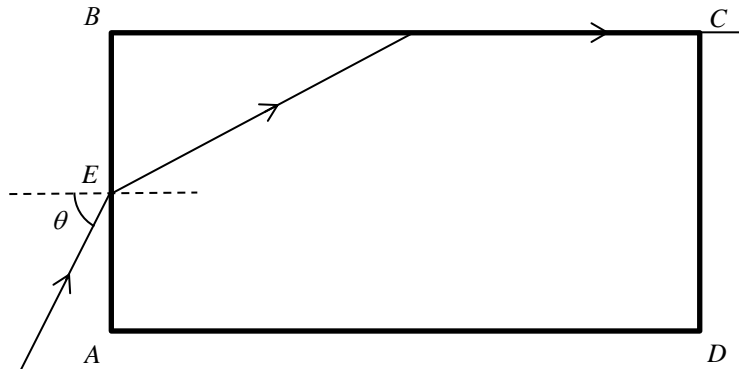


7. (a) A light ray enters a rectangular plastic block $ABCD$ from air at point E , and the angle of incidence is θ . The light ray emerges along face BC as shown in Figure 7.1. The refractive index of the plastic is 1.36.

Figure 7.1



- (i) Find the critical angle of the plastic. (2 marks)

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- (ii) Find the value of θ . (3 marks)

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- (iii) If the light ray enters the plastic block at point E with an angle of incidence larger than θ , sketch the path of the light ray in Figure 7.1. (2 marks)

Answers written in the margins will not be marked.

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