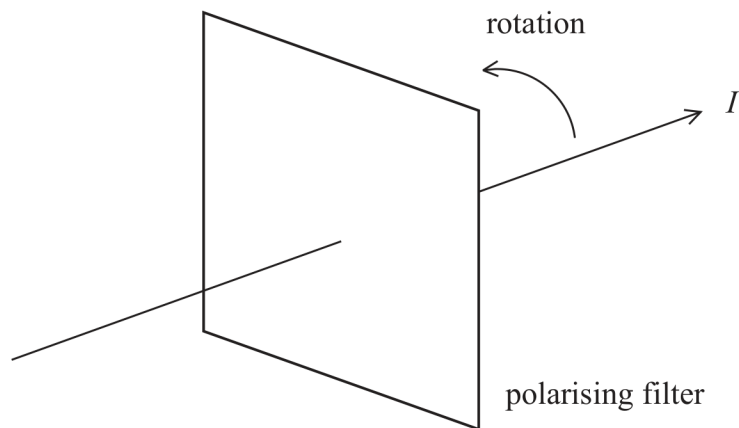4 A ray of unpolarised light is incident on a polarising filter. The polarising filter transmits light of intensity I, as shown.

The polarising filter is then rotated in the direction shown on the diagram.

Which of the following gives the intensity of light transmitted after the filter has been rotated 90°?

☒ **A** 0

☒ **B** $\dfrac{I}{4}$

☒ **C** $\dfrac{I}{2}$

☒ **D** I

(Total for Question 4 = 1 mark)