

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

DISCIPLINE: MINING			SEMESTER:4TH	NAME OF THE TEACHING FACULTY: GHANSHYAM DHURUA	
SUBJECT: MINE VENTILATION			NO OF DAYS/WEEK CLASS ALLOTTED: 4	SEMESTER FROM DATE: 14/2/2023 23/5/2023	TO DATE: NO OF WEEKS: 14
Month	Week	Nos. of Period Available	Class Day	Chapter	Topics
FEBRUARY	1st	1	15.02.23	Natural Ventilation	Introduction About subject and syllabus
	2nd	4	20.02.23		Definition of natural ventilation and factors affecting natural ventilation.
			21.02.23		Describe the different types of Thermometer and Barometer.
			22.02.23		Describe kata thermometer.
			25.02.23		Describe water gauge.
			27.02.23		Calculate ventilation pressure by using pitot static tube.
	3rd	4	28.02.23		Explain effects of heat .
			01.03.23		Explain effects of humidity.
			04.03.23		Explain natural ventilation motive column, geothermic gradient.
			06.03.23		Explain geothermic gradient.
MARCH	4th	2	11.03.23		Enumerate laws of mine air friction .
			13.03.23		Solve problems on above.
	5th	4	14.03.23		Statutory provision as per CMR 2017.
			15.03.23		Statutory provision as per MMR 1961.
			18.03.23	Air Crossing and distribution	Describe ventilation stopping,
	6th	4	20.03.23		Describe air crossing, ventilation door, brattice partition.
			21.03.23		Describe ventilation door.
			22.03.23		Describe brattice partition.
			25.03.23		Describe different types of ventilation.
			27.03.23		Accessional & declensional ventilation.
	7th	3	28.03.23		Homotropical ventilation.Antitropical ventilation, Boundary ventilation.
			29.03.23		Central & combined ventilation.
			03.04.23		Explain splitting of air current.
APRIL	8th	4	04.04.23		solve numerical problems on splitting
			05.04.23		Describe air locks at pit top

MAY	9th	4	08.04.23	Mechanical Ventilation	MONTHLY CLASS TEST 1
			10.04.23		Explain construction principle of centrifugal flow fans.
			11.04.23		State fan laws & calculate fan efficiency and capacity.
			12.04.23		Calculate fan efficiency and capacity.
			15.04.23		Explain installation of mine fan with reversal arrangement.
	10th	4	17.04.23		Describe fan drift, fan drive, evasee and diffusers.
			16.04.23		Explain fan characteristics and mine characteristics.
			19.04.23		Describe methods of output of mine fans.
			20.04.23		Describe installation of booster fan.
	11th	4	24.04.23	Booster fan and its Effects	Describe location and purpose of booster fan.
			25.04.23		Solve problems relating to booster fan.
			26.04.23	Auxiliary Ventilation	Describe systems of auxiliary ventilation.
			29.04.23		Describe advantages & disadvantages of auxiliary ventilation.
	12th	4	01.05.23	Ventilation Survey	MONTHLY CLASS TEST 2
			02.05.23		Describe methods of pressure survey using barometer, gauge.
			03.05.23		Describe methods of pressure survey using pitot tube with manometer.
			06.05.23		Describe the method of measurement of cross-sectional area.
			08.05.23		Describe the method of velocity measurements by using anemometer
	13th	4	09.05.23		Describe the method of velocity measurements by using voltmeter.
			10.05.23		Describe the method of velocity measurements by using pitot- static tube
			13.05.23		Describe the method of velocity measurements by using smoke & cloud method.
			17.05.23		Determine percentage of oxygen, methane, carbon monoxide SO ₂ & H ₂ S.
	14th	4	20.05.23	Leakage of air in Mines	Describe causes and preventive measures of leakage of air in mines.
			22.05.23		previous year question discussion
			23.05.23		previous year question discussion

Prepared By-

Ghanshyam Dhurua
Ghanshyam Dhurua
Sr. Lect.(Mining)
OSME,Keonjhar

HOD
HOD
Mining Engg.
OSME,Keonjhar

MINING ENGINEERING
OSME,KEONJHAR

Principal
Principal
OSME,Keonjhar
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