

Dicipline:	MINING	Semester: 4th	Name of the Teaching Faculty:	
Subject: MINE VENTILATION		No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____	No.of Weeks:
WEEK	Class Day	Theory Topics		
1	1st	Defining of natural ventilation and factors affecting natural ventilation		
	2nd	Defining of natural ventilation and factors affecting natural ventilation		
	3rd	Description of different types of Thermometer.		
	4th	Description of different types of Barometer		
	5th			
2	1st	Study of kata thermometer.		
	2nd	Study of water gauge.		
	3rd	Calculation of ventilation pressure by using piton static tube.		
	4th	Finding of height & distance from tangential system method.		
	5th			
3	1st	Explaining of effects of heat & humidity.		
	2nd	Details on natural ventilation motive column, geothermic gradient.		
	3rd	Enumeration of laws of mine air friction & problem solving.		
	4th	Problem solving on natural ventilation.		
	5th	Statutory provision as per CMR 2017,MMR 1961.		

WEEK	Class Day	Theory Topics
4	1st	Introduction to Air Crossing and distribution
	2nd	Description on ventilation stopping, air crossing, ventilation door, brattice partition
	3rd	Description on ventilation stopping, air crossing, ventilation door, brattice partition
	4th	Study on different types of ventilation.
	5th	
5	1st	Study on Accessional & declensional ventilation
	2nd	Description on Homotropical & Antitropical ventilation.
	3rd	Description on Boundary ventilation.
	4th	Description on Central & combined ventilation.
	5th	
6	1st	Explaining splitting of air current & solve numerical problems on splitting
	2nd	Description on air locks at pit top.
	3rd	Introduction to Mechanical Ventilation
	4th	Explanation on construction & principle of operation of centrifugal flow fans.
	5th	Explanation on construction & principle of operation of centrifugal flow fans.

WEEK	Class Day	Theory Topics
7	1st	Fan laws & calculate fan efficiency and capacity.
	2nd	Fan laws & calculate fan efficiency and capacity.
	3rd	Explaining installation of mine fan with reversal arrangement
	4th	Description on fan drift, fan drive, evasee and diffusers.
	5th	
8	1st	Description on fan drift, fan drive, evasee and diffusers.
	2nd	Study on fan characteristics and mine characteristics.
	3rd	Study on fan characteristics and mine characteristics.
	4th	Study on methods of output of mine fans.
	5th	
9	1st	Introduction to Booster fan and its Effects.
	2nd	Introduction to Booster fan and its Effects.
	3rd	Description of installation, location of the booster fan.
	4th	Description of installation, location of the booster fan.
	5th	

WEEK	Class Day	Theory Topics
10	1st	Description of purpose of the booster fan.
	2nd	Solving of problems relating to booster fan.
	3rd	Solving of problems relating to booster fan.
	4th	Solving of problems relating to booster fan.
	5th	
11	1st	Introduction to Auxiliary Ventilation.
	2nd	Introduction to Auxiliary Ventilation.
	3rd	Description of all systems of auxiliary ventilation.
	4th	Description of all systems of auxiliary ventilation.
	5th	
12	1st	Discussion on advantages & disadvantages of auxiliary ventilation.
	2nd	Discussion on advantages & disadvantages of auxiliary ventilation.
	3rd	Introduction to Ventilation Survey.
	4th	Study on methods of pressure survey using barometer.
	5th	

WEEK	Class Day	Theory Topics
13	1st	Study on methods of pressure survey using gauge and pitot tube with manometer.
	2nd	Study on methods of pressure survey using gauge and pitot tube with manometer.
	3rd	Study on method of measurement of cross-sectional area.
	4th	Study on method of measurement of cross-sectional area.
	5th	
14	1st	Description on the method of velocity measurements by using anemometer & voltmeter.
	2nd	Description on the method of velocity measurements by using anemometer & voltmeter.
	3rd	Description on the method of velocity measurements by using pitot- static tube and smoke & cloud method.
	4th	Description on the method of velocity measurements by using pitot- static tube and smoke & cloud method.
	5th	
15	1st	Determining of percentage of oxygen, methane, carbon monoxide SO ₂ & H ₂ S.
	2nd	Determining of all the causes of leakage of air in mines
	3rd	Determining of all the causes of leakage of air in mines
	4th	Determining of all the preventive measures of leakage of air in mines
	5th	