ID. No/Seat No.

MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO

MID SEMESTER EXAMINATION 2024
3rd SEMESTER (REGULAR)
B.E (PETROLEUM ENGINEERING) (23- BATCH)

SUBJECT (Code)	**FLUID MECHANICS (CE-261)**

Dated: 16-09-2024 Time Allowed: 1 Hours (2 C.H) Max: Marks: 15

NOTE : ATTEMPT ALL QUESTIONS.

Q.No. 01	05 Marks
Demonstrate the concept of the Knudsen number and explain how it determines the transition between continuum, slip, and free molecular flow regimes. Describe the characteristics of each flow regime in terms of the Knudsen number and how the flow behavior changes as the Knudsen number varies.. (**CLO-1:C4, PLO-2**)	
Q.No. 02	05 Marks
Velocity distribution of a liquid is given as ; U = 5SIN(5πy). Compute the shear stress at wall take μ = 5 poise . (**CLO-1:C3, PLO-2**)	
Q.No. 03	05 Marks
Demonstrate how the concepts of fluid rheology apply to the behavior of pseudoplastic and dilatant fluids. Compare these two types of non-Newtonian fluids in terms of their viscosity behavior under different shear rates and explain how this affects their practical applications. (**CLO-1:C3, PLO-2**)	

Name of Subject Teacher: Engr. Mukhtiar Ali Talpur

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