

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY, BHUBANESWAR

Discipline: Mining Engg.	Semester: 5TH	Name of the Teaching Faculty: <u>Chaitanilish Behera</u>	
Subject: MINE MACHINERY - 1	No of Days/Week Class Allotted: _____	Semester From date: <u>1/10/21</u> To date <u>18/1/22</u>	No. of Weeks: _____

WEEK	Class Day	Theory Topics
1st	1st	Introduction about wire ropes. State types of wire ropes used in mines.
	2nd	Description of Constructional features of wire ropes & lay of wires.
	3rd	— do —
	4th	Definition of Factor of safety to wire ropes, nominal & actual factors of safety of wire ropes.
	5th	
2nd	1st	State efficiency of rope construction, space factor & cross-sectional area of rope.
	2nd	Some problems with some discussion related to space factor & C.S. area of rope.
	3rd	State factors affecting deterioration of ropes.
	4th	Description of care and maintenance of ropes.
	5th	
3rd	1st	Procedure of splicing of wire rope.
	2nd	Description of rope capel for haulage winding and re-capping with figures.
	3rd	Introduction about Rope haulage & Transportation in mines by rope haulage.
	4th	Various types of rope haulage with specification & use.
	5th	

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY, BHUBANESWAR

Line: Mining Engg.	Semester: 5 TH	Name of the Teaching Faculty	
Subject: MINE MACHINERY	No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____	No. of Weeks:

WEEK	Class Day	Theory Topics
4 th	1st	— do —
	2nd	— do —
	3rd	— do —
	4th	— do —
	5th	
5 th	1st	"
	2nd	"
	3rd	state and describe different types of safety devices on rope haulage roadway
	4th	"
	5th	state and describe different types of
6 th	1st	state and describe different types of couplings.
	2nd	Introduction of headgear with description by figure
	3rd	state various functions of headgear
	4th	Description of Constructional features of headgear pulley with figure.
	5th	

7 th	1st	Definition of angle of fleet and its effects. (some discussion for mines)
	2nd	Description of cage, cage suspension gear with sketches.
	3rd	Description of detaching hooks and its functions with sketches.
	4th	Description of safety catch at headgear & keps with sketches.
	5th	State & describe guide mechanism at right guide with figure.
8 th	1st	State and describe flexible guide (flexible shoe) & guide rope suspension with diagram.
	2nd	State & describe various tensioning arrangement with diagram.
	3rd	Description of different profiles of winding Drums with figures.
	4th	"
	5th	Description of different types of winding with figures.
9 th	1st	Description of various types of safety devices on winding system with figures.
	2nd	"
	3rd	"
	4th	Introduction & working of Friction winding with figures.
	5th	State and describe principle & non-functional features of friction winding.

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY, BHUBANESWAR

Discipline:	Mining Engg.	Semester:	5TH	Name of the Teaching Faculty	
Subject:	MINE MACHINERY-1	No of Days/Week Class Allotted:		Semester From date: _____ To date _____	No. of Weeks:
WEEK	Class Day	Theory Topics			
10th	1st	State advantages and disadvantages of koepe winding			
	2nd	Describe multirope system of koepe winding.			
	3rd	-do-			
	4th	Introduction about skip winding and its purpose.			
	5th				
11	1st	Constructional features of Top discharge ^{skip} with diagram			
	2nd	-do- Compare skip winding, cage winding			
	3rd	Compare skip winding, cage winding			
	4th	"			
	5th	-			
12th	1st	State factors affecting pit-bottom lay-outs.			
	2nd	Describe different types of pit-top car/tub circuit lay-outs.			
	3rd	"			
	4th	Describe different types of pit-bottom car-tub circuit layouts			
	5th				

13th.	1st	Factors Influencing the FOS
	2nd	State and describe testing and examination of wire reel.
	3rd	Description of various types of reel halloge with simple sketch.
	4th	
	5th	
14th	1st	Revise class
	2nd	Revise class
	3rd	Revise class.
	4th	Revise class.
	5th	
15th.	1st	Doubt clear class.
	2nd	
	3rd	
	4th	
	5th	