3.1 Energy: 10-minute Pack

AQA 8463 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 State the unit used for energy in the SI system.

(a) Unit for energy. **(1)**

(Total for Question 1 is 1 mark)

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2 Give two examples of ways energy can be transferred from one object to another.

(a) Two examples of energy transfer methods (one answer gives both). **(1)**

(Total for Question 2 is 1 mark)

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3 State the definition of power in physics and give its SI unit.

(a) Definition of power. **(1)**

(b) SI unit of power. **(1)**

(Total for Question 3 is 2 marks)

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4 A person pushes a toy car with a constant horizontal force of 20 N for 5.0 m. Calculate the work done on the car. Show your working.

(a) Use work done = force x distance. **(2)**

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(Total for Question 4 is 2 marks)

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5 Energy resources can be classified as renewable or non-renewable.

(a) Name two renewable energy resources. **(2)**

(b) Give one disadvantage of using fossil fuels to generate electricity. **(1)**

(Total for Question 5 is 3 marks)

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Mark scheme · 3.1 Energy: 10-minute Pack

Question 1

(a) joule or J cao **B1**

(a) Answer: Joule (J)

Question 2

(a) examples such as heating, mechanical work, electrical transfer, radiation, sound, oe (any two in one answer) cao **B1**

(a) Answer: For example: heating and electrical transfer.

Question 3

(a) the rate of doing work or the rate of energy transfer cao **B1**

(a) Answer: The rate of doing work or rate of energy transfer.

(b) watt or W cao **B1**

(b) Answer: Watt (W)

Question 4

(a) substitutes: W = 20 x 5.0 **M1**

(a) 100 J cao **A1**

(a) Answer: 100 J

Question 5

(a) one renewable resource, e.g. wind **B1**

(a) a second, different renewable resource, e.g. solar / hydroelectric / tidal / wave / geothermal / bio-fuel **B1**

(a) Answer: Any two of: wind, solar, hydroelectric, tidal, wave, geothermal, bio-fuel

(b) releases carbon dioxide / greenhouse gases (climate change) OR they are finite / will run out OR causes acid rain **B1**

(b) Answer: They release carbon dioxide (or: they are finite / cause acid rain)

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