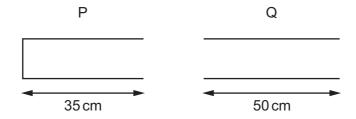
26 A surveyor's device emits a pulse of light. The light is reflected from a wall 150 m away.

What is the time taken for the pulse to travel from the device to the wall and then back to the device?

- **A** 0.05 ns
- **B** 0.10 ns
- **C** $0.50 \, \mu s$
- **D** 1.0 μs

27 Progressive sound waves of wavelength 20 cm enter the air columns in a closed pipe P and an open pipe Q. The lengths of the pipes are shown.



In which pipe or pipes are stationary waves formed?

- A P and Q
- **B** P only
- **C** Q only
- **D** neither P nor Q

28 What happens when waves pass through a gap equal to their wavelength?

- A There is diffraction and the wavelength decreases.
- **B** There is diffraction and the wavelength stays the same.
- **C** There is no diffraction and the wavelength decreases.
- **D** There is no diffraction and the wavelength stays the same.