SECTION B

Answer ALL questions.

11 Every litre of fuel used in a car engine releases 32 MJ of energy. During one journey the car used 65 litres of fuel. The car journey lasted 8 hours.

(a) Show that the average power input to the engine was about 70 kW.

(2)

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(b) The car travelled a total distance of 730 km during the journey.

The average force of the engine was 2.1 kN.

Show that the average power output of the engine was about 50 kW.

(3)

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(c) Determine the efficiency of the engine.

(2)

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Efficiency of engine = ...

(Total for Question 11 = 7 marks)