

- 1 A signal has a frequency of 2.0 MHz.

What is the period of the signal?

- A  $2\ \mu\text{s}$                       B  $5\ \mu\text{s}$                       C 200 ns                      D 500 ns

- 2 A metal sphere of radius  $r$  is dropped into a tank of water. As it sinks at speed  $v$ , it experiences a drag force  $F$  given by  $F = kr v$ , where  $k$  is a constant.

What are the SI base units of  $k$ ?

- A  $\text{kg m}^2 \text{s}^{-1}$                       B  $\text{kg m}^{-2} \text{s}^{-2}$                       C  $\text{kg m}^{-1} \text{s}^{-1}$                       D  $\text{kg m s}^{-2}$

- 3 Which physical quantity would result from a calculation in which a potential difference is multiplied by an electric charge?

- A electric current  
B electric energy  
C electric field strength  
D electric power

**Space for working**