FLUID MECHANICS

LESSON PLAN AS PER SCTEVT WEF 10.03.2022 (SUMMER)
4th SEMESTER

DISCIPLINE	SEMESTER-	NAME OF THE FACULTY - Er. SUNITA SAMAL (Sr. Lect) MECH.
MECHANICAL	4th	
SUBJECT	NO of days/	Semestere from 10.03.2022 to
FLUID	Week Class	10.06.2022
MECHANICS	alloted - 04	NO of weeks - 14 (48 PERIODS)

WEEK/P	CLASS DAY	TOPICS
1st (2P)	10.03.2022	Introduction of the subject. Syllabus discussion.
	11.03.2022	CHAPTER-1 Properties of Fluid 1.1 Define Fluid
2nd (3P)	14.03.2022	1.2 Description of fluid properties like Density, specific weight, specific gravity, specific volume
	16.03.2022	1.2 Simple Numericals.
	17.03.2022	1.3 Definitions and Units of Dynamic viscosity, kinematic viscosity.
	21.03.2022	1.3 Definition of surface tension, Capillary Phenomenon. CHAPTER-1 COMPLETED
3rd (4P)	23.03.2022	CHAPTER-2.0 Fluid Pressure and its Measurements. 2.1 Definition and units of fluid Pressure, Pressure intensity and Pressure head.
	24.03.2022	2.2 Statement of Pascal's Law.
	25.03.2022	2.3 Concept of atmospheric pressure gauge Pressure, vacuum pressure and absolute Pressure.
4th (3P)	28.03.2022	2.4 Pressure Measuring instruments Manometers (simple and Differential) Simple Numericals.
	30.03.2022	2.4.1 Bourdon tube pressure gauge.
	31.03.2022	2.5 Solve simple problems on Manometers. CH-2 COMPLETED

(TH-3)

WEEK/P	CLASS DAY	TOPICS
5th (4P)	04.04.2022	CHAPTER-3 HYDROSTATICS STARTED
		3.1 Definition of hydrostatic pressure
	06.04.2022	3.2 Total pressure and centre of pressure on immersed bodies (Horizontal and vertical bodies)
	07.04.2022	3.2 continued.
	08.04.2022	3.3 solve simple problems.
6th (2P)	11.04.2022	3.4 'Archimedes principle', concept of buoyancy, Meta centre and Meta centric height (Definitions only)
	13.04.2022	3.5 Concept of floatation CH-3 COMPLETED
7th (4P)	18.04.2022	CHAPTER-4 KINEMATICS OF FLOW STARTED
		4.1 Types of fluid flow
	20.04.2022	4.2 continuity equation (statement) and proof for one dimensional flow.
	21.04.2022	4.3 Bernoulli's theorem (statement and proof.
	22.04.2022	4.3 Applications and limitations of Bernoulli's theorem (venturimeter, pitot tube)
8th (4P)	25.04.2022	4.3 continued.
	27.04.2022	4.4 Solve simple problems
	28.04.2022	4.4 Completed CHAPTER-4 COMPLETED
	29.04.2022	CHAPTER-5 ORIFICES, NOTCHES & WEIRS STARTED
		5.1 Define Orifice
		5.2 Flow through Orifice.
9th (4P)	02.05.2022	5.3 Orifices coefficient and the relation between the orifice coefficients.
	04.05.2022	5.4 Classification of notches & weir
	05.05.2022	5.5 Discharge over a rectangular notch or weir.
	06.05.2022	5.6 Discharge over a triangular notch or weir.
10th (4P)	09.05.2022	5.7 Simple problems on above
		CHAPTER-5 COMPLETED

WEEK/PERIODS	CLASS DAY	TOPICS
10th (4P)	10.05.2022	CHAPTER-6 FLOW THROUGH PIPE 6.1 Definition of pipe
	12.05.2022	6.2 Loss of energy in pipes
	13.05.2022	6.2 completed.
11th (03P)	18.05.2022	6.3 Head loss due to friction Darcy's and Chezy's formula Expressions only.
	19.05.2022	6.4 Solve preoblems using Darcy's and chezy's formula
	20.05.2022	6.4 completed.
12th (04P)	23.05.2022	6.5 Hydraulic greadient line.
	25.05.2022	6.5 Total Energy line.
		CHAPTER-6 COMPLETED
	26.05.2022	CHAPTER-7 IMPACT OF JETS STARTED 7.1 Impact of jet on fixed and moving veretical flat plates
	27.05.2022	7.1 Continued
13th (03P)	01.06.2022	7.2 ~~completed~~ Dereivation of
	02.06.2022	~~7.2~~ Workdone on sereies of Vanes and condition for Maximum efficieney.
	03.06.2022	7.2 completed.
14th (04P)	06.06.2022	7.3 Impact of jet on moving cureved vanes, illustreation using velocity treiangles, dereivation of worek done, efficieney.
	08.06.2022	7.3 completed.
		CHAPTER-7 COMPLETED
	09.06.2022	Revision
	10.06.2022	Revision.
	EXTENSION OF CLOSING OF ATTENDACE UPTO 30.06.2022	
15th (03P)	13.06.2022	Revision (ch-1)
	16.06.2022	Revisim (ch-2)
	17.06.2022	Revisim (ch-3)

Week/Period	CLASS DAY	TOPICS
16th (04P)	20.06.2022	Revision (Ch-3)
	22.06.2022	Revision (Ch-4)
	23.06.2022	Revision (Ch-4)
	24.06.2022	Revision (Ch-5)
17th (03)	27.06.2022	Revision (Ch-6)
	29.06.2022	Revision (Ch-7)
	30.06.2022	Revision (Ch-7)