

Dicipline:	Mining	Semester: 4 <sup>th</sup>	Name of the Teaching Faculty: Dharmasish Behera	
Subject:	UCM	No of Days/Week Class Allotted: _____	Semester From date: 13/02/23 To date 23/05/23	No. of Weeks:
WEEK	Class Day	Theory Topics		
1 <sup>st</sup>	1st	Introduction to underground coal mining.		
	2nd	Define mine and diff. methods of mining		
	3rd	classify underground coal mining methods.		
	4th	,, ,,		
	5th			
2 <sup>nd</sup>	1st	Bored and pillar method		
	2nd	describe the various application of Bored and pillar method.		
	3rd	,, ,,		
	4th	Describe various layout of Bored and pillar method.		
	5th			
3 <sup>rd</sup>	1st	,, ,,		
	2nd	describe depillaring method.		
	3rd	stowing and caving		
	4th	state precautions against fire and water during and after depillaring.		
	5th			

WEEK	Class Day	Theory Topics
4 <sup>th</sup>	1st	" "
	2nd	State and describe various machines used in working face.
	3rd	Define contoured seam.
	4th	Describe working of contoured seams.
	5th	
5 <sup>th</sup>	1st	Describe working of seams above and below goaved out area.
	2nd	" "
	3rd	State advantages and disadvantages of Bord and Pillar method.
	4th	" "
	5th	
6 <sup>th</sup>	1st	Longwall method Introduction.
	2nd	Describe Longwall advancing and retreating methods.
	3rd	Define single unit and double unit face.
	4th	Describe cyclic and non cyclic L/W layouts.
	5th	

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WEEK	Class Day	Theory Topics
7 <sup>th</sup>	1st	Describe mechanized longwall working with armored flexible conveyor, shield supports and other equipment.
	2nd	" "
	3rd	Thick seam mining Introduction.
	4th	Define thick seam.
	5th	
8 <sup>th</sup>	1st	Classify Thick Seam Mining.
	2nd	Describe layout of horizontal slicing
	3rd	Incline slicing, blasting gallery and sub-leveling.
	4th	Horizontal Mining Introduction.
	5th	
9 <sup>th</sup>	1st	State conditions, advantages, disadvantages
	2nd	Limitations of horizontal mining.
	3rd	Describe the layout of horizontal mining.
	4th	Hydraulic and pneumatic stowing.
	5th	

WEEK	Class Day	Theory Topics
10 <sup>th</sup>	1st	Describe hydraulic stoweling.
	2nd	Describe pneumatic stoweling.
	3rd	Support and roof control in mines Introduction.
	4th	State properties of various types of roof and behavior, pressure arch theory in B&M.P.
	5th	
11 <sup>th</sup>	1st	" "
	2nd	long wall working.
	3rd	Describe testing of roof.
	4th	Classification of support system in mines construction.
	5th	
12 <sup>th</sup>	1st	Principle of operation applications and load bearing capacity assessment.
	2nd	Subsidence due to mining Introduction.
	3rd	Define angle of draw.
	4th	State factors of subsidence, critical area of extraction.
	5th	

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13 <sup>th</sup>	1st	Describe the factors affecting subsidence - ce.
	2nd	state and describe precast, cast in situ measures against damage due to subsidence.
	3rd	Define shaft piling.
	4th	shaft sinking Introduction.
	5th	
14 <sup>th</sup>	1st	Describe vertical shaft and Inclined shaft
	2nd	determine shape and size of shaft, location of shaft. Describe sinking through normal ground
	3rd	state shaft piling.
	4th	Describe sinking through difficult ground cementation, freezing Mechanical shaft sinking
	5th	
15 <sup>th</sup>	1st	sinking upward, widening and deepening of shafts.
	2nd	doubt class
	3rd	doubt class
	4th	reviewed class
	5th	 