GOVT. POLYTECHNIC MAYURBHANJ			
LESSON PLAN			
Discipline : MECHANICAL ENGG.		Semester: 4th Sem	Name of the Teaching Faculty :Sagar Kumar Mohapatra
Subject : FM		No. of Days / per week class allotted : 04	Semester From date : 16.01.2024 To Date : 26.04.2024
MONTH	**Week**	**Day**	**Topics**
JANUARY	3rd	2nd	**1.0 Properties of Fluid ,**Define fluid ,Description of fluid properties like Density, Specific weight
		4th	problem solved
		5th	specific gravity, specific volume and solve simple problems
		6th	Definitions and Units of Dynamic viscosity, kinematic viscosity,
	4th	4th	surface tension ,Capillary phenomenon
		6th	**2.0 Fluid Pressure and its measurements** , Definitions and units of fluid pressure, pressure intensity and pressure head
	5th	2nd	Statement of Pascal's Law. Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
FEBRUARY	1st	4th	Pressure measuring instruments Manometers (Simple and Differential)
		5th	Pressure measuring instruments Manometers (Simple and Differential)
		6th	Bourdon tube pressure gauge
	2nd	2nd	Solve simple problems on Manometer.
		4th	Solve simple problems on Manometer.
		5th	Hydrostatics 3.1 Definition of hydrostatic pressure
		6th	**CLASS TEST -1**
	3rd	2nd	Total pressure and centre of pressure on immersed bodies(Horizontal Bodies)
		4th	Total pressure and centre of pressure on immersed bodies(Vertical Bodies)
		5th	Solve Simple problems.
		6th	Archimedes 'principle, concept of buoyancy
		2nd	meta center and meta centric height ,Concept of floatation

	4th	4th	**4.0 Kinematics of Flow** 4.1 Types of fluid flow 4.2 Continuity equation(Statement and proof for one dimensional flow)
		5th	Different type of fluid flow
		6th	Bernoulli's theorem(Statement and proof) Applications and limitations of Bernoulli's theorem (Venturimeter, pitot tube)
	5th	2nd	Bernoulli's theorem(Statement and proof) Applications and limitations of Bernoulli's theorem
		4th	Solve simple problems
MARCH	1st	5th	Venturimeter
		6th	Solve simple problems
	2nd	4th	pitot tube
		6th	Solve simple problems
	3rd	2nd	**5.0 Orifices, notches & weirs**,Define orifice , Flow through orifice
		4th	Orifices coefficient & the relation between the orifice coefficients
		5th	Classifications of notches & weirs
		6th	Discharge over a rectangular notch or weir
	4th	2nd	Discharge over a triangular notch or weir
		4th	Classifications of notches & weirs
		5th	Simple problems
		6th	**INTERNAL**
APRIL	1st	2nd	Simple problems
		4th	**6.0 Flow through pipe** ,Definition of pipe. Loss of energy in pipes.
		5th	Head loss due to friction: Darcy's and Chezy's formula (Expression only)
		6th	Head loss due to friction: Minor loss
	2nd	2nd	Head loss due to friction: Minor loss
		5th	Hydraulic gradient and total gradient line
		6th	problem solved
	3rd	2nd	**7.0 Impact of jets** , Impact of jet on fixed and moving vertical flat plates
		4th	Impact of jet on fixed and moving vertical inclined plates

	3rd	5th	Impact of jet on fixed and moving vertical curved plates
		6th	Derivation of work done on series of vanes and condition for maximum efficiency.
	4th	2nd	Impact of jet on moving curved vanes, illustration using velocity triangles
		4th	derivation of work done, efficiency
		5th	**CLASS TEST-2**

HOD, Mechanical
Govt. polytechnic
Mayurbhanj

Subject Expert
Govt. polytechnic
Mayurbhanj

Academic Co-ordinator
Govt. polytechnic
Mayurbhanj