30. Equilibrium of forces (on the floating body) is expressed as

$$F_b = m_{\text{body}} g \implies \rho_{\text{liquid}} g V_{\text{submerged}} = \rho_{\text{body}} g V_{\text{total}}$$

which leads to

$$\frac{V_{\text{submerged}}}{V_{\text{total}}} = \frac{\rho_{\text{body}}}{\rho_{\text{liquid}}} .$$

We are told (indirectly) that two-thirds of the body is below the surface, so the fraction above is 2/3. Thus, with $\rho_{\text{body}} = 0.98\,\text{g/cm}^3$, we find $\rho_{\text{liquid}} \approx 1.5\,\text{g/cm}^3$ – certainly much more dense than normal seawater (the Dead Sea is about seven times saltier than the ocean due to the high evaporation rate and low rainfall in that region).