LESSONPLAN

DISCIPLINE: Mechanical engineering	Semester: 4TH	Name of the Teaching Faculty: S.SAHOO
Subject : FLUID MECHANICS	No. of Days / per week class allotted : 4	Semester From date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : 15

Week	Class Day	Topics
1st	1st	PROPERTIES OF FLUID:Definefluid Description of fluid properties like Density, Specific weight, specific volume
	2nd	Solve simple problems
	3rd	Solve simple problems
	4th	Definitions and Units of Dynamicviscosity
2nd	1st	Units of Dynamicviscosity
	2nd	Kinematic viscosity,
	3rd	Surface tension
	4th	Capillary phenomenon
3rd	1st	FLUID PRESSURE AND ITS MEASUREMENTS:Definitionsandunits offluidpressure,pressureintensityandpressurehead
	2nd	StatementofPascal'sLaw.
	3rd	Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
	4th	PressuremeasuringinstrumentsManometers(Simple)
4th	1st	PressuremeasuringinstrumentsManometers(Differential)
	2nd	Bourdontubepressuregauge(SimpleNumerical)
	3rd	SimpleproblemsonManometer.
	4th	SimpleproblemsonManometer.

5th	1st	HYDROSTATICS: Definition of hydrostatic pressure Total pressure and centre of pressure on immersed bodies(Horizontal)
	2nd	centreofpressureonimmersedbodies(VerticalBodies)
	3rd	SolveSimpleproblems.
	4th	SolveSimpleproblems.
6th	1st	SolveSimpleproblems
	2nd	.DefinitionofArchimedes'principle,conceptofbuoyancy,meta centerandmetacentricheight.
	3rd	Conceptoffloatation
	4th	revision
7th	1st	KINEMATICFLOW:Typesoffluidflow
	2nd	Continuityequation(Statementandproofforonedimensional flow))
	3rd	Bernoulli'stheorem(Statementandproof)
	4th	ApplicationsandlimitationsofBernoulli'stheorem(Venturimeter)
8th	1st	ApplicationsandlimitationsofBernoulli'stheorem(pitottube)
	2nd	Solvesimpleproblems
	3rd	Solvesimpleproblems
	4th	Solvesimpleproblems
9th	1st	ORIFIES,NOTCHES&WEIRS:Defineorifice
	2nd	Flowthroughorifice
	3rd	Orificescoefficient&therelationbetweentheorificecoefficients
	4th	Classificationsofnotches&weirs

10th	1st	Dischargeoverarectangularnotchorweir
	2nd	Dischargeoveratriangularnotchorweir
	3rd	Simpleproblemsonabove
	4th	Simpleproblemsonabove
11th	1st	FLOWTHROUGHPIPES:Definitionofpipe
	2nd	Lossofenergyinpipes)
	3rd	Headlossduetofriction:Darcy'sformula(Expressiononly
	4th	Headlossduetofriction:Chezy'sformula(Expressiononly)
12th	1st	SolveProblemsusingDarcy'sformula.
	2nd	SolveProblemsusingDarcy'sformula.
	3rd	SolveProblemsusingChezy'sformula.
	4th	SolveProblemsusingChezy'sformula.
13th	1st	Hydraulicgradient
	2nd	totalgradientline
	3rd	IMPACTOFJETS:Impactofjetonfixed
	4th	Impactofjetonmovingverticalflatplates
14th	1st	Derivationofworkdoneonseriesofvanes
	2nd	Conditionformaximumefficiency.
	3rd	Impactofjetonmovingcurvedvanes
	4th	illustrationusingvelocitytriangles,
15th	1st	derivationofworkdone
	2nd	efficiency
	3rd	revision
	4th	revision