

Discipline: Mechanical Semester: 4th

Name of faculty: Er. Kailash Panda

Subject: Fluid Mechanics. No. of weeks: 05
allotted

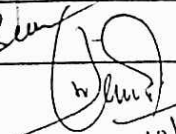
Semester ¹⁷ From: 14/02/23
To: 23/05/23

week	No. of period	Theory Topic
	1st	Introduction to fluid mechanics
14th Feb	2nd	Define fluid
to	3rd	Density, specific density, specific grav
18 Feb		Specific volume.
20th Feb	1st	problems on density.
to	2nd	Definition and units of dynamic viscosity
25th Feb	3rd	units of kinematic viscosity
	4th	Surface tension.
	5th	problems on surface tension.
27th Feb	1st	Capillary action phenomenon.
to	2nd	problems on capillarity.
4th March	3rd	Definition and units of fluid pressure
	4th	pressure intensity, pressure head.
	5th	statement of Pascal's law.
6th March	1st	Concept of atmospheric pressure & gauge pressure.
to	2nd	Dussehra
11th March	3rd	Holi
	4th	vacuum pressure & absolute pressure
	5th	Simple Manometers.
13th March	1st	Differential manometer
to	2nd	Bourdon tube pressure gauge.
18th March	3rd	Simple problems on simple manometer
	4th	problems on differential Manometer
	5th	problems on differential manometers

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week	No. of period	Theory Topic.
20th March	1st	Definition of hydrostatic pressure
to	2nd	Total pressure & centre of pressure
25th March	3rd	• solve simple problems
	4th	Archimedes principle
	5th	concept of buoyancy.
27th March	1st	Metacenter & Metacentric height
to	2nd	Concept of flotation
1st April	3rd	Numericals.
	4th	Ram Navami
	5th	Numericals.
3rd April	1st	Types of fluid flow.
to	2nd	Continuity Equation.
8th April	3rd	Numericals on Continuity Equation
	4th	Bernoulli's Theorem (proof & statement)
	5th	Numericals on Bernoulli's Th ^m .
10th April	1st	Venturimeter
to	2nd	orifice meter
15th April	3rd	Numericals on orificemeters
	4th	Define orifice
	5th	Flow through pipe.
17th April	1st	orifice coefficient & their relation
to	2nd	classification of notches.
22nd April	3rd	Numericals on notches
	4th	classification of weirs.
	5th	Id-ul-Fitre.

Week	No. of period	Theory Topic
24th April	1st	Discharge over a rectangular notch.
to	2nd	Discharge over a triangular notch
29th March	3rd	Simple problems.
	4th	Simple problems.
	5th	Definition of pipe.
1st May	1st	Loss of energy in pipes.
to	2nd	Head loss due to friction.
5th May	3rd	Chezy's formula
	4th	Solve problems on Chezy's formula
	5th	Solve problems on Darcy's formula
8th May	1st	Hydraulic gradient & total gradient
to	2nd	Impact of jet on fixed plates
13th May	3rd	Impact jet on moving plates.
	4th	Numericals.
	5th	Numericals.
15th May	1st	Derivation of work done on series of vanes.
to	2nd	Numericals.
20th May	3rd	Numericals.
	4th	Impact of jet on moving curved vanes.
	5th	Illustration of velocity triangles.
2nd May	1st	Derivation of work done & efficiency
to	2nd	Numericals.
8th May	3rd	Discussion on short questions previous year
	4th	Discussion on long questions previous year
	5th	Revision.

Sum

 12/02/23