GOVERNMENT POLYTECHNIC JAJPUR

A/ P: Ragadi, Block: Korei, Dist.: Jajpur, Odisha-755019

Website: https://www.gpjajpur.org E-mail: principalgpjajpur@yahoo.co.in Contact: 9437155107

		DEPARTMENT OF MINING ENGINEERING
		<u>LESSON PLAN</u>
Discipline: MINING	Semester: 5th	Name of the Teaching faculty: SOUMYA RANJAN SAMAL
Subject:	No of	Semester from Date:12/09/2025 To Date: 15/11/2025
MINE	Days/Week	No of weeks: 15
MACHINERY	class alloted:	
-1	4	
Week	Class Day	Topics
	1st	State the types of wire ropes used in Mines.
1	2nd	State the types of wire ropes used in Mines.
1st	3rd	Describe constructional features of wire ropes.
	4th	Describe constructional features of wire ropes.
	1st	Explain lay of wire ropes.
2nd	2nd	Explain lay of wire ropes.
ZIIU	3rd	Define factor of safety to wire ropes nominal.
	4th	Define actual factor of safety of wire ropes.
	1st	State factors influencing the F.O.S.
3rd	2nd	State factors influencing the F.O.S.
Siu	3rd	State efficiency of rope construction, space factor & cross sectional area rope.
	4th	State efficiency of rope construction, space factor & cross sectional area rope.
	1st	State factors affecting deterioration of ropes.
4th	2nd	State factors affecting deterioration of ropes.
401	3rd	State factors affecting deterioration of ropes.
	4th	Describe care & maintenance of ropes.
k	1st	State & describe testing & examination of wire ropes.
5th	2nd	Give the procedure of splicing of wire rope
Sui	3rd	Give the procedure of splicing of wire rope
	4th	Describe rope capel for haulage winding & recapping.
	1st	Describe rope capel for haulage winding & recapping.
6th	2nd	Describe rope capel for haulage winding & recapping.
DLII	3rd	Describe rope capel for haulage winding & recapping.
	4th	Describe rope capel for haulage winding & recapping.
7th	1st	Transportation in mines by rope haulage.
	2nd	State type of rope haulage
	3rd	Describe various types of rope haulage with simple sketches.
	4th	Describe various types of rope haulage with simple sketches.
8th	1st	State & describe different type of safety devices on rope haulage roadways.
	2nd	State & describe different type of safety devices on rope haulage roadways.

State function of headgear.

Describe constructional features of headgear pulley.

8th

3rd

4th

2nd Describe detaching hooks & its function, safety catch at headgear & keps.	9th -		Define angle of fleet.
State types of guide. 1st 1state types of guide. 1st 1state types of guide. 1st 1state 2state			
1st State & describe rigid guide & flexible guide 2nd State & describe guide rope suspension & tensioning arrangement. 3rd State different profiles of winding Drum. 4th Describe different types of winding brake. 2nd State & describe principle & constructional features of ground-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winder. State & describe principle & constructional features of tower-mounted koepe winding. State & Compare skip winding cage winding. State factors affecting pit top & pit bottom layouts. State factors affecting pit top & pit bottom layouts. State factors affecting pit top & pit bottom layouts. State factors affecting pit top & pit bottom layouts. State factors affecting pit top & pit bottom car/tub circuit layouts. State factors affecting pit top & pit top toottom car/tub circuit layouts. State factors affecting pit top & pit top toottom car/tub circuit layouts. State factors affecting pit top & pit top toottom car/tub circuit layouts. State factors affecting pit top & pit top toottom car/tub circuit layouts. State factors affecting pit top & pit top & pit bottom car/tub circuit layouts. State factors affecting pit top & pit top & pit bottom car/tub circuit layouts. State factors affecting pit top & pit top & pit bottom car/tub circuit layouts. State factors affecting pit top & pit top & pit bottom car/tub circuit layouts. State factors affecting pit top & pit top & pit bottom ca		0.0	
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3rd State different types of winding Drum.	10th -		
3rd State different profiles of winding Drum.			
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