ACADEMIC SESSION: 2023-24(SUMMER -2024)

DISCIPLINE:MECHANICAL ENGINEERING			Semester:4TH	Name of the teaching faculty: SARAT KUMAR BISWAL
SUBJECT: FLUIDS MECHANICS			Semester from date:16.01.2024 to 26.04.2024	
SL NO	DATE	CHAPTER	THEORY TOPIC NAME	NO OF PERIODS
1	17.01.24	Properties of Fluid	Define fluid	1
2	18.01.24		Description of fluid properties like Density, Specific weight and relationship between them	1
3	19.01.24		Simple problems on above	1
4	22.01.24		Description of fluid properties like specific gravity, specific volume	1
5	24.01.24		Simple problems on above	1
6	25.01.24		Definitions and Units of Dynamic viscosity and kinematic viscosity,	1
7	29.01.24		Description of fluid properties like surface tension Capillary phenomenon	1
8	31.01.24	Fluid Pressure and its measurements	Definitions and units of fluid pressure, pressure intensity and pressurehead.	1
9	1.02.24		Statement of Pascal's Law.Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure	1
10	2.02.24		Manometers (Simple)	1
11	5.02.24		Simple problems on above	1
12	7.02.24		Manometers (Differential)	1
13	8.02.24		Simple problems on above	1
14	9.02.24	Hydrostatics	Bourdon tube pressure gauge	1
15	12.02.24		Definition of hydrostatic pressure	1
16	15.02.24		Total pressure on immersed bodies(Horizontal Bodies	1
17	16.02.24		Simple problems on above	1
18	19.02.24		Total pressure on immersed bodies(Vertical Bodies	1
19	21.02.24		Simple problems on above	1
20	22.02.24		Archimedes principle, Concept of buoyancy	1
21	23.02.24	Kinematics of Flow	meta center and meta centric height, Concept of floatation	1
22	26.02.24		Types of fluid flow	1
23	28.02.24		Continuity equation(Statement and proof)	1
24	29.02.24		Simple problems on above	1
25	1.03.24		Bernoulli's theorem(Statement and proof)	1
26	4.03.24		Simple problems on above	1
27	6.03.24		Applications and limitations of Bernoulli's theorem (Venturimeter, pitot tube)	1
28	7.03.24		Solve simple problems	1

29	11.03.24	**Orifices, notches & weirs**	Define orifice, Flow through orifice	1
30	13.03.24		Orifices coefficient & the relation between the orifice coefficients	1
31	14.03.24		Classifications of notches & weirs	1
32	15.03.24		Discharge over a rectangular notch or weir	1
33	18.03.24		Discharge over a triangular notch or weir	1
34	20.03.24		Simple problems on above	1
35	21.03.24	**Flow through pipe**	Definition of pipe. Loss of energy in pipes	1
36	22.03.24		Head loss due to friction: Darcy's formula (Expression only)	1
37	27.03.24		Simple problems on above	1
38	28.03.24		Head loss due to friction: Chezy's formula (Expression only)	1
39	3.04.24		Simple problems on above	1
40	4.04.24		Hydraulic gradient and total gradient line	1
41	5.04.24		Simple problems on above	1
42	8.04.24	**Impact of jets**	Impact of jet on fixed vertical plate	1
43	10.04.24		Simple problems on above	
44	12.04.24		Impact of jet on moving flat plates	1
45	15.04.24		Simple problems on above	1
46	18.04.24		Derivation of work done on series of vanes and condition formaximum efficiency	1
47	19.04.24		Impact of jet on moving curved vanes, using velocity triangles,	1
48	22.04.24		Simple problems on above	1
49	24.04.24		Impact of jet on moving curved vanes using velocity, derivation of work done, efficiency.	1
50	25.04.24		Simple problems on above	1
51	26.04.24		Simple problems on above	1
			TOTAL No of Classes	51

16/01/24

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