

1 Which quantity is a physical quantity?

- A** flavour
- B** kelvin
- C** minute
- D** potential difference

2 What is a power of 3.7 MW when expressed in kilowatts?

- A** $3.7 \times 10^{-3} \text{ kW}$
- B** $3.7 \times 10^{-3} \text{ KW}$
- C** $3.7 \times 10^3 \text{ kW}$
- D** $3.7 \times 10^3 \text{ KW}$

3 A spring is suspended from a fixed point and a force is applied. The position of a pointer attached to the bottom of the spring against a vertical ruler is recorded.

Before the force is applied, the position of the pointer is $(225 \pm 2) \text{ mm}$.

After the force is applied, the position of the pointer is $(250 \pm 2) \text{ mm}$.

The extension of the spring is determined.

What is the percentage uncertainty in the extension?

- A** 1.6% **B** 1.8% **C** 8.0% **D** 16%

4 What is the difference between a scalar quantity and a vector quantity?

- A** A scalar quantity has direction but a vector quantity does not.
- B** A scalar quantity has magnitude but a vector quantity does not.
- C** A vector quantity has direction but a scalar quantity does not.
- D** A vector quantity has magnitude but a scalar quantity does not.