

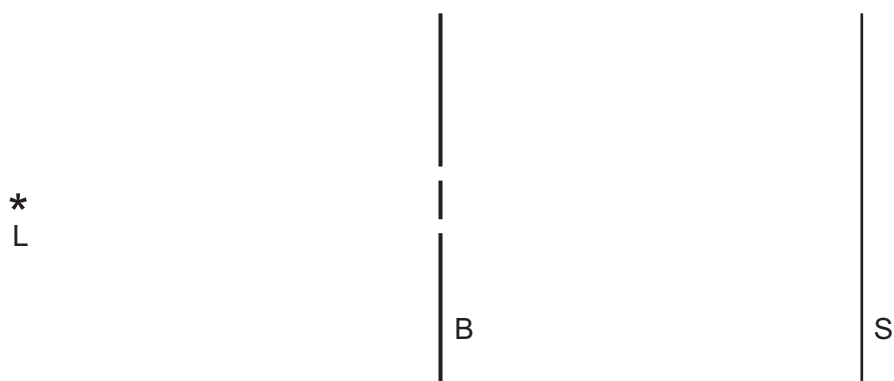
- 27 P is a source emitting infra-red radiation and Q is a source emitting ultra-violet radiation. The figures in the table are suggested values for the wavelengths emitted by P and Q.

Which row is correct?

	wavelength emitted by P / m	wavelength emitted by Q / m
<b>A</b>	$5 \times 10^{-5}$	$5 \times 10^{-8}$
<b>B</b>	$5 \times 10^{-5}$	$5 \times 10^{-10}$
<b>C</b>	$5 \times 10^{-7}$	$5 \times 10^{-8}$
<b>D</b>	$5 \times 10^{-7}$	$5 \times 10^{-10}$

- 28 The diagram shows a view from above of a double slit interference demonstration.

L is a monochromatic light source with a vertical filament. B is a barrier with two narrow vertical slits and S is a screen upon which interference fringes form.



The intensity is  $I$  at a point on the screen where the centre of the fringe pattern forms.

What is the intensity, at the same point, when one of the slits is covered up?

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

**Space for working**