GOVERNMENT POLYTECHNIC, KORAPUT

DEPARTMENT OF MECHANICAL ENGINEERING

Discipline: MECHANICAL ENGG	Semester: 4TH	Name of the Teaching Faculty: B. SAI SANTOSH
Subject: FLUID MECHANICS	No. of days/per week class allotted:4	Semester From date: 20/4/21 To Date: 03/8/21
		No. of Weeks:15

COURSE OUTCOMES	Students will develop an ability towards 1.Comprehending fluid properties and their measurements 2.Realizing conditions for floatation 3.Applying Bernoulli's theorem

Week	Class Day	Theory/Practical Topics
1ST	1ST	Introduction to fluid mechanics, properties of fluid
	2ND	Properties of fluid
	3RD	Numericals on priperties of fluid
	4TH	Viscosity
2ND	1ST	Viscosity
	2ND	Numericals related viscosity
	3RD	Surface tension & related numerical
	4TH	Capillarity & related numerical
3RD	1ST	Pressure, pressure head, pascal's law
	2ND	Concept of atmospheric pressure, vaccum pressure, gauge pressure
	3RD	Pressure measuring instruments
	4TH	Pressure measuring instruments
4TH	1ST	Bourdeon tube pressure gauge
	2ND	Numericals
	3RD	Numericals
	4TH	Numericals & Revision
5TH	1ST	Hydrostatic pressure
	2ND	Total pressure,centre of pressure on immersed bodies
	3RD	Continued...
	4TH	Numericals
6TH	1ST	Numericals
	2ND	Archmedes principle,buoyancy, metacentre
	3RD	Metacentric height
	4TH	Concept of flotation
7TH	1ST	Types of fluid flow
	2ND	Continuity equation
	3RD	Bernoulli's theorm
	4TH	Venturimeter
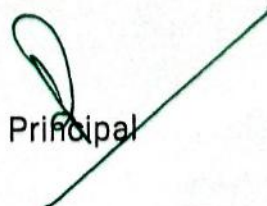
8TH	1ST	Orifice meter	
	2ND	Pitot tube	
	3RD	Numericals	
	4TH	Numericals	
9TH	1ST	Orifice , flow through orifice	
	2ND	Orifice cofficeant, relation between orifice cofficeant	
	3RD	Classification of notches & weirs	
	4TH	Discharge over a rectangular notch, weir	
10TH	1ST	Discharge over a triangular notch , weir	
	2ND	Numericals	
	3RD	Numericals	
	4TH	Numericals	
11TH	1ST	Pipe, loss of energy in pipes	
	2ND	Energy loss in pipes	
	3RD	Head lost due to friction darcy formula	
	4TH	Head lost due to friction chezy formula	
12TH	1ST	Numericals	
	2ND	Numericals	
	3RD	Numericals	
	4TH	Numericals	
13TH	1ST	Hydraulic gradient line & total gradient line	
	2ND	Numericals	
	3RD	Impact of jet	
	4TH	Impact of jet on fixed & moving vertical flat plates	
14TH	1ST	Derivation of workdone on series of vanes & condition of maximum efficiency	
	2ND	Continued.	
	3RD	Impact of jet on moving curved vanes	
	4TH	Derivation of workdone, efficiency	
15TH	1ST	Numericals	
	2ND	Numericals	
	3RD	Numericals	
	4TH	Revision	

LEARNING RESOURCES:

1. **Text Book of Fluid Mechanics R.K.Bansal Laxmi**

2. **Text Book of Fluid Mechanics R.S khurmi S.Chand**

3. **Text Book of Fluid Mechanics R.K.Rajput S.Chand**

4. **Text Book of Fluid Mechanics Modi & Seth Rajson's pub. Pvt. lt**

B. Sai Santosh
Sign. Of Faculty
concerned

Principal

Sharmila Saba
SignatureOf HOD