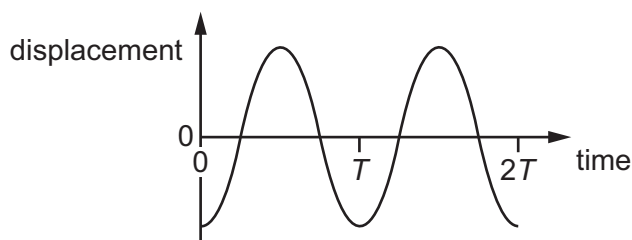


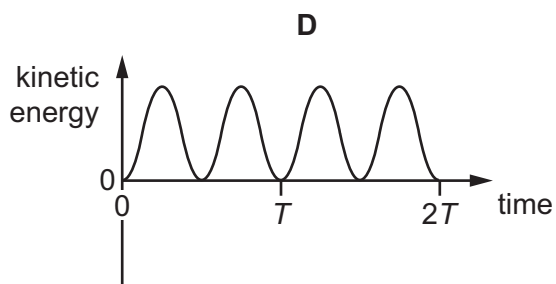
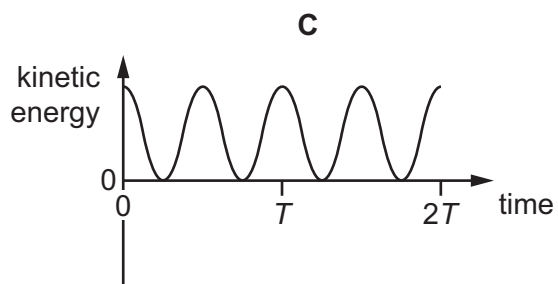
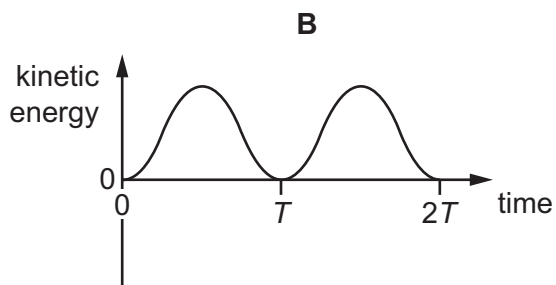
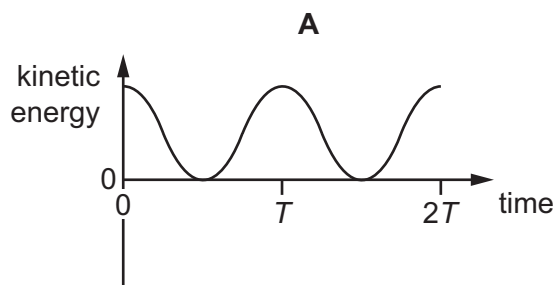
**22** Which statement about electromagnetic radiation is correct?

- A** Waves of wavelength  $5 \times 10^{-9}$  m are high-energy gamma rays.
- B** Waves of wavelength  $3 \times 10^{-8}$  m are ultra-violet waves.
- C** Waves of wavelength  $5 \times 10^{-7}$  m are infra-red waves.
- D** Waves of wavelength  $9 \times 10^{-7}$  m are light waves.

**23** When sound travels through air, the air particles vibrate. A graph of displacement against time for a single air particle is shown.



Which graph best shows how the kinetic energy of the air particle varies with time?



**Space for working**