9.3 Sustainable Energy Use and Local Renewable Schemes: 10-minute Pack

AQA 8035 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Total time suggested 10 minutes.

1 Define the term 'energy conservation' as used in household and community settings.

(Total for Question 1 is 1 mark)

2 State TWO simple actions a household can take to reduce energy demand at home.

(Total for Question 2 is 2 marks)

3 Give ONE environmental benefit of households switching from fossil-fuel heating to electric heating powered by renewable electricity.

(Total for Question 3 is 1 mark)

4 Describe how home insulation, for example loft insulation and cavity wall insulation, reduces household energy use.

(Total for Question 4 is 2 marks)

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5 Describe what is meant by an energy-efficient appliance and give one example relevant to kitchens.

(Total for Question 5 is 2 marks)

6 Suggest ONE challenge that implementing a small-scale renewable energy scheme in a low-income country might face, and suggest ONE practical solution to that challenge.

(Total for Question 6 is 2 marks)

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Mark scheme · 9.3 Sustainable Energy Use and Local Renewable Schemes: 10-minute Pack

Question 1

reducing the amount of energy used by people or systems, for example by changing behaviour or using less energy, oe **B1**

Answer: Reducing the amount of energy used by people or systems, for example by changing behaviour or using less energy.

Question 2

switching off lights and appliances when not in use, oe **B1**

reducing thermostat temperature or wearing warmer clothing indoors, oe **B1**

Answer: Switch off lights and appliances when not in use; reduce the thermostat temperature or wear warmer clothing indoors.

Question 3

reduction in carbon dioxide emissions if the electricity comes from renewable sources, oe **B1**

Answer: Reduction in carbon dioxide emissions if the electricity is generated from renewable sources.

Question 4

insulation reduces heat loss through the roof and walls, keeping homes warmer for longer, oe **B1**

this lowers the need for heating, so less energy is used and fuel bills fall, oe **B1**

Answer: Insulation reduces heat loss through the roof and walls, keeping homes warmer for longer; this lowers the need for heating so less energy is used and fuel bills fall.

Question 5

an appliance that uses less energy to do the same job compared with an older or less efficient model, oe **B1**

example, an A-rated refrigerator or an efficient induction hob, oe **B1**

Answer: An appliance that uses less energy to do the same job compared with older models; for example, an A-rated refrigerator or an efficient induction hob.

Question 6

challenge, e.g. lack of upfront finance for purchasing equipment, oe **B1**

solution, e.g. use microfinance, payment plans or government subsidies to spread the cost, oe **B1**

Answer: Challenge: lack of upfront finance for equipment. Solution: use microfinance, affordable payment plans or subsidies to spread the cost.

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