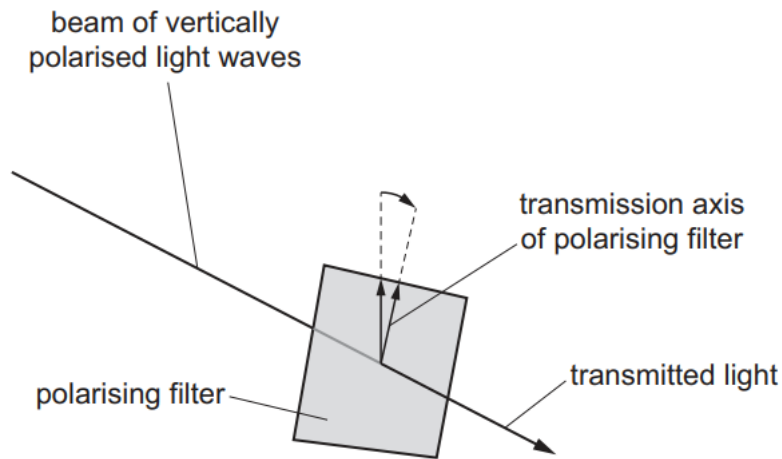**19** A beam of vertically polarised light is incident normally on a polarising filter. The filter can be rotated so that it is always in a plane perpendicular to the beam. The transmission axis of the filter is initially vertical.

beam of vertically polarised light waves

transmission axis of polarising filter

transmitted light

polarising filter

The filter is first rotated clockwise by an angle of 30° so that the transmitted light waves have intensity I_{30}. The filter is then rotated clockwise by a further angle of 30°.

What is the new intensity of the transmitted light waves?

A $0.25I_{30}$ **B** $0.33I_{30}$ **C** $0.75I_{30}$ **D** $0.87I_{30}$