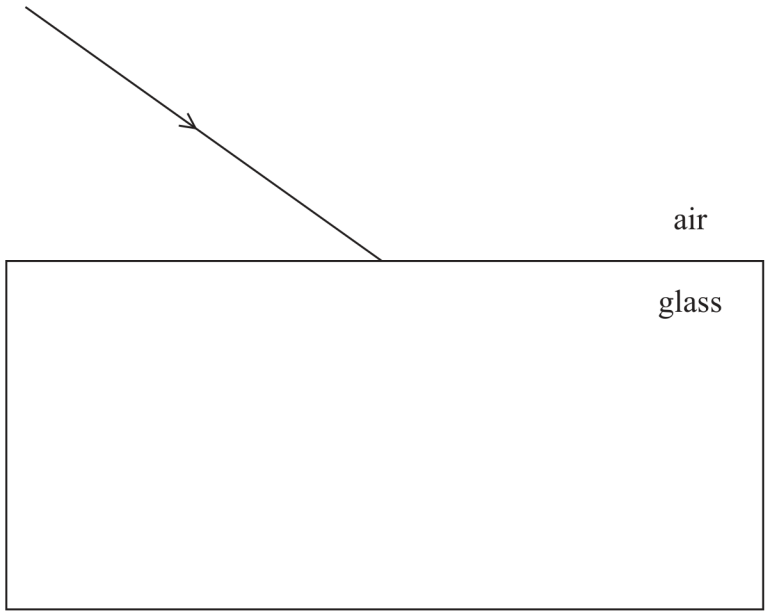
SECTION B

Answer ALL questions in the spaces provided.

11 The diagram shows a ray of light incident on a glass block.



(a) Complete the diagram to show the path of the ray as it enters the block. Use the space below for any calculations.

refractive index of glass = 1.58

(5)

(b) The speed of light in a different type of glass is $1.96 \times 10^{8}\,m\,s^{-1}$.

Calculate the value of the critical angle at a boundary between this type of glass and air.

(3)

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Critical angle = ...

(Total for Question 11 = 8 marks)