**ASSIGNMENT 2**

You are to submit this assignment through the link ; rominiyiol@abuad.edu.ng      and engromslawani @ yahoo.com

DEADLINE : On or before  18 th April, 2020;;; 12 midnight

Any assignment submitted after the deadline may not be  graded


**QUESTION 1**

Water of viscosity 0.9 Poise and relative density 0.9 flows through a pipe of diameter 120 mm and length 12m . Compute (a) The Reynold"s number of flow if 785N of oil was  collected in 25 seconds  (b) What is the pressure difference at the ends of the pipe.


Ans : Re = 375.2 and since it is less than 2000 , the flow is hence laminar

P1-P2 = 753.6 N/m$^2$ and h$_f$ = 0.085m of oil.


**QUESTION 2**

A smooth pipe 60 mm diameter, 850 m long conveys water at the rate of 8.5 Lit/sec. Kinematic viscosity is given as 0.5 stokes and the coefficient of friction is given by $f = \frac{0.0791}{Re^{1/4}}$ where Re = Reynold's number . Calculate (a) head loss  $h_{f}$ (  (b) wall shearing stress (c) Reynold's number and hence determine the nature of flow.

$(a)h_f$= 110.73 m  (b) $\tau_o$ = 19.17 N/m$^2$    (c) 120,000    (d) Turbulent flow