

**GOVT. POLYTECHNIC DEOGARH**  
**DEPT. OF MINING ENGG.**  
**LESSON PLAN**

Discipline : MINING	Semester: 5th	Name of the Teaching faculty: Rahul Kumar Das
Subject: MINE MACHINERY 1	No of Days/Week class allotted: 4	Semester from Date-15.09.2022 To Date-21.01.2023  No of Weeks-15
Week	Class Days	Topic
1ST	1 <sup>st</sup>	State the types of wire ropes used in Mines
	2 <sup>nd</sup>	State the types of wire ropes used in Mines
	3 <sup>rd</sup>	Describe constructional features of wire ropes & lay of wire ropes.
	4 <sup>th</sup>	Describe constructional features of wire ropes & lay of wire ropes.
2ND	1 <sup>st</sup>	Define factor of safety to wire ropes nominal & actual factor of safety of wire ropes.
	2 <sup>nd</sup>	Define factor of safety to wire ropes nominal & actual factor of safety of wire ropes.
	3 <sup>rd</sup>	State factors influencing the F.O.S.
	4 <sup>th</sup>	State factors influencing the F.O.S.
3RD	1 <sup>st</sup>	State efficiency of rope construction, space factor & cross sectional area rope.
	2 <sup>nd</sup>	State efficiency of rope construction, space factor & cross sectional area rope.
	3 <sup>rd</sup>	State factors affecting deterioration of ropes.
	4 <sup>th</sup>	State factors affecting deterioration of ropes.
4TH	1 <sup>st</sup>	Describe care & maintenance of ropes.
	2 <sup>nd</sup>	State & describe testing & examination of wire ropes.
	3 <sup>rd</sup>	Give the procedure of splicing of wire rope.
	4 <sup>th</sup>	Give the procedure of splicing of wire rope.
5TH	1 <sup>st</sup>	Describe rope Capel for haulage winding & recapping.
	2 <sup>nd</sup>	Describe rope Capel for haulage winding & recapping.
	3 <sup>rd</sup>	Describe rope Capel for haulage winding & recapping.
	4 <sup>th</sup>	Describe rope Capel for haulage winding & recapping.
6TH	1 <sup>st</sup>	CLASS TEST-1
	2 <sup>nd</sup>	Transportation in mines by rope haulage.
	3 <sup>rd</sup>	State type of rope haulage
	4 <sup>th</sup>	Describe various types of rope haulage with simple sketches.
7TH	1 <sup>st</sup>	Describe various types of rope haulage with simple sketches.
	2 <sup>nd</sup>	State & describe different type of safety devices on rope haulage roadways.
	3 <sup>rd</sup>	State & describe different types of clips & couplings.
	4 <sup>th</sup>	State & describe different types of clips & couplings.
8TH	1 <sup>st</sup>	INTERNAL-1
	2 <sup>nd</sup>	State function of headgear
	3 <sup>rd</sup>	Describe constructional features of headgear pulley.
	4 <sup>th</sup>	Describe constructional features of headgear pulley.
9TH	1 <sup>st</sup>	Define angle of fleet.
	2 <sup>nd</sup>	Describe cage, cage suspension gear, detaching hooks & its function, safety catch at headgear & keps
	3 <sup>rd</sup>	Describe cage, cage suspension gear, detaching hooks & its function, safety catch at headgear & keps
	4 <sup>th</sup>	State types of guide.

10TH	1 <sup>st</sup>	State & describe rigid guide, flexible shoes, guide rope suspension & tensioning arrangement.
	2 <sup>nd</sup>	State & describe rigid guide, flexible shoes, guide rope suspension & tensioning arrangement.
	3 <sup>rd</sup>	State different profiles of winding Drum.
	4 <sup>th</sup>	Describe different types of winding brake.
11TH	Group 1(3P)	Describe various types of safety devices on winding system.
	Group 2(3P)	State & describe principle & constructional features of ground-mounted & tower-mounted koepe winder
	Group 1(3P)	State & describe principle & constructional features of ground-mounted & tower-mounted koepe winder
	Group 2(3P)	State advantages & disadvantages of koepe winding.
12TH	Group 1(3P)	Describe multirope system of koepe winding.
	Group 2(3P)	CLASS TEST-2
	Group 1(3P)	Describe constructional features bottom discharge skip, Top discharge skip.
	Group 2(3P)	Describe constructional features bottom discharge skip, Top discharge skip.
13TH	Group 1(3P)	Compare skip winding cage winding.
	Group 2(3P)	State factors affecting pit top & pit bottom layouts.
	Group 1(3P)	State factors affecting pit top & pit bottom layouts.
	Group 2(3P)	State factors affecting pit top & pit bottom layouts.
14TH	Group 1(3P)	Describe different types of pit top & pit bottom car/tub circuit layouts.
	Group 2(3P)	Describe different types of pit top & pit bottom car/tub circuit layouts.
	Group 1(3P)	Describe different types of pit top & pit bottom car/tub circuit layouts.
	Group 2(3P)	INTERNAL-2
15TH	Group 1(3P)	REVISION/DOUBT CLEARING CLASS.
	Group 2(3P)	REVISION/DOUBT CLEARING CLASS.
	Group 1(3P)	REVISION/DOUBT CLEARING CLASS.
	Group 2(3P)	REVISION/DOUBT CLEARING CLASS.

*Rohit Kumar Das*  
 15/9/22  
**Signature of Faculty**