1 What is the unit of the Young modulus when expressed in SI base units?

A $kg\,m^{-1}s^{-2}$

B $kg\,m^{3}s^{-2}$

C $kg\,m^{-2}$

D $kg\,m^{-1}s^{-1}$

2 The Reynolds number R is a constant used in the study of liquids flowing through pipes. R is a pure number with no unit.

$$R = \frac{\rho v D}{\mu}$$

where ρ is the density of the liquid, v is the speed of the liquid and D is the diameter of the pipe through which the liquid flows.

What are the SI base units of μ?

A $kg\,m\,s$ **B** $kg\,m^{-1}s$ **C** $kg\,m\,s^{-1}$ **D** $kg\,m^{-1}s^{-1}$

3 When a force F moves its point of application through a displacement s in the direction of the force, the work W done by the force is given by

$$W = F\,s.$$

How many vector quantities and scalar quantities does this equation contain?

A one scalar quantity and two vector quantities

B one vector quantity and two scalar quantities

C three scalar quantities

D three vector quantities

4 Measurements are subject to systematic error and random error.

Which measurements have high accuracy and low precision?

A high random error and high systematic error

B high random error and low systematic error

C low random error and high systematic error

D low random error and low systematic error