

Discipline: <b>MINING</b>	Semester: <b>3rd</b>	Name of the Teaching Faculty <b>Dharmasish Behera</b>	
Subject: <b>Surface mining Technology</b>	No of Days/Week Class Allotted: _____	Semester From date: <b>01, 10, 21</b> To date: <b>18, 01, 22</b>	No. of Weeks: _____

WEEK	Class Day	Theory Topics
1st	1st	Introduction of mining and open cast mining and their factors affecting open cast.
	2nd	Define stripping ratio. and find stripping ratio and determine variable limit.
	3rd	state favorable conditions for maximised open cast mine and limitations of large open pits.
	4th	Define box cut and determine the location the box cut.
	5th	
2nd	1st	Determine the bench of mines and its height, width & slope of the bench.
	2nd	Introduction of cohesion force and Adhesion force and length of bench.
	3rd	Define Gastation period and friction and reason and their length of bench overbudden and ore.
	4th	Define explosive and state of constituents of explosive, properties and characteristics
	5th	
3rd	1st	Classify explosive and explosive content and uses of explosive in mines.
	2nd	explain PMS and SMS and determined Permitted explosive and classify Permitted explosive.
	3rd	explain the high and low explosive and it's difference and define coal dust test.
	4th	explain sheathed, equivalent sheathed and Ultra safe explosive and Gas test in mines.
	5th	

WEEK

WEEK	Class Day	Theory Topics
4 <sup>th</sup>	1st	state properties of Permitted explosive, and define stemming rod, crack detector knife
	2nd	state composition & constructional features of safety fuse, detonating fuse
	3rd	Define detonating relay, igniter cord, momey and raydet. define crumper.
	4th	Introduction of detonator and types of detonator and its uses in mines.
	5th	
5 <sup>th</sup>	1st	state advantages of delay detonator and and define delay detonator.
	2nd	state exploder and types of exploder and its construction and safety features, circuit tester
	3rd	Introduction of slope stability and their factors affecting in slope stability.
	4th	explain types of slope stability and how to calculate the slope stability.
	5th	
6 <sup>th</sup>	1st	causes and prevention of slope stability
	2nd	Define Drilling and explain how many types of drilling and drilling propose uses
	3rd	explain different principles and method of excavatory drilling in surface mining.
	4th	state different types of drill used in open cast mining and state D.T.H.
	5th	

WEEK	Class Day	Theory Topics
7 <sup>th</sup>	1st	Describe simple constructional features of churn drill, drill masters, wagon drill etc.
	2nd	Describe different types of drill bit and constructional features of Jack hammer.
	3rd	Define blasting in mines and types of blasting.
	4th	Describe preparation of charge
	5th	
8 <sup>th</sup>	1st	State procedure of firing shots and direct and inverse initiation
	2nd	Define stemming materials, water ampoules, cushion firing
	3rd	Define blasting efficiency
	4th	State and describe plaster shooting and POP shooting, toe blasting
	5th	
9 <sup>th</sup>	1st	Define primary blasting and secondary blasting and its describe spacing factor
	2nd	Define blasting operation with accessories
	3rd	Introduction of control blasting and types of control blasting.
	4th	State describe pre-splitting, cushion blasting, muffle blasting
	5th	

WEEK	Class Day	Theory Topics
10 <sup>th</sup>	1st	Describe the coyote hole blasting, chambered hole blasting, directional blasting
	2nd	Introduction of techniques as per as statutory provision and describe EBS
	3rd	Define magazines and its chamber and how to safety make magazine house in a reason in mines. Describe and layout of different types of magazine. State their safety features
	4th	
	5th	
11 <sup>th</sup>	1st	Revise class
	2nd	Revise class
	3rd	Revise class
	4th	Revise class
	5th	
12 <sup>th</sup>	1st	Revise class
	2nd	Revise class
	3rd	Revise class
	4th	Revise class
	5th	

WEEK	Class Day	Theory Topics
13 <sup>th</sup>	1st	Revise class
	2nd	Revise class
	3rd	Revise class
	4th	Revise class
	5th	
14 <sup>th</sup>	1st	Revise class
	2nd	Revise class
	3rd	Revise class
	4th	Doubt class
	5th	
15 <sup>th</sup>	1st	Doubt class
	2nd	Doubt class
	3rd	Doubt class
	4th	Doubt class
	5th	