS	
6	Coal Mine Ground Control	is s Peng
7	SME Mining Engg.Handbook	
8	Strata Contro	Jermic


 23.1.24
 Signature of Faculty