

Dicipline:	MINING	Semester: 5 th	Name of the Teaching Faculty: Dharmasish Behera	
Subject:	MINE MACHINERY	No of Days/Week Class Allotted: _____	Semester From date: 15/09/22 To date 22/12/22	No. of Weeks: 14

WEEK	Class Day	Theory Topics
From 15/09/22 to 18/09/22	1st	Wire ropes, types of wire ropes used in mines.
	2nd	Constructional features of wire ropes & lay of wire ropes.
	3rd	Nominal factor of safety of wire ropes.
	4th	Actual factor of safety of wire ropes
	5th	
From 19/09/22 to 24/09/22	1st	Factors influencing the F.O.S
	2nd	Efficiency of rope construction
	3rd	Description of space factor.
	4th	Description of cross sectional area rope.
	5th	
From 26/09/22 to 01/10/22	1st	Factors affecting deterioration of ropes
	2nd	Description care & maintenance of ropes.
	3rd	Testing & examination of wire ropes.
	4th	procedure of splicing of wire rope.
	5th	

WEEK	Class Day	Theory Topics
From 16/10/22 to 15/10/22	1st	Description of rope capel for haulage winding & recapping.
	2nd	Rope Haulage (Introduction)
	3rd	Types of Rope Haulage
	4th	Transportation in mines by rope Haulage
	5th	
From 17/10/22 to 22/10/22	1st	Direct rope Haulage, Single drum direct rope haulage, Double drum direct rope haulage.
	2nd	main & tail rope haulage, Endless rope haulage
	3rd	Under rope endless rope haulage, over-rope endless rope haulage
	4th	Gravity rope haulage
	5th	
From 24/10/22 to 29/10/22	1st	Safety devices on rope haulage roadways
	2nd	Stop Block or Buttern, Back stay or Drag
	3rd	Monkey catch or Back catch, run away Switch.
	4th	Drop wire work, Jazz road, manhole, flyb, refac-ler, wheel, signals & telecommunication.
	5th	

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WEEK	Class Day	Theory Topics		
From 01/11/22 to 05/11/22	1st	Different types of claps & couplings.		
	2nd	Jaw couplings, sleeve coupling, T-joint coupling.		
	3rd	Disc coupling, Diaphragm coupling, gear couplings, grid coupling, roller chain coupling.		
	4th	Introduction to Headgear		
	5th			
From 07/11/22 to 12/11/22	1st	Steel Headgear, concrete Headgear		
	2nd	Drum hoist & Friction hoist (Koepe), Height of Headgear.		
	3rd	Design of Headgear, constructional features of Headgear pulley.		
	4th	Angle Sleet (Description, Derivation)		
	5th			
From 14/11/22 to 19/11/22	1st	Cage and shaft buttings (Introduction)		
	2nd	Cage suspension gear, detaching hooks & its function.		
	3rd	Safety catch at headgear & keps.		
	4th	Describe types of guide		
	5th			

WEEK	Class Day	Theory Topics
From 21/11/22 to 26/11/22	1st	Rigid guide, Flexible shoes
	2nd	guide rope suspension & tensioning arrangement.
	3rd	Drum winder definitions, How it works
	4th	Types of Drum winder (Cylindrical drum)
	5th	
From 28/11/22 to 03/12/22	1st	Conical drum, Cylindrical conical drum, Bi-cylindrical conical drum.
	2nd	Types of winding brake, mechanical Brake.
	3rd	Centre suspended caliper post Brake
	4th	Types of safety devices on winding system.
	5th	
From 05/12/22 to 10/12/22	1st	Friction winding definition, principle
	2nd	Constructional features of ground-mounted & tower-mounted rope winder.
	3rd	Advantages & disadvantages of rope winder.
	4th	multi-rope system of rope winding
	5th	

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WEEK	Class Day	Theory Topics
FROM 12/12/22 TO 17/12/22	1st	Introduction to skip winding
	2nd	Constructional features bottom discharge skip
	3rd	Constructional features TOP discharge skip
	4th	Compare skip winding cage winding
	5th	
FROM 19/12/22 TO 29/12/22	1st	
	2nd	
	3rd	
	4th	
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	