

SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Discipline: MNE	Semester: 4th sem	Name of the Teaching Faculty: Srikant Mallick
Subject: UG COAL MINING	No of Days/per week class allotted:	Semester from Date: 16-01-24 to Date: 26-04-24 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Introduction to method of UG coal mine
	2nd	definition, different method etc
	3rd	Classify UG coal mining methods
	4th	-do-
	5th	
2nd	1st	Board & Pillar Method of extraction
	2nd	explanation, basic concept, principle etc
	3rd	Layout of Board & pillar
	4th	-do-
	5th	
3rd	1st	Describe depillaring method with stowing
	2nd	and caving method
	3rd	-do-
	4th	Describe fire and water during the
	5th	
4th	1st	and after depillaring method
	2nd	State & describe various type of
	3rd	machinery used in UG coal faces
	4th	Define contiguous seam
	5th	
5th	1st	-do-
	2nd	Describe working of contiguous seam
	3rd	working of seam above and below goaved
	4th	out area.
	5th	

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U/G Coal Mining		No of Weeks:
Week	Class Day	Theory/Practical Topics
6th 1st	1st	Advantages & disadvantages of Board & pillar method.
	2nd	
	3rd	Longwall Method of working :-
	4th	Advancing & Retreating method
	5th	
7th 2nd	1st	Single unit & Double unit face
	2nd	-do-
	3rd	Describe cyclic & non cyclic LW layout
	4th	Describe mechanized longwall workings
	5th	
8th 3rd	1st	-do-
	2nd	Armoured flexible conveyor
	3rd	Shield support
	4th	Shearer loader
	5th	
9th 4th	1st	Thick Seam Mining Method :-
	2nd	Defination, explanation
	3rd	Classification of thick seam
	4th	Describe layout of various thick seam
	5th	
10th 5th	1st	method, :- Horizontal slicing
	2nd	Incline slicing
	3rd	Blasting Gallery
	4th	Sublevel
	5th	

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Discipline: MNE	Semester: 4th	Name of the Teaching Faculty:
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Week	Class Day	Theory/Practical Topics
11th 1st	1st	Horizon Mining Method:-
	2nd	State condition, advantages, disadvantages
	3rd	Limitation of Horizon mining,
	4th	Layout of Horizon method of working
	5th	
12th 2nd	1st	Hydraulic & Pneumatic stowing
	2nd	-do-
	3rd	-do-
	4th	Support & Roof control in mines :-
	5th	
13th 3rd	1st	State properties of various type of roof
	2nd	and roof behavior.
	3rd	Pressure arch theory in B&P and L/W
	4th	-do-
	5th	
14th 4th	1st	Describe testing of roof
	2nd	-do-
	3rd	Support system in mine construction
	4th	principle, of operation etc
	5th	
15th 5th	1st	Subsidence due to mining method :-
	2nd	Angle of draw, factors affecting subsidence
	3rd	critical area of extraction, precaution,
	4th	measure against damage due to subsidence
	5th	

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Subject:	No of Days/per week class allotted: 4	Semester from Date: 16-01-24 to Date: 26-04-24
Week	Class Day	Theory/Practical Topics
16 th 1st	1st	Shaft Sinking :-
	2nd	Describe vertical shaft and inclined shaft
	3rd	location, size, shape etc
	4th	-do-
	5th	
17 th 2nd	1st	Describe sinking through difficult ground,
	2nd	cementation, freezing, sinking upward etc
	3rd	-do-
	4th	-do-
	5th	
3rd	1st	
	2nd	
	3rd	
	4th	
	5th	
4th	1st	
	2nd	
	3rd	
	4th	
	5th	
5th	1st	
	2nd	
	3rd	
	4th	
	5th	

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