G.P. DHANGAR (Fatehabad)

Name of Faculty :		Mrs. Sunita
Discipline : CIVIL ENGG.		
Semester : 3rd		
Subject : Fluid Mechanics		
Week	**Lecture No.**	**Topic Covered**
1	1	Concept of Fluids: Real and ideal fluids
	2	Introduction to Fluid Mechanics, Hydrostatics, Hydrodynamics, Hydraulics
	3	Revision
2	4	Introduction to Fluid properties
	5	Mass density, specific weight, specific gravity
	6	viscosity, surface tension
3	7	cohesion, adhesion and, capillarity, vapour pressure and compressibility.
	8	Pressure, intensity of pressure, pressure head
	9	Pascal's law and its applications.
4	10	Total pressure, resultant pressure, and centre of pressure.
	11	Total pressure and centre of pressure on horizontal, vertical and inclined plane
	12	Total pressure and centre of pressure on horizontal, vertical and inclined plane
5	13	Revision
	14	surfaces of rectangular and triangular
	15	Surfaces of trapezoidal shapes and circular.
6	16	Numericals
	17	Revision
	18	Introduction to Atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure.
7	19	Piezometer, simple manometer and differential manometer
	20	Bourden gauge and dead weight pressure gauge
	21	Revision
8	22	Fundamentals of Fluid Flow
	23	Types of Flow
	24	Discharge and continuity equation
9	25	Revision & Discussion of numericals
	26	Types of hydraulic energy: Potential energy, kinetic energy, pressure energy
	27	Bernoulli's theorem
10	28	Simple numerical problems
	29	Flow Measurement: Pitot tube, orifices. Current meter
	30	Venturimeter and orificemeter
11	31	pipe flow; Reynolds number, laminar and turbulent flow
	32	Critical velocity and velocity distributions in a pipe for laminar flow
	33	Head loss in pipe lines
12	34	Simple numerical problems
	35	Hydraulic gradient line and total energy line & Pipes in series or parallel
	36	Water hammer
13	37	Definition of an open channel, uniform flow and non-uniform flow
	38	Discharge calculation
	39	Hydraulic pumps