

- 27** Which electromagnetic wave would cause the most significant diffraction effect for an atomic lattice of spacing around 10^{-10} m?
- A** infra-red
 - B** microwave
 - C** ultraviolet
 - D** X-ray

- 28** An electron is in an electric field of strength $5 \times 10^4 \text{ V m}^{-1}$. The field is the only influence on the electron.

The mass and charge of an electron are known.

Which quantity can be calculated without any more information?

- A** the force on the electron
- B** the momentum of the electron
- C** the kinetic energy of the electron
- D** the speed of the electron

Space for working