

<b>Dicipline:</b>	MINING	<b>Semester:</b> 4th	<b>Name of the Teaching Faculty:</b>	
<b>Subject:</b> UNDERGROUND COAL MINING	No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____		No.of Weeks:
<b>WEEK</b>	<b>Class Day</b>	<b>Theory Topics</b>		
<b>1</b>	<b>1st</b>	Introduction to Underground Coal Mining.		
	<b>2nd</b>	Defining mine and different methods of mining		
	<b>3rd</b>	Classification of Undergound Coal Mining Methods.		
	<b>4th</b>	Classification of Undergound Coal Mining Methods.		
	<b>5th</b>			
<b>2</b>	<b>1st</b>	Introduction to Bord and Pillar Method		
	<b>2nd</b>	Description to the various application of Bord & Pillar method.		
	<b>3rd</b>	Description of various layouts of Bord & Pillar method.		
	<b>4th</b>	Explaining of depillaring method with stowing and caving.		
	<b>5th</b>			
<b>3</b>	<b>1st</b>	Explaining of depillaring method with stowing and caving.		
	<b>2nd</b>	Study on precautions against fire and water during and after depillaring.		
	<b>3rd</b>	Study on precautions against fire and water during and after depillaring.		
	<b>4th</b>	Description to various machinerries used in working face		
	<b>5th</b>			

<b>WEEK</b>	<b>Class Day</b>	<b>Theory Topics</b>
<b>4</b>	<b>1st</b>	Description to various machineries used in working face
	<b>2nd</b>	Defining contigeous seam.
	<b>3rd</b>	Description to working of contiguous seams.
	<b>4th</b>	Description to working of contiguous seams.
	<b>5th</b>	
<b>5</b>	<b>1st</b>	Description to working of seams above and below goaved out area.
	<b>2nd</b>	Description to working of seams above and below goaved out area.
	<b>3rd</b>	Detailing of advantages and disadvantages of Bord & Pillar method.
	<b>4th</b>	Introduction to Longwall Method.
	<b>5th</b>	
<b>6</b>	<b>1st</b>	Description to Longwall advancing and retreating methods.
	<b>2nd</b>	Description to Longwall advancing and retreating methods.
	<b>3rd</b>	Description to single unit and double unit face.
	<b>4th</b>	Description to single unit and double unit face.
	<b>5th</b>	

<b>WEEK</b>	<b>Class Day</b>	<b>Theory Topics</b>
<b>7</b>	<b>1st</b>	Description to cyclic and non-cyclic L/W layouts.
	<b>2nd</b>	Description to cyclic and non-cyclic L/W layouts.
	<b>3rd</b>	Study on mechanized longwall working with armoured flexible conveyor, shieldsupport and shearer loader.
	<b>4th</b>	Study on mechanized longwall working with armoured flexible conveyor, shieldsupport and shearer loader.
	<b>5th</b>	
<b>8</b>	<b>1st</b>	Defining of Thick seam Mining
	<b>2nd</b>	Classification of Thick seam Mining.
	<b>3rd</b>	Description of layouts of horizontal slicing.
	<b>4th</b>	Description of layouts of incline slicing.
	<b>5th</b>	
<b>9</b>	<b>1st</b>	Description of layouts of blasting gallery.
	<b>2nd</b>	Description of layouts of sublevel caving.
	<b>3rd</b>	Introduction to Horizon Mining and its condition.
	<b>4th</b>	Advantages, disadvantages and limitations of Horizon Mining.
	<b>5th</b>	

<b>WEEK</b>	<b>Class Day</b>	<b>Theory Topics</b>
<b>10</b>	<b>1st</b>	Advantages, disadvantages and limitations of Horizon Mining.
	<b>2nd</b>	Description of layout of Horizon Mining.
	<b>3rd</b>	Description to hydraulic stowing.
	<b>4th</b>	Description to Pneumatic stowing.
	<b>5th</b>	
<b>11</b>	<b>1st</b>	Introduction to Support and roof control in underground Mines.
	<b>2nd</b>	Discussion on properties of various types of roof & roof behavior, Pressure arch theory in B&P
	<b>3rd</b>	Discussion on properties of various types of roof & roof behavior, Pressure arch theory in B&P
	<b>4th</b>	Discussion on properties of various types of roof & roof behavior, Pressure arch theory in onwall working.
	<b>5th</b>	
<b>12</b>	<b>1st</b>	Discussion on properties of various types of roof & roof behavior, Pressure arch theory in onwall working.
	<b>2nd</b>	Description to testing of roof.
	<b>3rd</b>	Classification of support system in Mines construction.
	<b>4th</b>	Principle of operation application and load bearing capacity assessment.
	<b>5th</b>	

<b>WEEK</b>	<b>Class Day</b>	<b>Theory Topics</b>
<b>13</b>	<b>1st</b>	Introduction of Subsidence due to Mining & angle of draw.
	<b>2nd</b>	Description to factors of subsidence, critical area of extraction
	<b>3rd</b>	Discussion on precautionary measures against damage due to subsidence.
	<b>4th</b>	Defining of shaft pillar.
	<b>5th</b>	
<b>14</b>	<b>1st</b>	Introduction to Shaft Sinking.
	<b>2nd</b>	Description of vertical shaft and inclined shaft; determining of shape and size of shaft, location of shaft.
	<b>3rd</b>	Description of vertical shaft and inclined shaft; determining of shape and size of shaft, location of shaft.
	<b>4th</b>	Description of sinking through normal ground & explaining of shaft plumbing.
	<b>5th</b>	
<b>15</b>	<b>1st</b>	Description of sinking through normal ground & explaining of shaft plumbing.
	<b>2nd</b>	Description of sinking through difficult ground, cementation, freezing of shaft.
	<b>3rd</b>	Description of sinking through difficult ground, cementation, freezing of shaft.
	<b>4th</b>	Explaining of mechanized shaftsinking, sinking upward, widening and deepening of shafts.
	<b>5th</b>	Explaining of mechanized shaftsinking, sinking upward, widening and deepening of shafts.