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 : 13.02.2023 To Date : 23.05.2023
MONTH	**Week**	**Day**	**Topics**
FEBRUARY	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
	4th	2nd	Definitions and Units of Dynamic viscosity, kinematic viscosity,
		4th	surface tension ,Capillary phenomenon
		5th	**2.0 Fluid Pressure and its measurements** , Definitions and units of fluid pressure, pressure intensity and pressure head
		6th	Statement of Pascal's Law. Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
	5th	2nd	Pressure measuring instruments Manometers (Simple and Differential)
MARCH	1st	4th	Pressure measuring instruments Manometers (Simple and Differential)
		5th	Bourdon tube pressure gauge
		6th	Solve simple problems on Manometer.
	2nd	4th	Solve simple problems on Manometer.
		5th	**3.0 Hydrostatics -** Definition of hydrostatic pressure
		6th	Total pressure and centre of pressure on immersed bodies(Horizontal Bodies)
	3rd	2nd	Total pressure and centre of pressure on immersed bodies(Vertical Bodies)
		4th	**CLASS TEST -1**
		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** 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
		5th	Solve simple problems
APRIL	2nd	2nd	Venturimeter
		4th	Solve simple problems
		6th	pitot tube
	3rd	2nd	Solve simple problems
		4th	**5.0 Orifices, notches & weirs**,Define orifice , Flow through orifice
		6th	Orifices coefficient & the relation between the orifice coefficients
	4th	2nd	**INTERNAL**
		4th	Classifications of notches & weirs
		5th	Discharge over a rectangular notch or weir
		6th	Discharge over a triangular notch or weir
	5th	2nd	Classifications of notches & weirs
		4th	Simple problems
		5th	**6.0 Flow through pipe** ,Definition of pipe. Loss of energy in pipes.
		6th	Head loss due to friction: Darcy's and Chezy's formula (Expression only)
MAY	1st	2nd	Head loss due to friction: Minor loss
		4th	Hydraulic gradient and total gradient line
		6th	problem solved
	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
		6th	Impact of jet on fixed and moving vertical curved plates
		2nd	Derivation of work done on series of vanes and condition for maximum efficiency.

	3rd	4th	Impact of jet on moving curved vanes, illustration using velocity triangles
		6th	derivation of work done, efficiency
	4th	2nd	**CLASS TEST-2**

HOD, Mechanical
Govt. polytechnic
Mayurbhanj

Subject Expert
Govt. polytechnic
Mayurbhanj

Academic Co-ordinator
Govt. polytechnic
Mayurbhanj