DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: Mechanical Engineering

Academic Session: 2021 (May-Aug 2021)

Semester- IV Sem

Subject with code- Fluid Mechanics (PEC-ME -204G)

Name of Faculty with designation : Mr. Yudhveer Kumar Verma (ASSISTANT PROFESSOR)

S.No.	Month	Date & Day	Sem-Class	Section/Unit	Topic/Chapter covered	Academic activity	Test / assignment
1			IV-ME	I	Fluid Properties and Fluid Statics: Concept of fluid and flow	……	**Assignment of 02 Ques.**
2			IV-ME		ideal and real fluids, continuum	……	**Assignment of 02 Ques.**
3			IV-ME		concept, and properties of fluids, Newtonian and non-Newtonian fluids	……	**Assignment of 02 Ques.**
4			IV-ME		Pascal's law, hydrostatic equation, hydrostatic forces on plane and curved surfaces	……	**Assignment of 02 Ques.**
5			IV-ME		stability of floating and submerged bodies, relative equilibrium,		**Assignment of 02 Ques.**
6			IV-ME		Problems	……	**Assignment of 02 Ques.**
7			IV-ME		Fluid Kinematics: Eulerian and Lagrangian description of		**Assignment of 02 Ques.**
8			IV-ME		fluid flow; stream, streak and path lines	……	**Assignment of 02 Ques.**
9			IV-ME		types of flows, flow rate and continuity equation	……	**Assignment of 02 Ques.**
10			IV-ME		differential equation of continuity in cylindrical and polar coordinates, rotation, vorticity and	……	**Assignment of 02 Ques.**
11			IV-ME		circulation, stream and potential functions, flow net, Problems	……	**Assignment of 02 Ques.**
12			IV-ME	II	Fluid Dynamics: Concept of system and control volume, Euler's equation	……	**Assignment of 02 Ques.**
13			IV-ME		Bernoulli's equation, venturimeter, orifices, orificemeter,	……	**Assignment of 02 Ques.**

14			IV-ME		mouthpieces, kinetic and momentum correction factors	……	**Assignment of 02 Ques.**
15			IV-ME		Impulse momentum relationship and its applications, Problems	……	**Assignment of 02 Ques.**
16			IV-ME		Compressible Fluid Flow:	……	**Assignment of 02 Ques.**
17			IV-ME		Introduction, continuity momentum and energy equation		**Assignment of 02 Ques.**
18			IV-ME		sonic velocity, propagation of elastic		**Assignment of 02 Ques.**
19			IV-ME		waves due to compression of fluid, propagation of elastic waves due to disturbance in fluid	……	**Assignment of 02 Ques.**
20			IV-ME		stagnation properties, isentropic flow, effect of area variation on flow properties, isentropic flow	……	**Assignment of 02 Ques.**
21			IV-ME		through nozzles,diffusers,injectors,Problems	……	**Assignment of 02 Ques.**
22			IV-ME	III	regimes and Reynolds's number, Relationship between shear stress a	……	**Assignment of 02 Ques.**
23			IV-ME		uni-directional flow between stationary and moving parallel plates, movementof piston in a dashpot, power absorbed in bearings	……	**Assignment of 02 Ques.**
24			IV-ME		Problems. Flow Through Pipes		**Assignment of 02 Ques.**
25			IV-ME		Major and minor losses in pipes, Hagen-Poiseuilli law, hydraulic gradient and total energy lines	……	**Assignment of 02 Ques.**
26			IV-ME		series and parallel connection of pipes, branched pipes; equivalent pipe, power transmission through pipes,		**Assignment of 02 Ques.**
27			IV-ME		Problems.		**Assignment of 02 Ques.**
28			IV-ME	IV	Boundary Layer Flow: Boundary layer concept, displacement		**Assignment of 02 Ques.**
29			IV-ME		momentum and energy thickness,von-karman momentum integral equation		**Assignment of 02 Ques.**
30			IV-ME		laminar and turbulent boundary layer flows, drag on a flat plate, boundary layer separation and control		**Assignment of 02 Ques.**
31			IV-ME		Streamlined and bluff bodies lift and drag on a cylinder and an airfoil,		**Assignment of 02 Ques.**

32			IV-ME		Problems.		**Assignment of 02 Ques.**
33			IV-ME		Turbulent Flow: Shear stress in turbulent flow, Prandtl mixing		**Assignment of 02 Ques.**
34			IV-ME		length hypothesis		**Assignment of 02 Ques.**
35			IV-ME		hydraulically smooth and rough pipes, velocity distribution in pipes, friction		**Assignment of 02 Ques.**
36			IV-ME	I	Fluid Properties and Fluid Statics: Concept of fluid and flow	……	**Assignment of 02 Ques.**