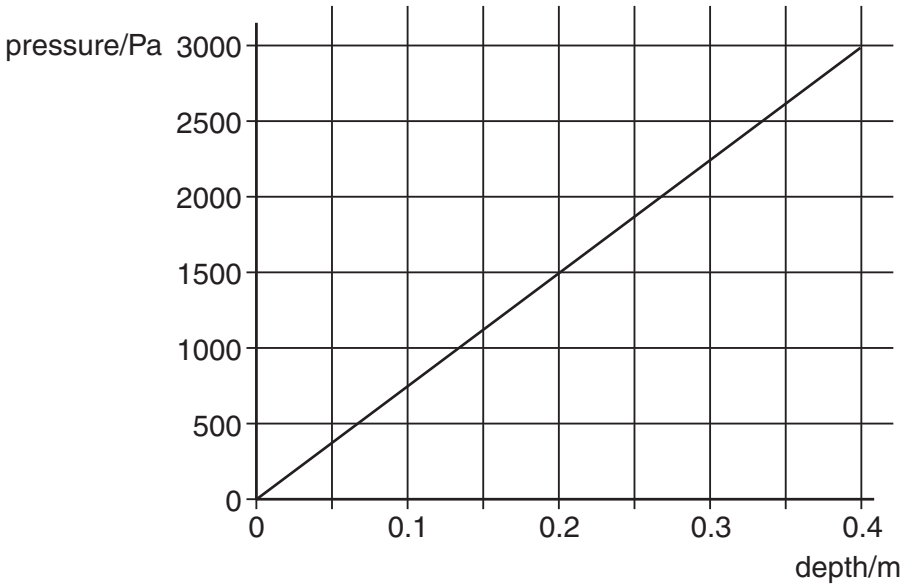
18 A boat moving at constant speed v through still water experiences a total frictional drag F.

What is the power developed by the boat?

A $\frac{1}{2}Fv$ **B** Fv **C** $\frac{1}{2}Fv^2$ **D** Fv^2

19 The graph shows how the pressure exerted by a liquid varies with depth below the surface.



What is the density of the liquid?

A 600 kg m^{-3} **B** 760 kg m^{-3} **C** 5900 kg m^{-3} **D** 7500 kg m^{-3}

20 In an experiment to demonstrate Brownian motion, smoke particles in a container are illuminated by a strong light source and observed through a microscope.

The particles are seen as small specks of light that are in motion.

What causes this motion?

A collisions between the smoke particles and air molecules

B collisions between the smoke particles and the walls of the container

C convection currents within the air as it is warmed by the light source

D kinetic energy gained by the smoke particles on absorption of light