

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline: MINING	Semester:5th	Name of the Teaching faculty: Rajiv Lochan Bal	
Subject: MINE MACHINERY - I	No of Days/Week class alloted: 4	Semester from Date: 1/10/2021 No of weeks: 16	To Date: 8/1/2022
Week	Class Day	Topics	
1st	1st	State the types of wire ropes used in Mines.	
	2nd	State the types of wire ropes used in Mines.	
	3rd	Describe constructional features of wire ropes.	
	4th	Describe constructional features of wire ropes.	
2nd	1st	Explain lay of wire ropes.	
	2nd	Explain lay of wire ropes.	
	3rd	Define factor of safety to wire ropes nominal.	
	4th	Define actual factor of safety of wire ropes.	
3rd	1st	State factors influencing the F.O.S.	
	2nd	State factors influencing the F.O.S.	
	3rd	State efficiency of rope construction, space factor & cross sectional area rope.	
	4th	State efficiency of rope construction, space factor & cross sectional area rope.	
4th	1st	State factors affecting deterioration of ropes.	
	2nd	State factors affecting deterioration of ropes.	
	3rd	Describe care & maintenance of ropes.	
	4th	Describe care & maintenance of ropes.	
5th	1st	State & describe testing & examination of wire ropes.	
	2nd	Give the procedure of splicing of wire rope	
	3rd	Give the procedure of splicing of wire rope	
	4th	Describe rope capel for haulage winding & recapping.	
6th	1st	Describe rope capel for haulage winding & recapping.	
	2nd	Describe rope capel for haulage winding & recapping.	
	3rd	Describe rope capel for haulage winding & recapping.	
	4th	CLASS TEST 1, Previous year questions, quiz test	
7th	1st	Transportation in mines by rope haulage.	
	2nd	Transportation in mines by rope haulage.	
	3rd	State type of rope haulage	
	4th	Describe various types of rope haulage with simple sketches.	
8th	1st	Describe various types of rope haulage with simple sketches.	
	2nd	Describe various types of rope haulage with simple sketches.	
	3rd	State & describe different type of safety devices on rope haulage roadways.	
	4th	State & describe different type of safety devices on rope haulage roadways.	

9th	1st	State & describe different types of clips & couplings.
	2nd	State function of headgear.
	3rd	Describe constructional features of headgear pulley.
	4th	Define angle of fleet.
10th	1st	Describe cage, cage suspension gear.
	2nd	Describe detaching hooks & its function, safety catch at headgear & keps.
	3rd	Describe detaching hooks & its function, safety catch at headgear & keps.
	4th	State types of guide.
11th	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.
12th	1st	Describe various types of safety devices on winding system.
	2nd	Describe various types of safety devices on winding system.
	3rd	State & describe principle & constructional features of ground-mounted koepe winder.
	4th	CLASS TEST 2, Previous year questions, quiz
13th	1st	State & describe principle & constructional features of tower-mounted koepe winder.
	2nd	State advantages & disadvantages of koepe winding.
	3rd	Describe multirope system of koepe winding.
	4th	Describe multirope system of koepe winding.
14th	1st	Describe constructional features bottom discharge skip, Top discharge skip
	2nd	Compare skip winding cage winding.
	3rd	State factors affecting pit top & pit bottom layouts.
	4th	State factors affecting pit top & pit bottom layouts.
15th	1st	State factors affecting pit top & pit bottom layouts.
	2nd	Describe different types of pit top & pit bottom car/tub circuit layouts.
	3rd	Describe different types of pit top & pit bottom car/tub circuit layouts.
	4th	Describe different types of pit top & pit bottom car/tub circuit layouts.
16th	1st	Describe different types of pit top & pit bottom car/tub circuit layouts.
	2nd	Describe different types of pit top & pit bottom car/tub circuit layouts.
	3rd	previous year question discussion
	4th	Previous year questions, quiz

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