

Dicipline:	Mining Engg	Semester: 4 th	Name of the Teaching Faculty: Subasish Mohanty	
Subject:	Electrical Equipments in Mines.	No of Days/Week Class Allotted: _____	Semester From date: 10/09/2022 To date: 28/06/2022	No. of Weeks:
WEEK	Class Day	Theory Topics		
1 st	1st	Various electrical cables used in mines.		
	2nd	Classification of Cables used in Mines.		
	3rd	Constructional Features of high tension and low tension cables. Armored & trailing cables.		
	4th	State various size of cables & their use.		
	5th			
2 nd	1st	State procedure of cable laying at surface.		
	2nd	Describe Cable Joint box mining type.		
	3rd	Fuse materials, Reclosable fuse, HRC fuse.		
	4th	Describe & Explain Air Circuit Breaker..		
	5th			
3 rd	1st	Describe minimum oil circuit Breaker (MOCB)		
	2nd	Explain Bulk oil circuit Breaker (BOCB).		
	3rd	Describe Air Blast circuit Breaker.		
	4th	Describe SF6 circuit Breaker.		
	5th			

WEEK	Class Day	Theory Topics
4th	1st	Explain essential qualities of a good protective system.
	2nd	State & describe various types of relays.
	3rd	Describe protection of transformer by differential relays.
	4th	Describe general principle of working-basis remote control circuit.
	5th	
5th	1st	Various protective devices of Gate-End Box.
	2nd	Describe function & operation of CBLL Panel.
	3rd	Earthing system in mines, voltage limit.
	4th	Fundamental of transformer.
	5th	
6th	1st	Explain starting & running characteristics of AC ^{or DC} motor.
	2nd	State selection of motors for mining use.
	3rd	Electric braking used in mines.
	4th	Describe & explain regenerative braking.
	5th	

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WEEK	Class Day	Theory Topics
7 th	1st	Describe & Explain magnetic locking.
	2nd	Flame proof & intrinsically safe apparatus.
	3rd	Define Flame proof apparatus & intrinsically safe apparatus.
	4th	Describe Safety Features of Flame proof apparatus.
	5th	
8 th	1st	Describe intrinsically safe apparatus.
	2nd	Underground signaling arrangement.
	3rd	Describe Communication system in U/g mines.
	4th	Define Point to Point Communication.
	5th	
9 th	1st	Intercom system / Telephone.
	2nd	Cordless system in mines.
	3rd	Sensors & their applications.
	4th	Battery locomotive system.
	5th	

WEEK	Class Day	Theory Topics
10th	1st	Automation with Thyrosted Control System.
	2nd	Electrical LHD, Electrical Equipments.
	3rd	Electrical mine Phone Connectivity.
	4th	
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	