

**SYNERGY SCHOOL OF ENGINEERING, BANAMALIPRASAD  
DHENKANAL**

**DEPARTMENT OF MINING ENGINEERING**

**LESSONPLAN**

<b>Discipline:</b> <b>MINING</b>	<b>Semester:</b> <b>6TH</b>	<b>Name of the Teaching faculty:</b> BISWAMBAR MAJHI
<b>Subject:</b> <b>MINE MACHINERY-I</b>	<b>No of Days/Week class alloted:</b> 4	<b>Semester from Date:</b> 04/02/25 <b>To Date:</b> 17/05/25 <b>No of weeks:</b> 15
<b>Week</b>	<b>ClassDay</b>	<b>Topics</b>
1st	1st	Describe constructional features of electric coal drill
	2nd	Describe constructional features, operation of electric coal drill
	3rd	Describe constructional features, operation, principle & use of electric coal drill
	4th	State types of drill rods & drill bits used in electric coal drill
2nd	1st	State types of drill rods & drill bits used in electric coal drill
	2nd	Describe basic constructional features of gathering arm loader
	3rd	Describe basic constructional features of scraper loader
	4th	Describe basic constructional features of side discharge loader
3rd	1st	Describe basic constructional features of load & haul loader
	2nd	Describe basic constructional features & operation principle of jack hammer drill
	3rd	Describe basic constructional features & operation principle of airleg rock drill
	4th	Describe basic constructional features & operation principle of road header
4th	1st	Describe basic constructional features & operation principle of road header
	2nd	Describe basic constructional features & operation principle of Shearer loader
	3rd	<b>CLASSTEST-1</b>
	4th	Describe basic constructional features & operation principle of Shearer loader
5th	1st	Describe basic constructional features of surface miner
	2nd	Describe basic constructional features of dragline
	3rd	Describe basic constructional features of shovel
	4th	Describe basic constructional features of BACKHOE
6th	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
7th	1st	Describe basic constructional features of road grader
	2nd	Classify mine pumps
	3rd	Describe constructional features, working & use of ramp pumps
	4th	Describe constructional features, working & use of ram pumps
8th	1st	Describe constructional features, working & use of ramp pumps
	2nd	<b>INTERNAL-1</b>
	3rd	Describe constructional features of centrifugal pump
	4th	Describe constructional features of turbine pumps

9th	1st	State principle of centrifugal pumps & its applicability
	2nd	State principle of turbine pumps & its applicability
	3rd	Explain balancing the axial thrust of turbine pumps
	4th	Draw characteristic curves for turbine pumps
10th	1st	Solve numerical problems on centrifugal pumps
	2nd	Solve numerical problems on turbine pumps
	3rd	Describe constructional features and working principle & use of rotopump
	4th	<b>CLASSTEST2</b>
11th	1st	Describe constructional features and working principle & use of rotopump
	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	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 types of pipe & valves used in Mines
13th	1st	Describe constructional features of various types of valves
	2nd	Describe constructional features of various types of valves
	3rd	State and describe various types of pipe joints
	4th	State and describe various types of pipe joints
14th	1st	Describe supporting of laying main pipe in shaft
	2nd	Discuss the Pipe line layout
	3rd	<b>INTERNAL2</b>
	4th	<b>PREVIOUS YEAR QUESTION DISCUSSION</b>
15th	1st	REVISION/DOUBT CLEARING CLASSES/REMEDIATION CLASSES
	2nd	REVISION/DOUBT CLEARING CLASSES/REMEDIATION CLASSES
	3rd	REVISION/DOUBT CLEARING CLASSES/REMEDIATION CLASSES
	4th	REVISION/DOUBT CLEARING CLASSES/REMEDIATION CLASSES
<b>RECOMMENDED BOOKS</b>		
SLNO.	Name of Author	Title of Books
1	H. Cottor	Electrical equipment in Mine
2	Desmukh & Desmukh	Winning and Working of Iron Ore
3	DJ. Desmukh	E.M.T. Vol.-III

*Biswambor Mahto*  
 Signature of Faculty