BIT POLYTECHNIC, BALASORE
DEPARTMENT OF MECHANICAL ENGINEERING
LESSON PLAN

SUBJECT- FLUID MECHANICS
NAME OF THE FACULTY- JAGAJYOTI SAHU   **SEMESTER-4TH**

MODULE	DATE	LECTURE No.	TOPIC TO BE COVERED
1	17/01/2024	1	Definition of fluid and classification
	18/01/2024	2	Description of fluid properties like Density, Specific weight
	19/01/2024	3	Description of fluid properties like specific gravity, specific volume
	20/01/2024	4	simple problems
	22/01/2024	5	Definitions and Units of Dynamic viscosity
	24/01/2024	6	Definitions and Units of kinematic viscosity
	25/01/2024	7	Surface tension Capillary phenomenon
2	27/01/2024	8	Definitions and units of fluid pressure, pressure intensity and pressure head.
	29/01/2024	9	Statement of Pascal's Law
	31/01/2024	10	Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
	01/02/2024	11	Pressure measuring instruments Manometers (Simple)
	02/02/2024	12	Pressure measuring instruments Manometers (Differential)
	03/02/2024	13	Bourdon tube pressure gauge (Simple Numerical)
	05/02/2024	14	Solve simple problems on Manometer
	07/02/2024	15	Solve simple problems on Manometer
3	08/02/2024	16	Definition of hydrostatic pressure
	09/02/2024	17	Total pressure and Centre of pressure on immersed bodies (Horizontal)
	10/02/2024	18	Total pressure and Centre of pressure on immersed bodies (Vertical Bodies)
	12/02/2024	19	Solve Simple problems
	15/02/2024	20	Archimedes 'principle, concept of buoyancy, meta center and meta centric height
	16/02/2024	21	Concept of floatation
	17/02/2024	22	Question discussion
4	19/02/2024	23	Types of fluid flow
	21/02/2024	24	Continuity equation (Statement and proof for one dimensional flow)
	22/02/2024	25	Bernoulli's theorem (Statement and proof)
	23/02/2024	26	Applications and limitations of Bernoulli's theorem (Venturi meter,)

	24/02/2024	27	Applications and limitations of Bernoulli's theorem (pitot tube)
	26/02/2024	28	Solving simple problems
	28/02/2024	29	Solving simple problems
5	29/02/2024	30	Definition of orifice and types
	01/03/2024	31	Flow through orifice
	02/03/2024	32	Orifice coefficient & the relation between the orifice coefficients
	04/03/2024	33	Classifications of notches & weirs
	06/03/2024	34	Discharge over a rectangular notch or weir
	07/03/2024	35	Discharge over a triangular notch or weir
	09/03/2024	36	Class Test
6	11/03/2024	37	Definition of pipe and its application
	13/03/2024	38	Loss of energy in pipes
	14/03/2024	39	Head loss due to friction: Darcy's and Chezy's formula (Expression only)
	15/03/2024	40	Solve Problems using Darcy's and Chezy's formula.
	16/03/2024	41	Solve Problems using Darcy's and Chezy's formula.
	18/03/2024	42	Solve Problems using Darcy's and Chezy's formula
	20/03/2024	43	Solve Problems using Darcy's and Chezy's formula
	21/03/2024	44	Hydraulic gradient and total gradient line
	22/03/2024	45	Numerical
7	23/03/2024	46	Impact of jet on fixed vertical flat plates
	27/03/2024	47	Impact of jet on moving vertical flat plates
	28/03/2024	48	Derivation of work done on series of vanes
	30/03/2024	49	Derivation of condition for maximum efficiency.
	03/04/2024	50	Impact of jet on moving curved vanes,
	04/04/2024	51	Impact of jet on illustration using velocity triangles,
	05/04/2024	52	Derivation of work done &efficiency on series of vanes
	06/04/2024	53	Derivation of condition for maximum efficiency
	08/04/2024	54	Derivation of work done of moving curved vanes
	10/04/2024	55	Derivation of efficiency on moving curved vanes
	12/04/2024	56	Problems with solutions
	13/04/2024	57	Problems with solutions
	15/04/2024	58	Problems with solutions
	18/04/2024	59	Revision
	19/04/2024	60	Questions &Answers discussion

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