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 : 04.02.2025 To Date : 17.05.2025**
MONTH	**Week**	**Day**	**Topics**
FEBRUARY	1st	6th	**1.0 Properties of Fluid ,**Define fluid ,Description of fluid properties like Density, Specific weight
	2nd	2nd	problem solved
		4th	specific gravity, specific volume and solve simple problems
		5th	Definitions and Units of Dynamic viscosity, kinematic viscosity,
	3rd	1st	surface tension ,Capillary phenomenon
		2nd	**2.0 Fluid Pressure and its measurements** , Definitions and units of fluid pressure, pressure intensity and pressure head
		4th	Statement of Pascal's Law. Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
		6th	Pressure measuring instruments Manometers (Simple and Differential)
	4th	2nd	Pressure measuring instruments Manometers (Simple and Differential)
		4th	Bourdon tube pressure gauge
		5th	Solve simple problems on Manometer.
	5th	2nd	Solve simple problems on Manometer.
		4th	Hydrostatics 3.1 Definition of hydrostatic pressure
		5th	Total pressure and centre of pressure on immersed bodies(Horizontal and Vertical Bodies)
	1st	6th	Total pressure and centre of pressure on immersed bodies(Horizontal Bodies)

MARCH	2nd	2nd	Total pressure and centre of pressure on immersed bodies(Vertical Bodies)
		4th	CLASS TEST -1
		5th	Solve Simple problems.
	3rd	2nd	Archimedes 'principle, concept of buoyancy
		4th	meta center and meta centric height ,Concept of floatation
	4th	2nd	**4.0 Kinematics of Flow** 4.1 Types of fluid flow 4.2 Continuity equation(Statement and proof for one dimensional flow)
		4th	Different type of fluid flow
		5th	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
		6th	Venturimeter
APRIL	1st	4th	Solve simple problems
		5th	pitot tube
		6th	INTERNAL
	2nd	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
	3rd	2nd	Discharge over a rectangular notch or weir
		4th	Discharge over a triangular notch or weir
	4th	2nd	Classifications of notches & weirs
		4th	Simple problems
		5th	**6.0 Flow through pipe** ,Definition of pipe. Loss of energy in pipes.
	5th	2nd	Head loss due to friction: Darcy's and Chezy's formula (Expression only)
	1st	4th	Head loss due to friction: Minor loss
		5th	Head loss due to friction: Minor loss

MAY		6th	Hydraulic gradient and total gradient line
	2nd	2nd	problem solved
		4th	**7.0 Impact of jets** , Impact of jet on fixed and moving vertical flat plates
		5th	Impact of jet on fixed and moving vertical inclined plates
	3rd	2nd	Impact of jet on fixed and moving vertical curved plates
		4th	Derivation of work done on series of vanes and condition for maximum efficiency.
		5th	Derivation of work done on series of vanes and condition for maximum efficiency.
		6th	Impact of jet on moving curved vanes, illustration using velocity triangles, derivation of work done, efficiency