RAJA KISHORE CHANDRA ACADEMY OF TECHNOLOGY
NILGIRI,BALASORE
DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN

SUBJECT- FLUID MECHANICS

NAME OF THEFACULTY- ER.NIMAIN PRASAD DHAMUDIA SEMESTER-4TH

SESSION-

MODULE	DATE	NO. LECTURE	TOPIC TO BE COVERED
1		1	Define fluid
		2	Description of fluid properties like Density, Specific weight
		3	Description of fluid properties like specific gravity, specific volume
		4	simple problems
		5	Definitions and Units of Dynamic viscosity
		6	Definitions and Units of kinematic viscosity
		7	Surface tension Capillary phenomenon
2		8	Definitions and units of fluid pressure, pressure intensity and pressure head.
		9	Statement of Pascal's Law
		10	Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
		11	Pressure measuring instruments Manometers (Simple)
		12	Pressure measuring instruments Manometers (Differential)
		13	Bourdon tube pressure gauge(Simple Numerical)
		14	Solve simple problems on Manometer
		15	Solve simple problems on Manometer
3		16	Definition of hydrostatic pressure
		17	Total pressure and centre of pressure on immersed bodies(Horizontal)
		18	Total pressure and centre of pressure on immersed bodies(Vertical Bodies)
		19	Solve Simple problems
		20	Archimedes 'principle, concept of buoyancy, meta center and meta centric height
		21	Concept of floatation
		22	Question discussion
4		23	Types of fluid flow
		24	Continuity equation(Statement and proof for one dimensional flow)
		25	Bernoulli's theorem(Statement and proof)
		26	Applications and limitations of Bernoulli's theorem (Venturimeter,)

		27	Applications and limitations of Bernoulli's theorem (pitot tube)
		28	Solve simple problems on Bernouli's theorem
		29	Solve simple problems
5		30	Define orifice
		31	Flow through orifice
		32	Orifices coefficient & the relation between the orifice coefficients
		33	Classifications of notches & weirs
		34	Discharge over a rectangular notch or weir
		35	Discharge over a triangular notch or weir
		36	Simple problems on previous topic
6		37	Definition of pipe.
		38	Loss of energy in pipes
		39	Head loss due to friction: Darcy's and Chezy's formula (Expression only)
		40	Solve Problems using Darcy's and Chezy's formula.
		41	Solve Problems using Darcy's and Chezy's formula.
		42	Solve Problems using Darcy's and Chezy's formula
		43	Solve Problems using Darcy's and Chezy's formula
		44	Hydraulic gradient and total gradient line
		45	Solve some Numericals problems
7		46	Impact of jet on fixed vertical flat plates
		47	Impact of jet on moving vertical flat plates
		48	Derivation of work done on series of vanes
		49	Derivation of condition for maximum efficiency.
		50	Impact of jet on moving curved vanes,
		51	Impact of jet on illustration using velocity triangles,
		52	Derivation of work done, efficiency
		53	Discussion of previous semester questions
		54	Discussion of selected probable questions

SIGNATURE OF FACULTY **SIGNATURE OF H.O.D**