

1-A submarine at depth of 20m under sea water of density 1000 kg/m^3 so the pressure affecting external surface of submarine wall is($g=10 \text{ m/s}^2$ $p_a=1 \times 10^5 \text{ N/m}^2$)

a- 3.1×10^6 b- 3.2×10^6 c- 1.013×10^6 d- 3×10^5

2-A man sits on a chair of 4 legs of circular ends each of radius 1cm if the mass of the chair with the man is 100 kg, find the pressure of each leg produces equals $\times 10^5 \text{ pa}$

a-7.9 b-31 c-79.5 d- 100

3-cuboid is placed on surface such that the dimensions of it's base are (30 x10) cm so it exerts a pressure (p) on surface so how will the pressure on the surface change when the cuboid repositioned to be on the base of dimensions (40 x 10)cm

a-decreases by 0.25 p b-decreases by 0.75 p c-decreases by 0.5 p d-zero

4-U-shaped of areas 3 cm^2 , 6 cm^2 contains water ,oil is poured from narrow branch so height difference in water level becomes 4h,oil level is 6h then ratio between mass of the oil to mass of water above separating level is
a- $3/2$ b- $2/1$ c- $1/1$ d- $1/2$

5- In the previous problem if the experiment repeated with the same values but with uniform u-shaped tube then the difference between masses of oil and water is (o ,2 , cannot be determined)

6- U-shaped tube whose vertical height is 50 cm, was filled to its half with gasoline then another liquid is poured until the edge of the tube, so the height of gasoline above the interface between two liquids is (gasoline = 900 Kg/m^3 , $\rho_{\text{liquid}} = 850 \text{ Kg/m}^3$)
a. 50 cm b. 100 cm c. 44.7 cm d. 89.4 cm

7- U- shaped tube of two different area 2 cm^2 , 8 cm^2 oil is poured in the narrow side the level of water decreases 16 cm, So the volume of oil is cm^3 ($\rho_{\text{oil}} = 800 \text{ Kg/m}^3$, $\rho_{\text{water}} = 1000 \text{ Kg/m}^3$)

a. 12.5 b. 6.25 c. 50 d. 2.5

8-if pressure difference in a water pipe a long a building is 2 atm then height of the building ism

a-20.6 b-0.019 c-31

9-if reading of the barometer at the base of the mountain 70cmhg ,height of the mountain is 1km density of air is 1.25 kg/m^3 find the reading of the barometer at the top of the mountain in pascal is.....

a-60.8 b-81046 c-6000.8

ESSAY: a-Mention the effect of each of the following factors on height of mercury in barometer and also on the torrillian space

1-decreasing temperature

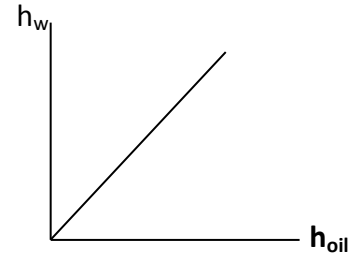
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2-increasing length of the tube

3-Area of the tube

4-moving barometer to a lower place

b-mention the slope of the graph



c-if area of cuboid placed on a surface decreased to quarter then the pressure will