

GOVERNMENT POLYTECHNIC JAJPUR

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DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline: MINING	Semester: 6TH	Name of the Teaching faculty: SAAHIL EJAZ	
Subject: MINE MACHINERY - II	No of Days/Week class allotted: 4	Semester from Date: 10/03/22 No of weeks: 15	To Date: 10/06/22 <i>Extended upto 30/6/22</i>
Week	Class Day	Topics	
1st	1st	Describe constructional features, operation, principle & use of electric coal drill	
	2nd	Describe constructional features, operation, principle & use of electric coal drill	
	3rd	State types of drill rods & drill bits used in electric coal drill.	
	4th	Describe basic constructional features of gathering arm loader.	
2nd	1st	Describe basic constructional features of scraper loader.	
	2nd	Describe basic constructional features of side discharge loader.	
	3rd	Describe basic constructional features of load & haul loader.	
	4th	Describe basic constructional features & operation principle of jack hammer drill.	
3rd	1st	Describe basic constructional features & operation principle of air leg rock drill.	
	2nd	Describe basic constructional features & operation principle of road header.	
	3rd	Describe basic constructional features & operation principle of Shearer loader.	
	4th	Describe basic constructional features of surface miner.	
4th	1st	Describe basic constructional features of dragline.	
	2nd	Describe basic constructional features of shovel .	
	3rd	CLASS TEST-I	
	4th	Describe basic constructional features of backhoe.	
5th	1st	Describe basic constructional features of bucket wheel excavator.	
	2nd	Describe basic constructional features of dumper.	
	3rd	Describe basic constructional features of dozer.	
	4th	Describe basic constructional features of scraper.	
6th	1st	Describe basic constructional features of road grader.	
	2nd	Classify mine pumps.	
	3rd	Describe constructional features, working & use of ram pumps	
	4th	Describe constructional features, working & use of ram pumps	
7th	1st	Centrifugal & turbine pumps.	
	2nd	Describe constructional features of centrifugal pump.	
	3rd	Describe constructional features of centrifugal pump.	
	4th	Describe constructional features of turbine pumps.	
8th	1st	Describe constructional features of turbine pumps.	
	2nd	INTERNAL-I	
	3rd	State principle of centrifugal & turbine pumps & its applicability.	
	4th	State principle of centrifugal & turbine pumps & its applicability.	
9th	1st	Explain balancing the axial thrust of turbine pumps.	
	2nd	Draw characteristic curves for turbine pumps.	
	3rd	Draw characteristic curves for turbine pumps.	
	4th	Solve numerical problems on centrifugal pumps.	
10th	1st	Solve numerical problems on centrifugal pumps.	
	2nd	Solve numerical problems on turbine pumps.	
	3rd	Solve numerical problems on turbine pumps.	
	4th	Describe constructional features and working principle & use of roto pump	

11th	1st	Describe constructional features and working principle & use of roto pump
	2nd	Describe constructional features & working principle of sinking pump.
	3rd	Describe constructional features & working principle of sinking pump.
	4th	State procedure of suspension in shaft.
12th	1st	CLASS TEST-II
	2nd	Describe constructional features & working of bore hole pump.
	3rd	Describe constructional features & working of bore hole pump.
	4th	State installation of bore hole pump
13th	1st	State installation of bore hole pump
	2nd	State types of pipe & valves used in Mines.
	3rd	Describe constructional features of various type of valves.
	4th	State & describe different types of pipe joints.
14th	1st	Describe support of laying main pipe in shaft.
	2nd	Discuss the Pipe line layout.
	3rd	INTERNAL-II
	4th	Previous years questions disscussion.
15th	1st	REVISION/DOUBT CLEARING CLASS
	2nd	REVISION/DOUBT CLEARING CLASS
	3rd	REVISION/DOUBT CLEARING CLASS
	4th	REVISION/DOUBT CLEARING CLASS

		RECOMMENDED BOOKS
SL NO.	Name of Author	Title of Books
1	H. Cotton	Electrical equipment in Mine
2	Desmukh & Desmukh	Winning and Working of Iron Ore
3	D.J.Desmukh	E.M.T. Vol.-III

Signature of Faculty