

ORISSA SCHOOL OF MINING ENGINEERING
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DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline: MINING	Semester: 6TH	Name of the Teaching faculty: Rajiv Lochan Bal
Subject: MINE MACHINERY – II	No of Days/Week class allotted: 4	Semester from Date: 10-03-22 To Date: 10-6-22 No of weeks: 16
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	Describe basic constructional features of backhoe.
	4th	Describe basic constructional features of bucket wheel excavator.
5th	1st	Describe basic constructional features of dumper.
	2nd	Describe basic constructional features of dozer.
	3rd	Describe basic constructional features of scraper.
	4th	Describe basic constructional features of road grader.
6th	1st	Classify mine pumps.
	2nd	Classify mine pumps.
	3rd	Describe constructional features, working & use of ram pumps
	4th	CLASS TEST 1, Previous year questions, quiz test
7th	1st	Describe constructional features, working & use of ram pumps
	2nd	Centrifugal & turbine pumps.
	3rd	Describe constructional features of centrifugal pump.
	4th	Describe constructional features of centrifugal pump.
8th	1st	Describe constructional features of turbine pumps.
	2nd	Describe constructional features of turbine pumps.
	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	Describe constructional features & working principle of sinking pump.
12th	1st	State procedure of suspension in shaft.
	2nd	State procedure of suspension in shaft.
	3rd	Previous year questions, quiz.
	4th	CLASS TEST 2.
13th	1st	Describe constructional features & working of bore hole pump.
	2nd	Describe constructional features & working of bore hole pump.
	3rd	State installation of bore hole pump
	4th	State installation of bore hole pump
14th	1st	State types of pipe & valves used in Mines.
	2nd	State types of pipe & valves used in Mines.
	3rd	Describe constructional features of various type of valves.
	4th	Describe constructional features of various type of valves.
15th	1st	State & describe different types of pipe joints.
	2nd	State & describe different types of pipe joints.
	3rd	Describe support of laying main pipe in shaft.
	4th	Describe support of laying main pipe in shaft.
16th	1st	Discuss the Pipe line layout.
	2nd	Discuss the Pipe line layout.
	3rd	previous year question disscussion
	4th	CLASS TEST 3, Previuos year questions, quiz

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

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