1.24 Biodiversity, Cycles and Human Impact: 10-minute Pack

Total Marks

AQA 8464 · Calculator allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Biodiversity describes the range of living things found on Earth or within an ecosystem.

(a) Define the term 'biodiversity'. **(1)**

(b) Give two reasons why maintaining a high level of biodiversity is important. **(2)**

(Total for Question 1 is 3 marks)

2 An increasing human population, and a rising standard of living, mean that more resources are used and more waste is produced.

(a) Explain why an increasing human population and a rising standard of living have led to an increase in the amount of household, industrial and agricultural waste produced. **(2)**

(b) Explain how waste materials can reduce biodiversity if they are not handled correctly. **(3)**

(Total for Question 2 is 5 marks)

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Mark scheme · 1.24 Biodiversity, Cycles and Human Impact: 10-minute Pack

Question 1

(a) the variety of different species (and the genetic variation within those species) living in an area/ecosystem (oe) **B1**

(a) Answer: The variety of different species, and the genetic variation within them, living in an area or ecosystem.

(b) a high biodiversity helps to keep ecosystems stable, since many different species (rather than just one) carry out important processes such as food production, decomposition and the recycling of nutrients (oe) **B1**

(b) a wide range of species provides a large gene pool, which could be a source of new medicines, food crops or other resources in the future (oe) **B1**

(b) Answer: A high biodiversity keeps ecosystems stable, since important processes such as decomposition and nutrient recycling do not depend on just one species, and it provides a wide gene pool that could be a source of new medicines, food crops or other resources in the future.

Question 2

(a) more people means more products (e.g. food, packaging, goods) are made and consumed, using more resources and producing more waste (oe) **B1**

(a) a rising standard of living means people buy and use more goods (e.g. electronics, packaging), which also increases the amount of waste produced (oe) **B1**

(a) Answer: More people consuming more products means more resources are used and more waste is produced, and a rising standard of living means people buy and use even more goods, further increasing the amount of waste generated.

(b) if waste is not disposed of correctly (e.g. sent to unmanaged landfill), it can pollute land, water or air (oe) **B1**

(b) for example, chemicals from landfill sites can leach into the soil and groundwater, or waste gases can pollute the atmosphere (oe) **B1**

(b) this pollution can kill organisms directly, or damage the habitats and food sources they depend on, reducing the number and variety of species that can survive in the affected area **B1**

(b) Answer: If waste is not disposed of correctly it can pollute land, water and air, for example by chemicals leaching from landfill into soil and groundwater; this pollution can kill organisms directly, or damage the habitats and food sources they rely on, reducing the number and variety of species able to survive there.

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