

Lesson Plan

Subject Fluid Mechanics (Code) TH-3 Name of faculty Satyabrata Chilar

Semester 4th Class allotted 4P/W Branch Mechanical

Discipline	Semester	From date:	To date:	Teaching Aid
Subject:	No. of days/ per week	Theory/ Practical - Topics/Lesson		
Week	Date/Period			
1	14-02-23	Define fluid		whole board marked
	15-02-23	Description of fluid properties like density, specific weight, specific volume, specific gravity etc.		
	17-02-23	Solve simple problems		
2	20-02-23	Definition & unit of dynamic viscosity,		//
	21-02-23	Kinematic viscosity, surface tension		
	25-02-23	Capillary phenomenon		
3	27-02-23	Definition & unit of fluid pressure, Pressure head		//
	28-02-23	Statement of Pascal's law,		
	04-03-23	Concept of atmospheric pressure, gauge, vacuum & absolute pressure.		
4	06-03-23	Pressure measuring instrument.		//
	07-03-23	Manometer (simple & differential)		
	11-03-23	Bourdon tube Pressure gauge. Solve simple problems on Manometer.		
5	13-03-23	Definition of hydrostatic Pressure		//
	14-03-23	Total pressure & centre of pressure on immersed bodies (Horizontal & vertical)		
	18-03-23	Solve simple problems.		
6	20-03-23	Archimedi's Principle & concept of buoyancy.		//
	21-03-23	Meta centre & meta centric height.		
	25-03-23	Concept of flotation.		
7	27-03-23	Types of fluid flow		//
	28-03-23	Continuity equation (Statement & proof of one dimensional flow)		
	31-03-23	Bernoulli's theorem (Statement & Proof)		

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Week	Date/Period	Theory/ Practical - Topics/Lesson	Teaching Aid
8	03-04-23	- Applications & Limitations of Bernoulli's theorem (Venturimeter, Pitot tube)	white board
	f0	- Solve simple problems,	
	08-04-23		white board
9	10-04-23	- Define orifice	
	f0	- Flow through orifice.	
	15-04-23	- Orifice coefficient & the relation between the orifice coefficient.	//
10	17-04-23	- Classification of notches & weirs.	
	f0	- Discharge over a rectangular notch or weir	
	21-04-23	- Discharge over a triangular notch or weir	//
11	24-04-23	- Simple problem on above.	
	f0	- Definition of pipe	
	29-04-23	- Loss of energy in pipes.	//
12	01-05-23	- Head loss due to friction: Darcy's & Chezy's formula (expression only)	
	f0	- Solve problems using Darcy's & Chezy's formula	//
	06-05-23		
13	08-05-23	- Hydraulic gradient and total gradient line.	
	f0	- "	//
	13-05-23	- Impact of jet on fixed and moving vertical flat plates	
14	15-05-23	- Derivation of work done on series of vanes & condition of maximum efficiency.	
	f0	- Impact of jet on moving curved vanes.	//
	20-05-23		
15	22-05-23	- Illustration using velocity triangle	
	f0	- derivation of work done & efficiency	//
	23-05-23	- Reversing	

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