| GOVT.POLYTECHNIC, MAYURBHANJ LESSON PLAN-2025-26 (WINTER) | | | | |
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| Name of the Faculty : Anup kumar Panda | | | | |
| Discipline:Mechanical | | | | W.e.f : 14.07.2025 to Date 15.11.2025 |
| Subject : HM & IFP | | | | Semester 5th |
| **Month** | **Week** | **Day** | | **TOPIC** |
| July | 3rd | 2nd | Unit 1 | Introduction & Definition and classification of hydraulic turbines |
| | | 2nd | | Construction and working principle of impulse turbine |
| | | 3rd | | Velocity diagram of moving blades, work done and |
| | | 4th | | derivation of various efficiencies of impulse turbine |
| | 4th | 2nd | | Numericals |
| | | 2nd | | Velocity diagram of moving blades, work done |
| | | 3rd | | derivation of various efficiencies of Francis turbine. |
| | | 4th | | Numericals |
| | 5th | 2nd | | Velocity diagram of moving blades, work done and |
| | | 2nd | | derivation of various efficiencies of Kaplan turbine |
| | | 3rd | | Numericals |
| | | 4th | | Distinguish between impulse turbine and reaction turbine. |
| August | 2nd | 2nd | | 1st assessment |
| | | 2nd | Unit 2 | Construction and working principle of centrifugal pumps |
| | | 3rd | | work done and derivation of various efficiencies of centrifugal pumps. |
| | | 4th | | Numericals |
| | 3rd | 2nd | Unit 3 | Describe construction & working of single acting reciprocating pump. |
| | | 2nd | | Describe construction & working of double acting reciprocating pump. |
| | | 3rd | | Numericals |
| | | 4th | | Monthly Test 1 |
| | 4th | 1st | | Numericals |
| | | 2nd | | Derive the formula for power required to drive the pump (Single acting) & |
| | | 3rd | | Derive the formula for power required to drive the pump (double acting) |
| | | 4th | | State positive & negative slip & establish relation between slip & coefficient of discharge. |
| | 5th | 2nd | | Student Mentoring Session |
| September | 1st | 2nd | Unit 4 | Elements- filter-regulator-lubrication unit, Pressure relief valves, Pressure regulation valves |
| | | 2nd | | 1 3/2DCV,5/2 DCV,5/3DCV |
| | | 3rd | | 2nd assessment |
| | | 4th | | Flow control valves |
| | 2nd | 2nd | | Throttle valves |
| | | 2nd | | ISO Symbols of pneumatic components |
| | | 3rd | | Direct control of single acting cylinder |
| | | 4th | | Operation of double acting cylinder |
| | 3rd | 2nd | | Operation of double acting cylinder with metering in and metering out control |
| | | 2nd | | Hydraulic system, its merit and demerits |
| | | 3rd | | Internal Assessment 1 |
| | | 4th | | Pressure control valves, Pressure relief valves , Pressure regulation valves |
| | 4th | 2nd | | 3/2DCV,5/2 DCV,5/3DCV |
| | | 2nd | | Flow control valves |
| | | 3rd | Unit 5 | Throttle valves |
| October | 2nd | 3rd | | External and internal gear pumps, Vane pump, Radial piston pumps |
| | | 4th | | 3rd assessment |
| | 3rd | 2nd | | ISO Symbols for hydraulic components. |
| | | 2nd | | Actuators |
| | | 3rd | | Internal Assessment 2 |
| | | 4th | | Direct control of single acting cylinder |
| | 4th | 3rd | | Operation of double acting cylinder,Operation of double acting cylinder with metering in and metering out control |
| | 5th | 2nd | Unit 1 Revision | Comparison of hydraulic and pneumatic system,Revision of impulse turbine |
| | | 2nd | | Additional Numerical practice |
| | | 3rd | | Revision of Francis turbine |
| | | 4th | | Additional Numerical practice |
| November | 2nd | 2nd | Unit 2 Revision | Revision of Kaplan Turbine |
| | | 2nd | | Revision of Centrifugal pump |
| | | 3rd | | Additioanal Numerical Practice |
| | 3rd | 2nd | Unit 3 Revision | Monthly Test 2 |
| | | 3rd | Unit 4 Revision | Revision of Reciprocating Pump |
| | | 4th | | |