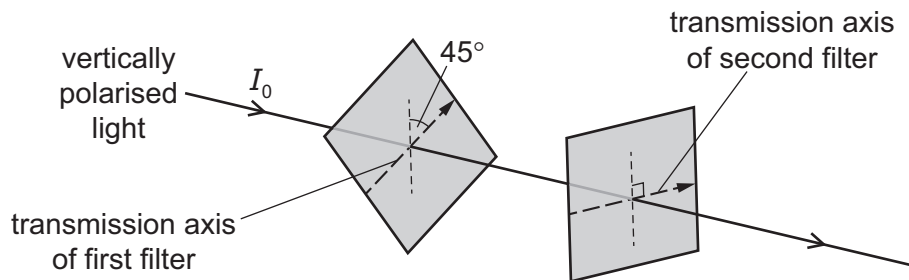


- 24** A vertically polarised beam of light of intensity  $I_0$  is incident normally on a polarising filter.

The transmission axis of the filter is at  $45^\circ$  to the vertical. The beam of light transmitted by this filter is then incident normally on a second filter. The transmission axis of the second filter is horizontal.



What is the intensity of the beam of light after transmission through the second filter?

- A** 0                      **B**  $\frac{1}{4} I_0$                       **C**  $\frac{1}{2} I_0$                       **D**  $I_0$
- 25** A stationary wave is formed by two progressive waves travelling in opposite directions along the same line of travel.

Which statement about the two progressive waves is **not** correct?

- A** They must have a constant phase difference.  
**B** They must have the same frequency.  
**C** They must have the same wavelength.  
**D** They must travel at the same speed.