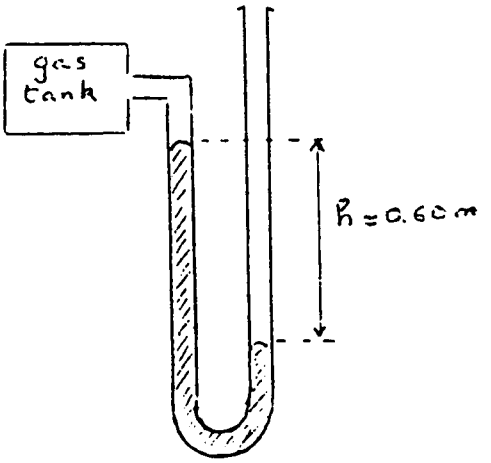
Chapter 15

An open-tube mercury manometer (see figure) is connected to a gas tank. What is the absolute pressure of the gas if h = 0.60 m and a nearby mercury barometer reads 76 cm-Hg ? (Density of mercury = 13.6*10**3 kg/m**3)



A. 1.93*10**4 Pa
B. 7.55*10**4 Pa
C. 2.00*10**5 Pa
(D.) 2.13*10**4 Pa
E. 1.01*10**5 Pa

A block of wood floats in water with 2/3 of its volume submerged. In oil, it has 0.900 of its volume submerged. Find the density of oil.

(A.) 741 kg/m**3
B. 621 kg/m**3
C. 921 kg/m**3
D. 1060 kg/m**3
E. 562 kg/m**3

A block of wood floats in water with 0.67 of its volume submerged. The density of water is 1000 kg/(m**3). When the same block floats floats in oil, 0.90 of its volume is submerged. Find the density of the oil.

(A.) 744 kg/(m**3)
B. 838 kg/(m**3)
C. 500 kg/(m**3)
D. 626 kg/(m**3)
E. 893 kg/(m**3)