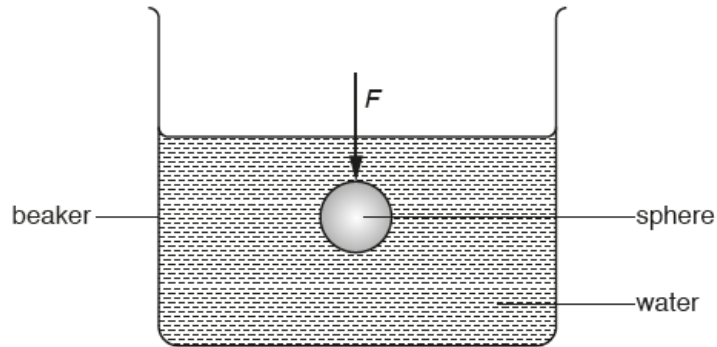**6**

A solid wooden sphere of density 650 kg m^{-3} has a mass of 0.75 kg.

It is pushed below the surface of water as shown. The density of water is 1000 kg m^{-3}.

What is the force F needed to be applied to the sphere to keep the wooden sphere stationary in this position?

A
3.9 N

B
7.3 N

C
11 N

D
19 N