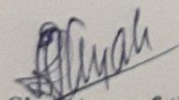
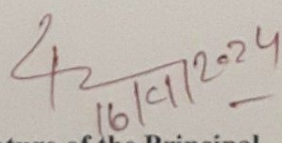


Academic Lesson Plan of Summer 2024

Department : MINING ENGG.	Semester : 4TH	Name of the Teaching Faculty : RUDRA MOHAN NAYAK
Subject : UNDERGROUND COAL MINING	No. of Days/per week class allotted :	Semester from : 16TH JANARY 2024
		No of Weeks : 15 Weeks
		Topic to be covered :
WEEK	DAY	TOPIC
1st Week	1st	Define Mine and Different Methods of Mine.
	2nd	Classify underground Coal Mine Methods.
	3rd	Describe the various application of Bord and pillar Method.
	4th	Describe various Layout of Bord and pillar Method.
2nd Week	1st	Describe Depillaring Method with Stowing.
	2nd	Describe Depillaring Method with Caving.
	3rd	State precaution against fire during and after Depillaring.
	4th	State precaution against water during and after Depillaring.
3rd Week	1st	State and Describe Various Mechneries used in working face.
	2nd	State and Describe Various Mechneries used in working face.
	3rd	State and Describe Various Mechneries used in working face.
	4th	Define contiguous seam. Describe working of contiguous seams.
4th Week	1st	Describe working of seams above goaved out area.
	2nd	Describe working of seams below goaved out area.
	3rd	Describe working of seams below goaved out area.
	4th	State Advantages and Disadvantages of Bord and pillar method.
5th Week	1st	Describe Long Wall advancing Methods.
	2nd	Describe Long Wall advancing Methods.
	3rd	Define Single Unit and Double Unit Face.
	4th	Describe Cyclic L/W Layout.
6th Week	1st	Describe Non-cyclic L/W Layout.
	2nd	Describe Mechanised Long Wall Working with Armoured Flexible Conveyor, Shield Support and Shearer Loader.
	3rd	Describe Mechanised Long Wall Working with Armoured Flexible Conveyor, Shield Support and Shearer Loader.
	4th	Define thick Seam.
7th Week	1st	Classified thick Seam Mining.
	2nd	Describe layouts of Horizontal Slicing.
	3rd	Describe layouts of Inclined Slicing.
	4th	Describe layouts of Blasting gallery
8th Week	1st	Describe layouts Sublable Caving.
	2nd	Describe layouts Sublable Caving.

WEEK	DAY	TOPIC
8th Week	3rd	State Conditions of Horizon Mining.
	4th	State Advantages and Disadvantages of Horizon Mining.
9th Week	1st	State Limitations of Horizon Mining.
	2nd	Describe the Layout of Horizon Mining
	3rd	Describe Hydraulic Stowing.
	4th	Describe Pneumatic Stowing.
10th Week	1st	State Properties of Various Types of Roof and Roof Behaviour.
	2nd	Describe Pressure arch Theory in B and P.
	3rd	Describe Pressure arch Theory in Long Wall Working.
	4th	Describe Testing of Roof.
11th Week	1st	Classify Support System in Mines Construction.
	2nd	Classify Support System in Mines Construction.
	3rd	Describe principle of Operation, Application of Support System.
	4th	Describe load gear Capacity Assessment of Support System.
12th Week	1st	Define Angle of Draw, State factors of Subsidence.
	2nd	Define Angle of Draw, State factors of Subsidence.
	3rd	Define Critical Area of Extraction.
	4th	Describe the Factors Affecting Subsidence .
13th Week	1st	State and Describe Precautionary Measures against damage due to Subsidence.
	2nd	State and Describe Precautionary Measures against damage due to Subsidence.
	3rd	Define Shaftpillar, Describe Vertical Shaft.
	4th	Describe Inclined Shaft.
14th Week	1st	Determine Shape and Size of Shaft.
	2nd	Determine location of Shaft.
	3rd	Describe Sinking through Normal Ground State Shaft Plumbing.
	4th	Describe Sinking through Difficult Ground.
15th Week	1st	Describe Sementation Method. Describe Freezing method.
	2nd	Explain mechanised Shaft Sinking, Sinking Upward, Widening and Deepening of Shafts.
	3rd	Explain Sinking Upward. Shaft Widening, Shaft Deepening.
	4th	INTERNAL.


Signature of the faculty


Signature of the Principal