4.4 Urban Sustainability and Reducing Cities' Environmental Impact: 10-minute Pack

AQA 8035 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer the short questions with brief answers. Full-sentence responses are required for the 6-mark and 12-mark questions. Suggested time: 10 minutes.

1 Define the term 'urban sustainability' in the context of cities such as Freiburg Vauban.

(Total for Question 1 is 1 mark)

2 Give one example of a water conservation strategy used in sustainable urban areas, giving the strategy name.

(Total for Question 2 is 1 mark)

3 State one waste reduction or recycling scheme a city council might introduce to reduce landfill.

(Total for Question 3 is 1 mark)

4 Which one of the following is a direct benefit of congestion charging in a city centre?

- ☐ A. Increased car ownership
- ☐ B. Reduced peak-time traffic volumes
- ☐ C. Higher on-street parking availability for residents only
- ☐ D. Reduced public transport funding

(Total for Question 4 is 1 mark)

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5 Name TWO energy conservation measures that can be retrofitted to existing urban housing.

(Total for Question 5 is 2 marks)

6 Describe briefly how green roofs contribute to energy conservation and urban sustainability in a district like Vauban.

(Total for Question 6 is 3 marks)

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Mark scheme · 4.4 Urban Sustainability and Reducing Cities' Environmental Impact: 10-minute Pack

Question 1

meeting the needs of the present urban population without compromising the ability of future generations to meet their needs, with balanced social, economic and environmental aims, oe **B1**

Answer: Urban sustainability is meeting the needs of the present urban population without compromising the ability of future generations to meet their needs, balancing social, economic and environmental aims.

Question 2

example e.g. grey water recycling, water butts, or low-flow fittings (any one named) oe **B1**

Answer: Grey water recycling.

Question 3

e.g. curbside separated recycling collection, food waste collection for composting, or household glass and plastic bottle banks (any one named) oe **B1**

Answer: Curbside separated recycling collection.

Question 4

B, reduced peak-time traffic volumes **B1**

Answer: B

Question 5

insulation of walls/loft insulation, oe **B1**

installation of solar panels/solar retrofit, oe **B1**

Answer: Wall or loft insulation and installation of solar panels (solar retrofit).

Question 6

green roofs provide insulation, reducing heat loss in winter and reducing overheating in summer, oe **B1**

they reduce energy demand for heating and cooling, lowering greenhouse gas emissions, oe **B1**

they also absorb rainwater, reducing runoff and pressure on drainage, and provide urban biodiversity benefits, oe **B1**

Answer: Green roofs provide insulation, reducing heat loss in winter and reducing overheating in summer, which lowers energy demand for heating and cooling and so reduces emissions; they also absorb rainwater, reducing runoff and supporting urban biodiversity.

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