Name: A-Level Physics: **w25 11**

17 An object with a mass of 100 g falls a vertical distance of 10 m.

What is the change in the gravitational potential energy of the object?

A 1 J **B** 10 J **C** 100 J **D** 10 000 J

A-Level Physics: **s25 12**

18 A ball of mass 1.2 kg travels horizontally at a speed of 3.0 $m\,s^{-1}$.

The ball hits a cushion and comes to rest over a horizontal distance of 0.020 m.

What is the work done by the cushion on the ball to bring the ball to rest?

A 0.24 J **B** 1.8 J **C** 5.4 J **D** 11 J

A-Level Physics: **s25 13**

19 An object travelling with a speed of 10 $m\,s^{-1}$ has kinetic energy of 1500 J.

The speed of the object is increased to 40 $m\,s^{-1}$.

What is the new kinetic energy of the object?

A 4500 J **B** 6000 J **C** 24 000 J **D** 1 350 000 J

A-Level Physics: **m25 12**

18 A projectile is launched at 45° to the horizontal with initial kinetic energy E.

Assuming air resistance to be negligible, what will be the kinetic energy of the projectile when it reaches its highest point?

A 0.50E **B** 0.71E **C** 0.87E **D** E