



ID. No/Seat No.

**MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY,  
JAMSHORO**

**MID SEMESTER EXAMINATION 2023 OF FIRST SEMESTER SECOND YEAR  
(21-BATCH) OF B.E (PETROLEUM & NATURAL GAS ENGINEERING)**

**FLUID MECHANICS  
(CE-263)**

Dated: 23/01/2023		Time: 45 MINTS (2 C.H)		Max. Marks-10	
Note:	ATTEMPT ANY TWO QUESTIONS.				
		CLO	Taxonomy Level	Marks	
Q.No.01 a)	The intensity of pressure at a point in a FLUID AT REST is the same in all the directions, says the Pascal Law. Analyze the pressure intensity for rigid bodies in the light of Pascal's law.	1	C4	3	
b)	In the light of Newton's Law of viscosity, Analyze the relationship between the rate of shear stress and the rate of shear strain. Support your discussion with the help of graphs.	1	C3	2	
Q.No.02 a)	Define Fluid Rheology and also discuss rheological models of dilatant and pseudo-plastic fluids with the help of a diagram.	1	C4	3	
b)	If the velocity distribution of a plate is given by $U = \frac{2}{3} y - y^2$ . Where y is the distance from the solid boundary in meters, U is the velocity in m/s. Determine shear stress at y = 0 m and y = 0.15m. $\mu = 8.63$ poise	1	C2	2	

**Name of Subject Teacher:** Engr. Mukhtiar Ali Talpur

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