MECHANICAL ENGINEERING DEPARTMENT

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mr. ALOK BARA Mr. PRAKASH KU. SAHU	Academic Year:2021-22
Course No.: TH3	Course Name: FLUID MECHANICS
Program: Diploma	Branch:Mechanical
Year/Sem: II / IV	Section:M1/M2

Sl. No.	Period	Time (min)	Unit/ Chapter	Topic to be covered
1.	1	55	1	Introduction to fluid and fluid mechanics
2.	2	55	1	Properties of fluid: density, specific weight, specific gravity, specific volume
3.	3	55	1	Solve numerical
4.	4	55	1	Defined dynamic viscosity, kinematic viscosity
5.	5	55	2	Surface tension, capillary phenomenon
6.	6	55	2	Class test
7.	7	55	2	FLUID PRESSURE & ITS MEASUREMENTS: Defined pressure & unit of fluid pressure, pressure intensity and pressure head.
8.	8	55	2	State pascal law
9.	9	55	2	State atmospheric pressure, absolute pressure, vacuum pressure, gauge pressure
10.	10,11	55	2	Demonstrate pressure measuring instrument 1-manometer-simple
11.	11	55	2	Demonstrate differential manometer
12.	12,13,14	55	2	Explain bourdon tube pressure gauge, solve numericals
13.	15	55	2	Solve numericals: manometer
14.	16	55	3	HYDROSTATICS: define hydrostatics pressure
15.	17	55	3	Explain total pressure, center of pressure on immerg body: vertical, horizontal
16.	18,19	55	3	Solve numerical
17.	20	55	3	State Archimedes principle & concept of buoyancy
18.	21,22	55	3	Defined meta center, metacentric height
19.	23	55	3	Explain concept of flotation

20.	24	55	4	KINEMATICS OF FLOW: explain type of fluid flow Explain Continuity equation and prove it.
21.	25,26	55	4	Explain and prove Bernoulli's theorem
22.	27	55	4	Solve numericals on bernoulli's eqution
23.	28	55	4	Demonstrate Applications :venturimeter,pitot tube state limitation of bernoulli's theorem
24.	29,30	55	4	Solve numericals: venturimeter, pitot tube
25.	31	55	5	ORIFICES,NOTCHES& WEIRS: define orifice ,flow through orifice
26.	32	55	5	Defined orifice coefficient ,state relation between orifice coefficient
27.	33	55	5	Classification of notches & weirs
28.	34	55	5	Discharge over rectangular notches
29.	35	55	5	Discharge over triangular notches
30.	36,37	55	5	Solve numericals
31.	38	55	6	FLOW THROUGH PIPE: Define pipe, explain loss of energy in pipe
32.	38	55	6	Head loss due to friction: explaindarchy's & chezy's formula
33.	39	55	6	Solve problem using darchy's & chezy's formula
34.	40	55	6	Explain hydraulic gradient line, total gradient line
35.	41,42	55	7	IMPACT OF JET: Impact of jet on fixed & moving flat plate
36.	43,44	55	7	Derivation of workdone on series of vane & condition of maximum efficiency
37.	45,46	55	7	Impact of jet on moving curved vane
38.	47,48	55	7	Velocity triangle
39.	49,50	55	7	Derive Workdone, efficiency
40.	51,52	55		Revision
41.	53,54	55		Revision
42.	54,55	55		Revision
43.	56,57	55		Class test
44.	58,59,60	55		Class test