

- 28** Diffraction can be observed when a wave passes an obstruction. The diffraction effect is greatest when the wavelength and the obstruction are similar in size.

For waves travelling through air, what is the combination of wave and obstruction that could best demonstrate diffraction?

- A** microwaves passing a steel post
 - B** radio waves passing a copper wire
 - C** sound waves passing a human hair
 - D** visible light waves passing a gate post
- 29** A health inspector is measuring the intensity of a sound. Near a loudspeaker, his meter records an intensity I . This corresponds to an amplitude A of the sound wave. At another position, the meter gives an intensity reading of $2I$.

What is the corresponding amplitude of the sound wave?

- A** $\frac{A}{\sqrt{2}}$ **B** $\sqrt{2}A$ **C** $2A$ **D** $4A$

Space for working