6 What will reduce the systematic errors when taking a measurement?

A adjusting the needle on a voltmeter so that it reads zero when there is no potential difference across it

B measuring the diameter of a wire at different points and taking the average

C reducing the parallax effects by using a marker and a mirror when measuring the amplitude of oscillation of a pendulum

D timing 20 oscillations, rather than a single oscillation, when finding the period of a pendulum

7 In an experiment to determine the acceleration of free fall g, the time t taken for a ball to fall through distance s was measured. The uncertainty in the measurement of s is estimated to be 2 %. The uncertainty in the measurement of t is estimated to be 3 %.

The value of g is determined using the equation

$$g = \frac{2s}{t^2}.$$

What is the uncertainty in the calculated value of g?

A 1 % **B** 5 % **C** 8 % **D** 11 %

Space for working