Academic Lesson Plan of Summer 2024

Department : MINING ENGG.	Semester : 4TH	Name of the Teaching Faculty : NARAYAN NATH
Subject : MINE VENTILATION	No. of Days/per week class allotted : 4Period/week	Semester from : 16TH JANUARY 2024
		No of Weeks : 15 Weeks
		Topic to be covered :
WEEK	**DAY**	**TOPIC**
1st Week	1st	Defination of Natural ventillation and factors affecting natural ventilation
	2nd	Defination of Natural ventillation and factors affecting natural ventilation
	3rd	Defination of Natural ventillation and factors affecting natural ventilation
	4th	Defination of Natural ventillation and factors affecting natural ventilation
2nd Week	1st	Describe the different types of Thermometer.
	2nd	Describe the different types of Barometer.
	3rd	Describe kata Thermometer.
	4th	Describe Water Gauge,
3rd Week	1st	Calculate Ventilation pressure by using Pitot Static Tool.
	2nd	Explain Effect of Heat. Explain effects of Humidity.
	3rd	Explain Natural ventilation motive column, Geothermic Gradient.
	4th	Explain Natural ventilation motive column, Geothermic Gradient.
4th Week	1st	Enumerate laws of Mine Air friction.
	2nd	Solve problems on Above.
	3rd	Solve problems on Above.
	4th	Statutory provision as per CMR 2017
5th Week	1st	Describe Ventilation stopping.
	2nd	Describe Air Crossing, Ventilation Door, Brattic Partition.
	3rd	Describe Air Crossing, Ventilation Door, Brattic Partition.
	4th	Describe different types of Ventilation.
6th Week	1st	Accessional and Declensional ventilation.
	2nd	Homotropal Ventilation. Antitropical ventilation.
	3rd	Boundary ventilation.
	4th	Central and Combined ventilation.
7th Week	1st	Explained Splitting of Air Current.
	2nd	Solve problems on Splitting.

WEEK	DAY	TOPIC
7th Week	3rd	Describe Air Locks at Pit Top.
	4th	Explain construction Principle of Centrifugal Flow Fans.
8th Week	1st	Explain construction Principle of Centrifugal Flow Fans.
	2nd	State fan Laws and calculate fan efficiency and capacity.
	3rd	State fan Laws and calculate fan efficiency and capacity.
	4th	Explain Installation of Mine fan with reversal arrangement.
9th Week	1st	Explain Installation of Mine fan with reversal arrangement.
	2nd	Describe Fan Drift, Fan Drive, Evasee and Diffusers.
	3rd	Describe Fan Drift, Fan Drive, Evasee and Diffusers.
	4th	Explain and Characteristics and Mine Characteristics.
10th Week	1st	Describe Methods of Output Control of Mine Fans.
	2nd	Describe installation, Location and Purpose of Booster fan.
	3rd	Describe installation, Location and Purpose of Booster fan.
	4th	Describe installation, Location and Purpose of Booster fan.
11th Week	1st	Solve problem relating to Booster fan.
	2nd	Describe System of Auxillary Ventilation.
	3rd	Describe Advantages and Disadvantages of Auxiliary Ventilations.
	4th	Describe Methods of pressure Survey using Barometer.
12th Week	1st	Describe Methods of pressure Survey using Barometer.
	2nd	Describe Methods of pressure Survey using Gauge and Pitot tube with manometer.
	3rd	Describe the methods of Measurement of cross Sectional Area.
	4th	Describe the methods of velocity measurement by using Anemometer.
13th Week	1st	Describe the methods of velocity measurement by using Velometer.
	2nd	Describe the methods of velocity measurement by using Pitot-static Tube.
	3rd	Describe the methods of velocity measurement by using Smoke and Cloud Method.
	4th	Determine Percentage of Oxyzen, Methen, Carbondioxide, SO2 and H2S.
14th Week	1st	Describe Causes and Preventive Measures of Leakage of Air in mines.
	2nd	Describe Causes and Preventive Measures of Leakage of Air in mines.
	3rd	INTERNAL.
	4th	Previous year Question Discussion.
	1st	Previous year Question Discussion.

WEEK	DAY	TOPIC
15th Week	2nd	Revision and Doubt clearing Class.
	3rd	Revision and Doubt clearing Class.
	4th	Revision and Doubt clearing Class.

N. Nath

Signature of the faculty

16/11/2024

Signature of the Principal