

GOVERNMENT POLYTECHNIC JAIPUR

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DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

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| Discipline: MINING | Semester: 6TH | Name of the Teaching faculty: Prabhudutta Mishra | |
| Subject: MINE MACHINERY – II | No of Days/Week class allotted: 4 | Semester from Date: 16.01.24 To Date: 26.04.24 No of weeks: 15 | |
| Week | Class Day | Topics | |
| 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 air leg 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 | CLASS TEST-1 | |
| | 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 ram pumps | |
| | 4th | Describe constructional features, working & use of ram pumps | |
| 8th | 1st | Describe constructional features, working & use of ram pumps | |
| | 2nd | INTERNAL-1 | |
| | 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 roto pump |
| | 4th | CLASS TEST 2 |
| 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 | 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 type of valves. |
| | 2nd | Describe constructional features of various type of valves. |
| | 3rd | State and describe various types of pipes joints. |
| | 4th | State and describe various types of pipes joints. |
| 14th | 1st | Describe supporting of laying main pipes in shaft |
| | 2nd | Discuss the Pipe line layout. |
| | 3rd | INTERNAL 2 |
| | 4th | PREVIOUS YEAR QUESTION DISCUSSION |
| 15th | 1st | REVISION/DOUBT CLEARING CLASSES/REMEDIAL CLASSES |
| | 2nd | REVISION/DOUBT CLEARING CLASSES/REMEDIAL CLASSES |
| | 3rd | REVISION/DOUBT CLEARING CLASSES/REMEDIAL CLASSES |
| | 4th | REVISION/DOUBT CLEARING CLASSES/REMEDIAL CLASSES |
| 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