PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Diploma Aeronautical Engineering, Mid semester Examination

Semester: 4th	**Date: (20/01/2022)**
Subject Code: 03613255	**Time: (1hr: 30min)**
Subject Name: Fundamentals of Fluid Mechanics	**Total Marks: 40**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

			CO/PO	Blooms Taxanomy Words
Q.1	**Answer any six out of Ten. (2 Marks Each)**	**(12)**		
	1. Define Fluid and enlist groups of fluid mechanics.		**1**	**knowledge**
	2. Define ideal and real fluid.		**1**	**knowledge**
	3. State Pascal's law.		**2**	**Apply**
	4. Define Mechanical Gauges.		**2**	**knowledge**
	5. Define Manometer.		**2**	**knowledge**
	6. Define Specific weight and Specific volume.		**1**	**knowledge**
	7. Define compressible and Incompressible fluid.		**1**	**understand**
	8. Give classification of Pressure.		**2**	**understand**
	9. Define Vacuum and Gauge pressure.		**2**	**knowledge**
	10. Define atmospheric pressure and absolute pressure.		**2**	**knowledge**
Q.2	A) Explain Groups of fluid mechanics.	**(03)**	**1**	**Analyse**
	OR			
	A) Differentiate between solid and fluid.	**(03)**	**1**	**understand**
	B) Give classification of fluid with figure.	**(03)**	**2**	**Apply**
	OR			
	B) Give classification of Viscosity and explain them.	**(03)**	**2**	**Apply**
	C) Define 1. Vapour pressure, 2. Compressibility 3. Surface Tension.	**(04)**	**1**	**knowledge**
	OR			
	C) Define 1.capillarity 2. Cohesion 3. Adhesion.	**(04)**	**1**	**knowledge**
	D) Define pressure and explain types of pressure.	**(04)**	**2**	**knowledge**
Q.3	A) Explain Simple U tube Manometer.	**(03)**	**2**	**Analyse**
	OR			
	A) Explain Differential U- tube manometer.	**(03)**	**2**	**Analyse**
	B) Give classification of pressure measuring devices.	**(03)**	**2**	**Apply**
	OR			
	B) Explain Bourdon tube pressure gauge.	**(03)**	**2**	**Analyse**
	C) Find the specific weight, specific volume and mass density of a liquid with 9.6 N weight and 4 litre volume.	**(04)**	**4**	**Evaluate**
	OR			
	C) A simple manometer is used to measure pressure of flowing water. The right limb of manometer is opened to atmosphere and left limb is attached to centre of pipe. The center of pipe is at a level of mercury in right limb. If the difference of mercury height between to limb is 20 cm. then calculate pressure.	**(04)**	**2**	**Evaluate**

D) Derive Pascal's Law.   **(04)   2   Apply**