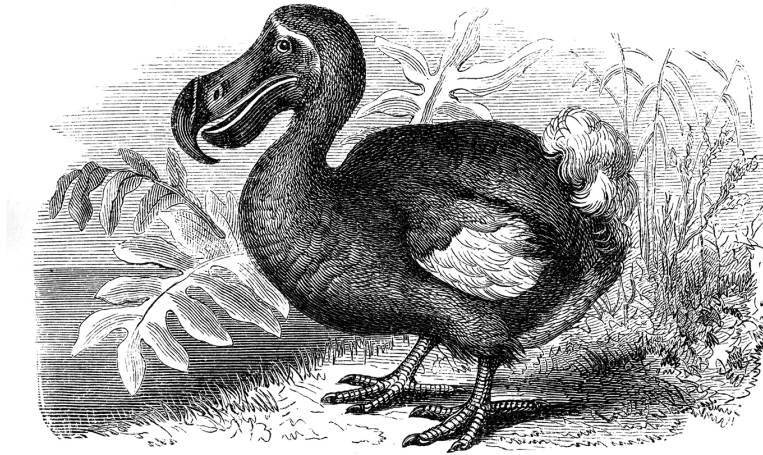


0 5

Figure 10 shows a flightless bird called the dodo (*Raphus cucullatus*).

Figure 10



The dodo:

- was 1 m tall
- had a mass of 20 kg
- lived in rainforests on a tropical island
- ate fruits
- made its nest on the ground.

A female dodo laid only one egg each year.

Humans arrived on the island in the year 1507. By 1681 the dodo was extinct.

0 5 . 1

What is the genus of the dodo?

[1 mark]

Tick (✓) **one** box.

Animal

Bird

Raphus



**0 5 . 2** Before the arrival of humans, there were no other large animals living on the island.

Suggest **two** reasons why the dodo became extinct soon after the arrival of humans.

**[2 marks]**

1 \_\_\_\_\_

2 \_\_\_\_\_

Today, humans are cutting down large areas of tropical rainforests.

**0 5 . 3** Suggest **one** use of the land after the trees have been removed.

**[1 mark]**

\_\_\_\_\_

\_\_\_\_\_

**0 5 . 4** Why does the removal of trees cause an increase in carbon dioxide in the atmosphere?

**[2 marks]**

Tick (✓) **two** boxes.

There are fewer animals.

There is less photosynthesis.

There is less respiration.

The soil dries out.

The trees are burned.

**Turn over ►**



**0 5 . 5** What effect would an increase in carbon dioxide in the atmosphere have on global air temperature?

**[1 mark]**

Tick (✓) **one** box.

Decrease

Increase

Stay the same

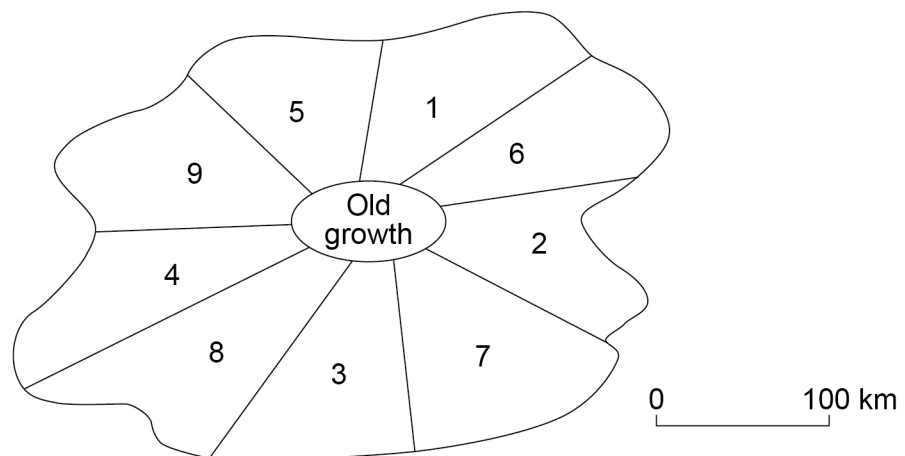
'Sustainable forestry' reduces the harmful effects of cutting down trees on the environment.

**Figure 11** shows a method of 'sustainable forestry'.

Numbers 1–9 show different parts of a rainforest.

**Figure 11**

**Map of the rainforest**



The trees are cut down in the sequence 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9

- The trees are cut down in only one area at any one time.
- It takes 30 years to cut down the trees in each area.
- The trees in the 'Old growth' area are never cut down.



**0 5 . 6**

How many years would it take to cut down the trees in all of the numbered areas in **Figure 11**?

**[2 marks]**

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Number of years = \_\_\_\_\_

**0 5 . 7**

The rainforest contains:

- 750 species of trees
- 400 species of birds
- 150 species of butterflies
- many other species of plants and animals.

Explain how the pattern of cutting down trees shown in **Figure 11** stops the biodiversity of the rainforest being reduced.

**[4 marks]**

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13

**Turn over ▶**



Question	Answers	Extra information	Mark	AO / Spec. Ref.
05.1	Raphus		1	AO2 4.6.4
05.2	any <b>two</b> from: <ul style="list-style-type: none"> <li>• humans hunted / killed / ate the dodo</li> <li>• <b>or</b> dodo easy to catch</li> <li>• humans ate / collected eggs</li> <li>• humans ate the dodo's food</li> <li>• animals brought by humans ate dodo / eggs</li> <li>• diseases introduced by humans <b>or</b> by imported animals</li> <li>• humans destroyed dodo's habitat / nests</li> </ul>	allow examples – eg cats / dogs / pigs / rats  allow deforestation	2	AO2 4.6.3.6
05.3	any <b>one</b> from: <ul style="list-style-type: none"> <li>• growing crops / biofuels</li> <li>• grazing animals</li> <li>• building houses</li> <li>• quarrying / mining</li> <li>• dumping waste</li> </ul>	allow farming / agriculture  allow other correct examples – eg building roads	1	AO1 4.7.3.3 4.7.3.4
05.4	there is less photosynthesis  the trees are burned		1  1	AO2 4.4.1.1 4.4.1.2 4.7.3.4 4.7.3.5
05.5	increase		1	AO1 4.7.3.5
05.6	9 × 30  270	an answer of 270 scores <b>2</b> marks	1  1	AO2 4.7.3.4 4.7.3.6

Question	Answers	Mark	AO / Spec. Ref.
<b>05.7</b>	<b>Level 2:</b> Relevant points (reasons/causes) are identified, given in detail and logically linked to form a clear account.	3–4	AO3  4.7.3.1 4.7.3.4 4.7.3.6
	<b>Level 1:</b> Points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.	1–2	
	<b>No relevant content</b>	0	
	<b>Indicative content</b> <ul style="list-style-type: none"> <li>• displaced animals can move to adjacent areas</li> <li>• where suitable habitat is found <b>or</b> where the trees have not been cut down</li>   <li>• seeds return to deforested area</li> <li>• from other (forested) areas</li>   <li>• plants / trees begin to grow back</li> <li>• so provide food / shelter / nest sites / suitable habitat for animals</li>   <li>• animals return to re-growing area</li> <li>• from other (forested) areas</li>   <li>• sufficient time for regeneration</li>   <li>• old growth area is a source of recolonising organisms</li> </ul>		
<b>Total</b>			<b>13</b>