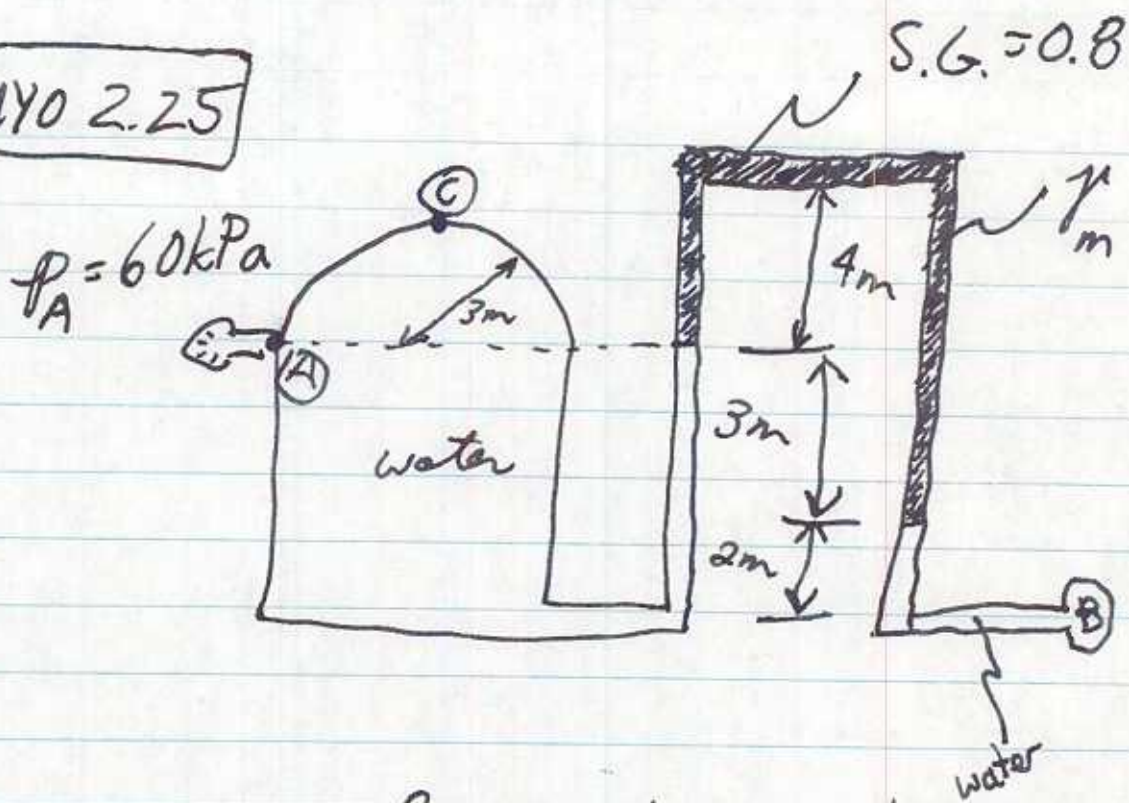


MYO 2.25



(a) $P_B = ?$ $\frac{\rho_m}{\rho_{H_2O}} = 0.8$ $\rho_m = 800 \frac{kg}{m^3}$ $\gamma_m = 7848 \frac{N}{m^3}$

$$P_B = P_A + (3m)(\gamma_m) + (2m)(\gamma_{H_2O})$$

$$P_B = 60,000 Pa + (3m)(7848 \frac{N}{m^3}) + (2m)(9810 \frac{N}{m^3})$$

$P_B = 103,164 Pa = 103 kPa$

(b) $P_C = ?$ (mm Hg)

$$P_C = P_A - \gamma_{H_2O} (3m) = 60,000 Pa - (9810 \frac{N}{m^3})(3m)$$

$$P_C = 30600 Pa$$

$$30,600 Pa = h \gamma_{Hg} = h (13600)(9.81)$$

$$h = .23 m \Rightarrow 230 mm$$

$P_C = 230 mm Hg$