25 An electromagnetic wave in free space has a frequency of 2.5×10^{14} Hz.

Which region of the electromagnetic spectrum includes this frequency?

A infrared

B microwave

C ultraviolet

D X-ray

26 Two polarising filters are placed next to each other so that their planes are parallel.

The first polarising filter has its transmission axis at an angle of 50° to the vertical.

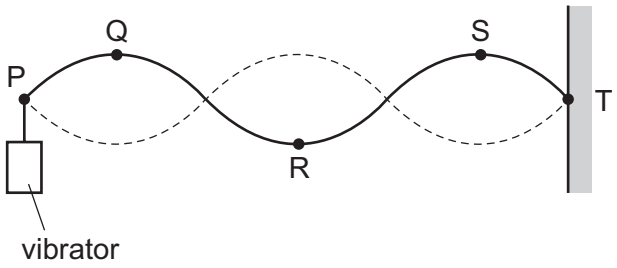
The second polarising filter has its transmission axis at an angle of 20° to the vertical. The angle between the transmission axes of the two polarising filters is 30°.

A beam of vertically polarised light of intensity $8.0\,W\,m^{-2}$ is incident normally on the first polarising filter.

What is the intensity of the light that is transmitted from the second polarising filter?

A zero **B** $2.5\,W\,m^{-2}$ **C** $2.9\,W\,m^{-2}$ **D** $6.0\,W\,m^{-2}$

27 A stationary wave on a stretched string is set up between two points P and T.



Which statement about the stationary wave is correct?

A Point R is at a node.

B Points Q and S vibrate in phase.

C The distance between P and T is three wavelengths.

D The wave transfers energy from P to T.