BHADRAK ENGG.SCHOOL & TECHNOLOGY (BEST),ASURALI, BHADRAK

FLUID MECHANICS (Th.-03)

CHAPTER-WISE DISTRIBUTION OF PERIODS & EXPECTED MARKS

Sl. No.	Name of the Chapter	Periods as per Syllabus	Periods actually needed	Expected Marks
01	PROPERTIES OF FLUID	08	08	15
02	FLUID PRESSURE AND ITS MEASUREMENTS	08	11	15
03	HYDROSTATICS	08	09	10
04	KINEMATICS OF FLOW	08	10	20
05	ORIFICES, NOTCHES &WEIRS	08	08	10
06	FLOW THROUGH PIPE	10	06	15
07	IMPACT OF JET	10	10	15
	Total	**60**	**62**	**62**

Sign of Lect.   Sign of HOD.   Sign of AIC   Sign of Vice Principal

LESSON PLAN

Discipline: Mechanical Engg.	Semester: Fourth(4ᵗʰ)	Name Of The Faculty: Er Rajesh Kumar Prusty
Subject: Fluid Mechanics	No of days/ week class allotted: Six(6)	**Semester from date:** 14. 02.2023 **to Date:** 23. 05.2023 **No of weeks: 15**

WEEK	CLASS DAY	THEORY TOPICS
1ˢᵗ	1ˢᵗ	**Chapter No.- 01 (Properties of Fluid)** Introduction on Fluid Mechanic
	2ⁿᵈ	Define fluid
	3ʳᵈ	Description of fluid properties like Density, Specific weight, specific gravity, specific volume
	4ᵗʰ	Solving numerical
	5ᵗʰ	Definitions and Units of Dynamic viscosity,
	6ᵗʰ	Definitions and Units of kinematic viscosity
2ⁿᵈ	1ˢᵗ	Definitions and Units of surface tension ,
	2ⁿᵈ	Capillary phenomenon
	3ʳᵈ	Solving numerical
	4ᵗʰ	**Possible question answer discussion**
	5ᵗʰ	**Chapter No.- 02 (Fluid Pressure and its measurements** Definitions and units of fluid pressure, pressure intensity
	6ᵗʰ	Definitions and units of pressure head
3ʳᵈ	1ˢᵗ	Solving numerical
	2ⁿᵈ	Statement of Pascal's Law
	3ʳᵈ	Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
	4ᵗʰ	Pressure measuring instruments Manometers (Simple)
	5ᵗʰ	Pressure measuring instruments Manometers (Differential
	6ᵗʰ	Bourdon tube pressure gauge (Simple Numerical)
4ᵗʰ	1ˢᵗ	Cont.
	2ⁿᵈ	Solve simple problems on Manometer.
	3ʳᵈ	Solving numerical
	4ᵗʰ	**Monthly test 01**
	5ᵗʰ	Solving numerical
	6ᵗʰ	**Possible question answer discussion**
5ᵗʰ	1ˢᵗ	**Chapter No.- 03 (Hydrostatics)** Definition of hydrostatic pressure
	2ⁿᵈ	Total pressure and center of pressure on immersed bodies
	3ʳᵈ	Total pressure and center of pressure on immersed bodies (Horizontal Bodies)
	4ᵗʰ	Total pressure and center of pressure on immersed bodies (Vertical Bodies)
	5ᵗʰ	Solving Numerical
	6ᵗʰ	Archimedes 'principle, concept of buoyancy

6th	1st	Archimedes 'principle, meta center (Definition only)
	2nd	Archimedes 'principle meta centric height (Definition only)
	3rd	Cont.
	4th	Concept of floatation
	5th	Cont.
	6th	Solving Numerical
7th	1st	**Possible question answer discussion**
	2nd	**Chapter No.- 04 (Kinematics of Flow** Types of fluid flow
	3rd	Continuity equation (Statement for one dimensional flow)
	4th	Continuity equation (proof for one dimensional flow)
	5th	**Monthly test 02**
	6th	Bernoulli's theorem (Statement and proof)
8th	1st	Solving numerical
	2nd	Applications of Bernoulli's theorem -Venturi meter,
	3rd	Cont.
	4th	Applications of Bernoulli's theorem - pitot tube
	5th	Cont.
	6th	Solve Simple Problems
9th	1st	Solve Simple Problems
	2nd	Solve Simple Problems
	3rd	**Possible question answer discussion**
	4th	**Chapter -05(Orifices, notches & weirs)** Define orifice
	5th	Flow through orifice
	6th	Orifice's coefficient & the relation between the orifice coefficients
10th	1st	Classifications of notches & weirs
	2nd	Discharge over a rectangular notch or weir
	3rd	Solving Numerical
	4th	Discharge over a triangular notch or weir
	5th	**Monthly test 03**
	6th	Solving Numerical
11th	1st	Solving Numerical
	2nd	Solving Numerical
	3rd	**Possible question answer discussion**
	4th	**Chapter No.- 06 (Flow through pipe)** Definition of pipe.
	5th	Loss of energy in pipes.
	6th	Head loss due to friction: Darcy's and Chazy's formula (Expression only)
12th	1st	Solve Problems using Darcy's formula.
	2nd	Solve Problems using Chazy's formula.
	3rd	Solving numerical
	4th	Hydraulic gradient and total gradient line
	5th	Solving Numerical
	6th	**Possible question answer discussion**

13th	1st	**Monthly test 04**	
	2nd	**Chapter No.- 07 (Impact of jets)** Impact of jet on fixed vertical flat plates	
	3rd	Impact of jet on moving vertical flat plates	
	4th	Solving numerical	
	5th	Derivation of work done on series of vanes and condition for maximum efficiency.	
	6th	Solving numerical	
14th	1st	Impact of jet on moving curved vanes, illustration using velocity triangles, derivation of work done, efficiency	
	2nd	Impact of jet on moving curved vanes derivation of work done, efficiency	
	3rd	Solving numerical	
	4th	Solving numerical	
	5th	**Possible question answer discussion**	
	6th	Revision	
15th	1st	Revision	
	2nd	Revision	
	3rd	Revision	
	4th	Revision	
	5th	Revision	
	6th	Revision	