AQA GCSE Biology | 8461

SPECIFICATION POINT 4.7.3.4

Deforestation

Past-paper questions

Tier	**Foundation**
Question groups	**17**
Available paper years	**2007–2019**

Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

Name: _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

4.7.3.4 Deforestation

Question 01

January 2007 | BLY1F | Original Q7 | Legacy

7 Deforestation affects the environment in many ways.

(a) Deforestation increases the amount of carbon dioxide in the atmosphere.

Give **two** reasons why.

1 .....

.....

2 .....

.....

(2 marks)

(b) Deforestation also results in a loss of *biodiversity*.

(i) What is meant by *biodiversity*?

.....

.....

(1 mark)

(ii) Give **one** reason why it is important to prevent organisms from becoming extinct.

.....

.....

(1 mark)

4

4.7.3.4 Deforestation

Question 02

June 2007 | BLY1B | Original Q2 | Legacy

QUESTION TWO

The burning of forests to create more land for growing rice is affecting the environment.

Match words, **A**, **B**, **C** and **D**, with the numbers **1–4** in the sentences.

A biodiversity

B carbon dioxide

C energy

D methane

Forests remove . . . **1** . . . from the atmosphere.

Cutting down forests reduces the amount of . . . **2** . . . .

Growing more rice is increasing the amount of . . . **3** . . . in the atmosphere.

The greenhouse effect is caused by the re-radiation of . . . **4** . . . back to the Earth.

4.7.3.4 Deforestation

Question 03

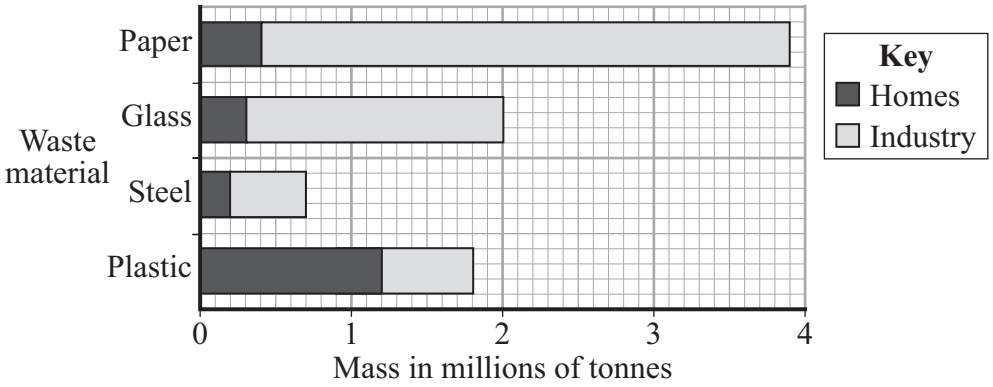
November 2007 | BLY1B | Original Q4 | Legacy

QUESTION FOUR

The human population is increasing rapidly.

This increases the amount of waste produced.

The bar chart shows the mass of waste produced by homes and industry in the UK in 2005.



Match materials, **A**, **B**, **C** and **D**, with the numbers **1–4** in the table.

A glass

B paper

C plastic

D steel

	Information
1	recycling of this material means fewer forests are cut down
2	industry produced 1.7 million tonnes of waste of this material
3	the material that formed the smallest mass of waste from homes
4	one third of this waste material came from industry

4.7.3.4 Deforestation

Question 04

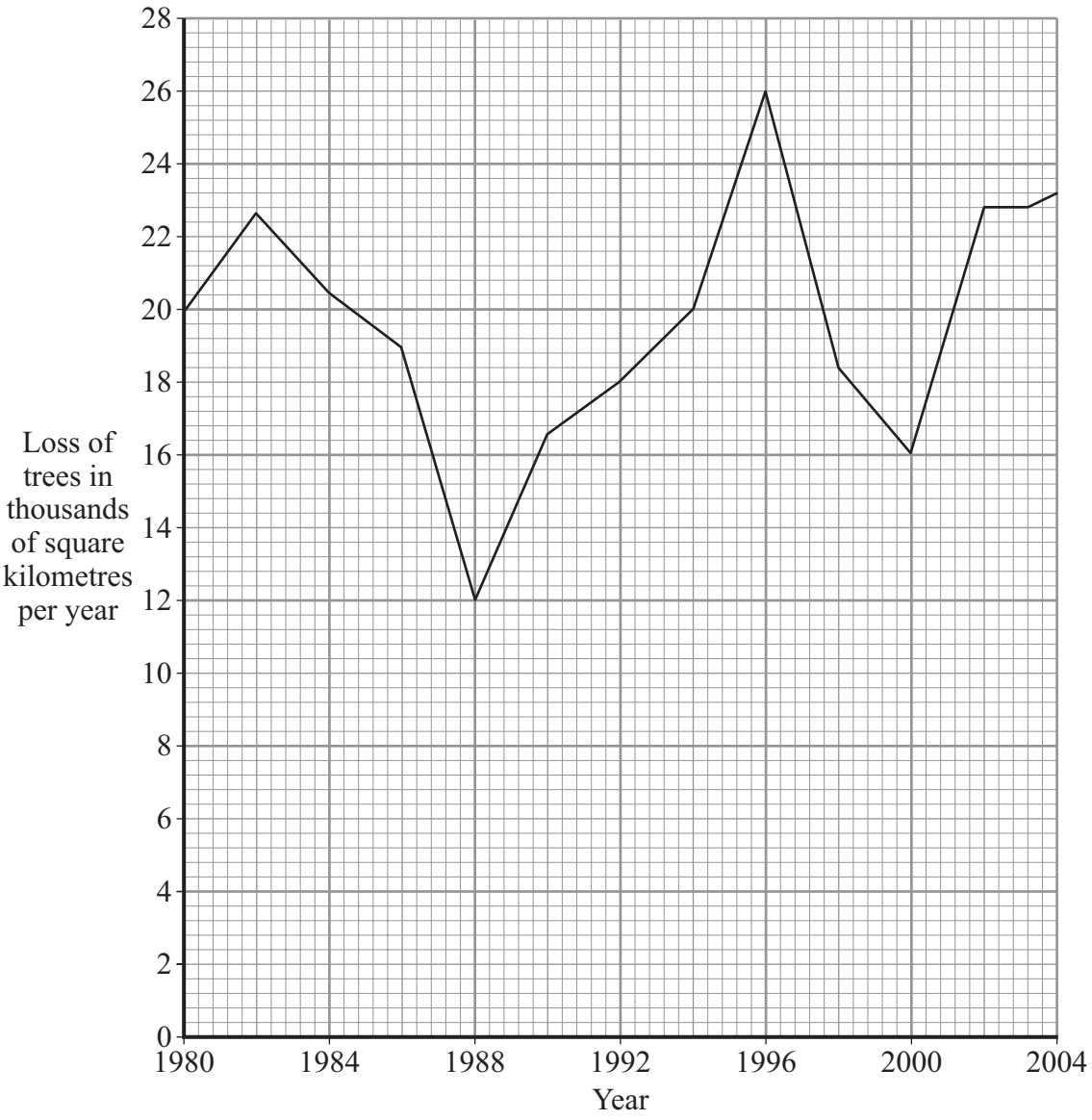
March 2008 | BLY1BP | Original Q7 | Legacy

QUESTION SEVEN

Deforestation is a major concern for all of us.

The forests of Brazil are now much smaller than they used to be.

The graph shows the loss of trees from the Amazon rain forest from 1980 to 2004.



4.7.3.4 Deforestation

Question 04 · continued March 2008 | BLY1BP | Original Q7 | Legacy

7A In which year were most trees lost?

1 1982

2 1988

3 1996

4 2000

7B What was the loss of trees in 1988?

1 12 km^2 per year

2 120 km^2 per year

3 1 200 km^2 per year

4 12 000 km^2 per year

7C Most of the loss of trees from tropical forests has been due to . . .

1 using the land for agriculture.

2 removing the threat from wild animals.

3 opening up the area for tourism.

4 housing the population.

7D Forests are important for our planet because . . .

1 they remove acid rain from the atmosphere.

2 they release carbon dioxide to the atmosphere.

3 they radiate energy back into space.

4 large amounts of carbon are ‘locked-up’ in the trees.

4.7.3.4 Deforestation

Question 05

January 2009 | BLY1F | Original Q2 | Legacy

2 The photograph shows an area where a tropical forest is being cleared.



© Kazuyoshi Nomachi/Corbis

2 (a) Complete the sentences.

People could use timber from the forest for ..... .

The cleared land can be used for ..... .

Clearing forests increases the concentration of ..... in the atmosphere.

This increase causes global ..... .

(4 marks)

2 (b) Clearing forests causes some species to become *extinct*.

2 (b) (i) What is meant by *extinct*?

.....

.....

(1 mark)

2 (b) (ii) It is important to prevent species from becoming extinct.

Give **one** reason why.

.....

.....

(1 mark)

6

4.7.3.4 Deforestation

Question 06

June 2009 | BLY1BP | Original Q2 | Legacy

QUESTION TWO

There are many ways in which we can help the environment.

Match methods, **A**, **B**, **C** and **D**, with the numbers **1–4** in the table.

A increasing the amount of glass and metal recycled

B increasing the amount of paper recycled

C improving insulation in homes

D extending the railway network

	Impact on the environment
1	fewer forests are cut down
2	fewer quarries are dug to provide raw materials
3	fewer car journeys are made
4	less electricity is used

4.7.3.4 Deforestation

Question 07

March 2010 | BLY1BP | Original Q2 | Legacy

QUESTION TWO

The drawing shows trees being cleared to make more land for farming.



Match words, **A**, **B**, **C** and **D**, with the numbers **1–4** in the sentences.

A biodiversity

B pollution

C global warming

D deforestation

The removal of vast areas of trees is called . . . **1** . . . .

This can reduce . . . **2** . . . .

The trees no longer remove carbon dioxide from the atmosphere. This results in increased . . . **3** . . . .

The lorries used to move the trees cause air . . . **4** . . . .

4.7.3.4 Deforestation

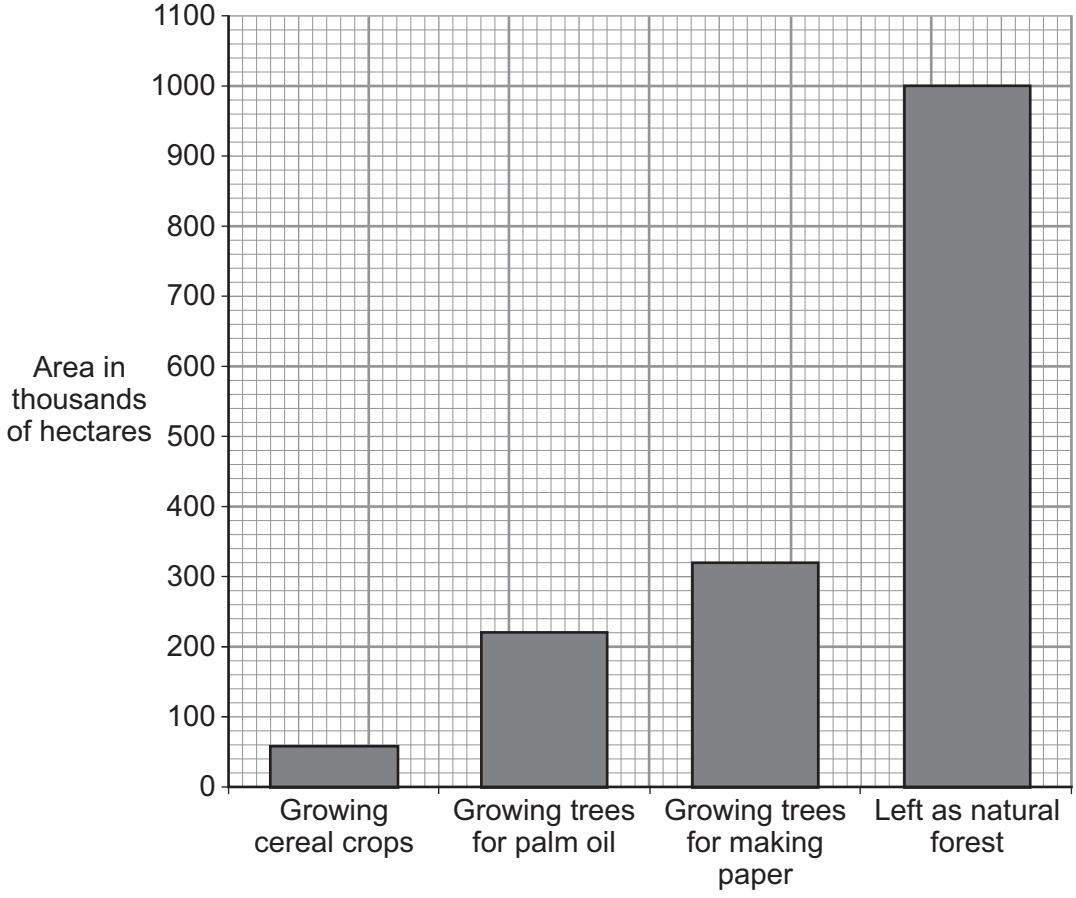
Question 08

June 2010 | BLY1BP | Original Q4 | Legacy

QUESTION FOUR

Tropical forests are being cut down and the cleared land used for other purposes.

The bar chart shows how tropical forest areas are now being used in one Asian country.



Match areas, **A**, **B**, **C** and **D**, with the statements **1–4** in the table.

A 60 000 hectares

B 320 000 hectares

C 540 000 hectares

D 1 000 000 hectares

1	area of forest cleared for growing cereals
2	total area planted with trees for palm oil and making paper
3	area with the largest biodiversity
4	area which could be reduced by recycling

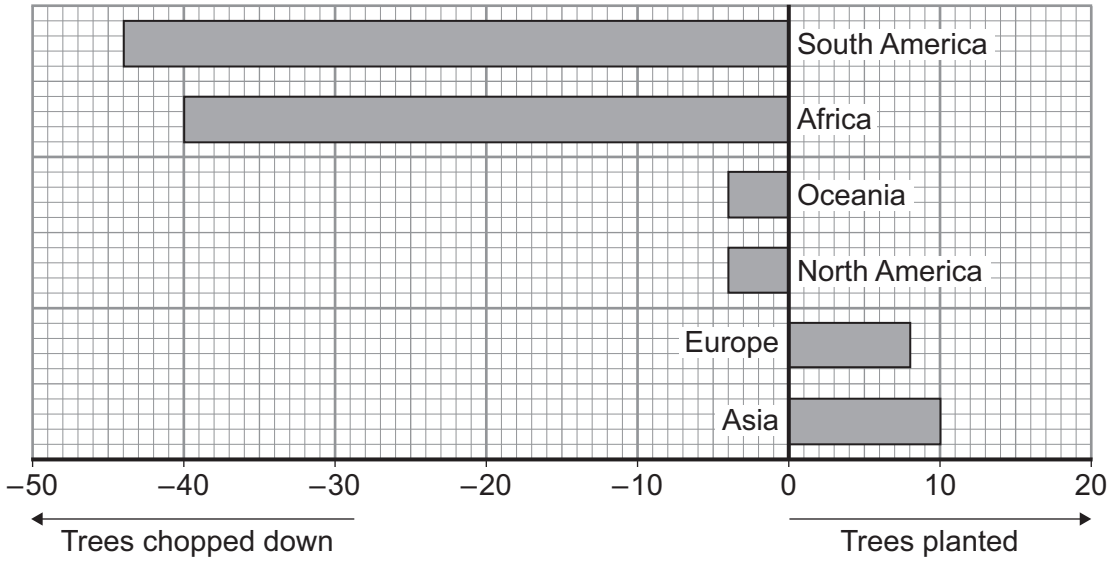
4.7.3.4 Deforestation

Question 09

June 2010 | BLY1F | Original Q5 | Legacy

5 In many parts of the world, forests are being chopped down (deforestation) so that the land can be used to grow food crops. In other parts, trees are planted to produce new forests.

The graph shows how the area of forest in each of the continents is changing each year.



Change in area of forest in thousands of km^2 per year

5 (a) (i) What area of forest is being lost in Africa each year?

Area = ... thousand km^2
(1 mark)

5 (a) (ii) Use **Steps 1**, **2** and **3** to calculate the total change to the area of forest each year.

Step 1 Calculate the total area of trees chopped down.

.....

Total area chopped down = ... thousand km^2

Step 2 Calculate the total area of trees planted.

.....

Total area planted = ... thousand km^2

4.7.3.4 Deforestation

Question 09 · continued

Step 3 Use your answers from **Steps 1** and **2** to calculate the total change in the area of forest.

.....

Total change in area of forest ..... thousand km^2

(3 marks)

5 (b) Draw a ring around the correct answer to complete each sentence.

5 (b) (i) Large scale deforestation reduces the number of species of

plants only.

animals only.

both animals and plants.

(1 mark)

5 (b) (ii) The remains of the trees are broken down into carbon dioxide by

lichens.

microorganisms.

plants.

(1 mark)

5 (b) (iii) The gas released into the atmosphere when trees are burned is

carbon dioxide.

methane.

oxygen.

(1 mark)

7

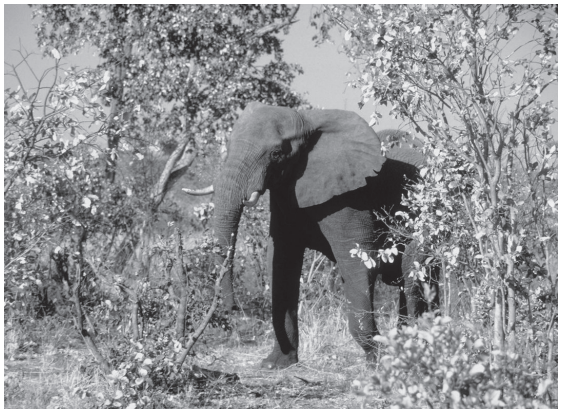
4.7.3.4 Deforestation

Question 10

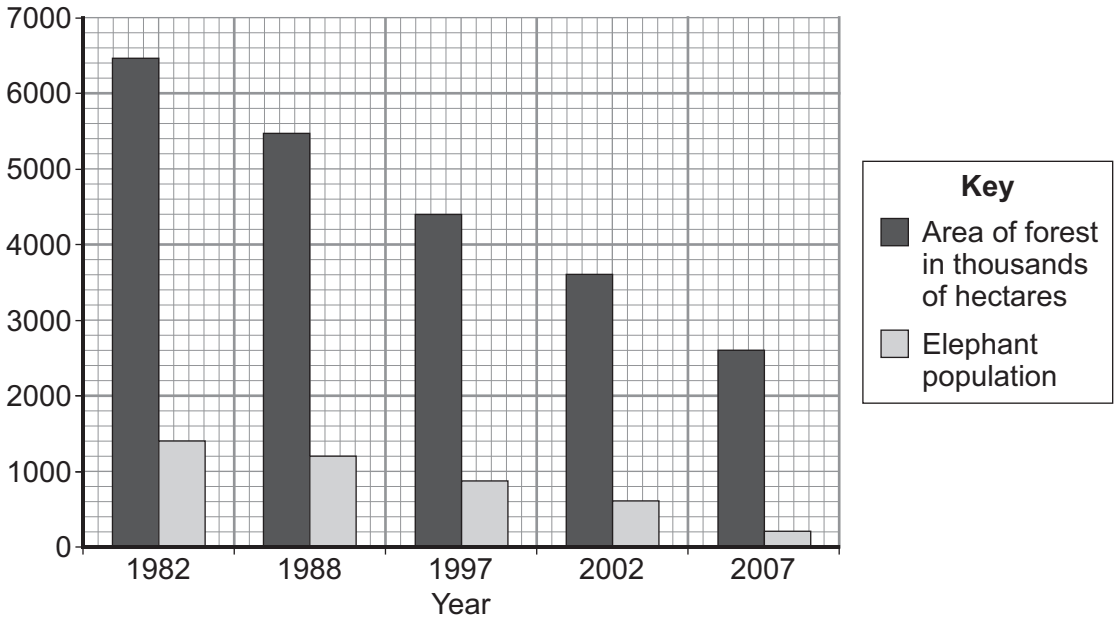
March 2011 | BLY1BP | Original Q3 | Legacy

QUESTION THREE

Asian elephants live mainly in forests.



The graph shows the effect of cutting down forests on elephant numbers in Indonesia.



Match figures, **A**, **B**, **C** and **D**, with the statements **1**–**4** in the table.

A 160

B 1200

C 1400

D 2600

1	the area of the forest in 2007 in thousands of hectares
2	the highest number of elephants in any year

4.7.3.4 Deforestation

Question 11

March 2011 | BLY1BP | Original Q8 | Legacy

QUESTION EIGHT

The picture shows part of a forest burning in Mexico.



8A The main reason for burning forests like this is to . . .

1 reduce the need for fertilisers.

2 use the land for agriculture.

3 use the land for roads.

4 reduce the 'greenhouse effect'.

8B Many scientists believe that large-scale deforestation has led to an increase in the carbon dioxide concentration in the atmosphere.

Which row in the table shows the effects of deforestation?

	Amount of carbon dioxide locked up in wood	Amount of carbon dioxide released by burning	Amount of carbon dioxide released by microorganisms
1	increases	decreases	increases
2	decreases	increases	increases
3	increases	increases	increases
4	decreases	decreases	decreases

4.7.3.4 Deforestation

Question 11 · continued March 2011 | BLY1BP | Original Q8 | Legacy

8C Deforestation affects biodiversity.

What does the biodiversity of a habitat measure?

1 the total number of all living things in the habitat

2 the number of animal and plant species that have become extinct in the habitat

3 the number of different species in the habitat

4 the total number of animals of the most common species in the habitat

8D Sometimes cattle may be kept on areas that have been deforested.

Which gas in the atmosphere is produced in large amounts by cattle but not by humans?

1 carbon dioxide

2 methane

3 oxygen

4 sulfur dioxide

4.7.3.4 Deforestation

Question 12

November 2011 | BLY1BP | Original Q2 | Legacy

QUESTION TWO

Human activities affect the environment.

Match activities, **A**, **B**, **C** and **D**, with the statements **1**–**4** in the table.

A deforestation

B recycling waste

C less cattle farming

D treating sewage

	Effect on the environment
1	reduces river pollution
2	reduces the need for landfill sites
3	reduces biodiversity
4	reduces the production of methane

4.7.3.4 Deforestation

Question 13

June 2014 | BL3FP | Original Q7 | Legacy

7 **In this question you will be assessed on using good English, organising information clearly and using specialist terms where appropriate.**

Deforestation affects the environment.

Deforestation is causing a change in the amounts of different gases in the atmosphere. This change causes global warming and climate change.

Figure 11 shows an area of deforestation.

Figure 11



Give the reasons why deforestation is taking place.

Describe how deforestation is causing the change in the amounts of different gases in the atmosphere.

[6 marks]

.....

.....

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.....

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4.7.3.4 Deforestation

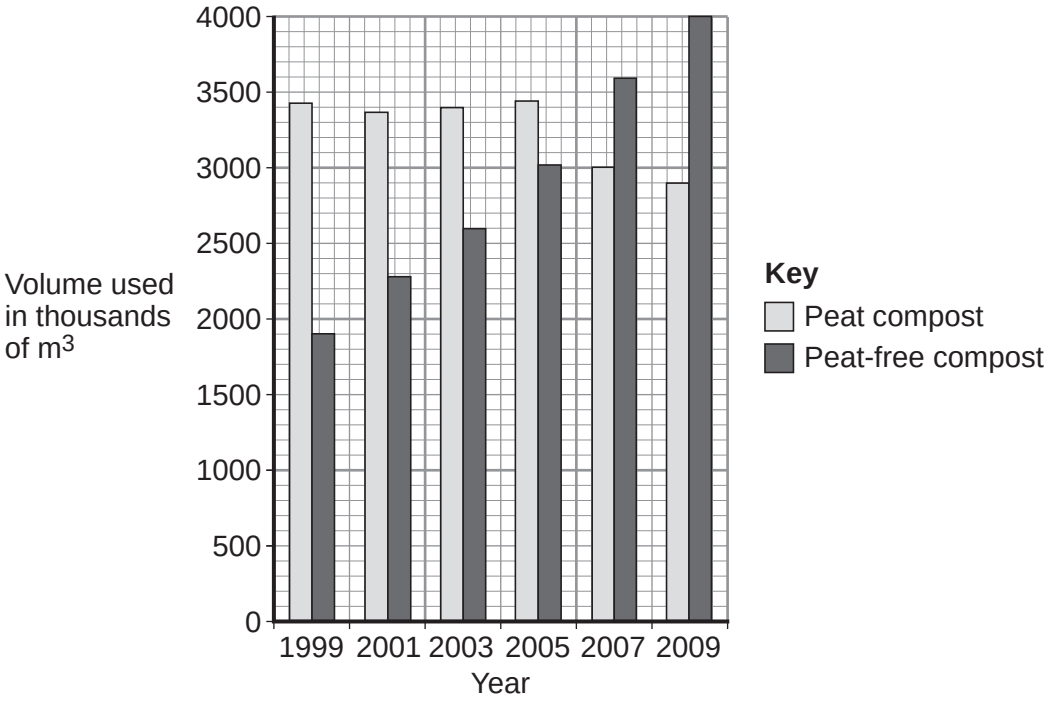
Question 14

June 2015 | BL3FP | Original Q9 | Legacy

9 Human activities have many effects on our ecosystem.

Figure 10 shows the volume of peat compost and peat-free compost used in gardening from 1999 to 2009.

Figure 10



9 (a) Describe the trends shown in **Figure 10**.

[2 marks]

.....

.....

.....

.....

.....

4.7.3.4 Deforestation

Question 14 · continued

June 2015 | BL3FP | Original Q9 | Legacy

9 (b) What effect does the destruction of peat bogs have on the gases in the atmosphere?

[1 mark]

.....

.....

9 (c) Deforestation is also damaging ecosystems.

Describe **one** effect of deforestation on ecosystems.

[1 mark]

.....

.....

4

4.7.3.4 Deforestation

Question 15

June 2016 | BL3FP | Original Q6 | Legacy

6 Human activity affects ecosystems.

6 (a) Draw **one** line from each human activity to the effect on ecosystems.

[2 marks]

Human activity	Effect on ecosystems
Increase in rice fields	Increases the amount of methane in the atmosphere
Destruction of peat bogs	Increases the amount of carbon dioxide that is released into the atmosphere
	Reduces the rate at which carbon dioxide is locked up as wood

6 (b) (i) Deforestation also affects the atmosphere.

Give **two** reasons why deforestation takes place.

[2 marks]

1 _____

_____

2 _____

_____

6 (b) (ii) Changes in the gases in our atmosphere can cause global warming.

Give **two** possible effects of a rise in the Earth's temperature.

[2 marks]

1 _____

_____

2 _____

_____

6

4.7.3.4 Deforestation

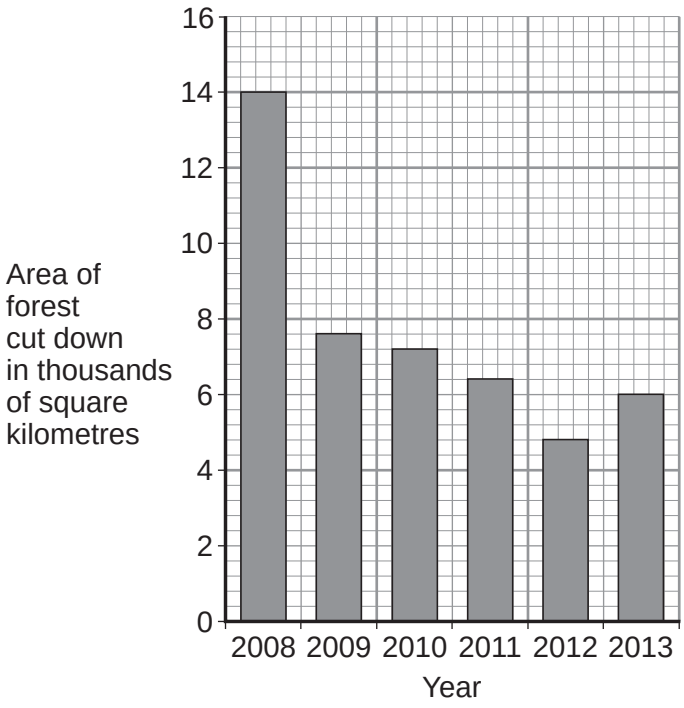
Question 16

June 2017 | BL3FP | Original Q1 | Legacy

1 Large areas of the Amazon rainforest have been cut down.

Figure 1 shows the area of forest cut down each year between 2008 and 2013 in the Amazon.

Figure 1



1 (a) (i) How many more thousand square kilometres of forest were cut down in 2008 than in 2013?

[1 mark]

Tick (✓) **one** box.

6.0 ☐

6.5 ☐

7.0 ☐

8.0 ☐

4.7.3.4 Deforestation

Question 16 · continued

1 (a) (ii) Give **two** reasons why forests are cut down.

[2 marks]

Tick (✓) **two** boxes.

- To decrease global warming ☐
- To decrease the amount of sulfur dioxide released ☐
- To increase biodiversity ☐
- To provide land to grow crops ☐
- To provide space for building ☐

1 (b) Deforestation changes the concentration of gases in the atmosphere.

The changes contribute to global warming.

Which **two** gases contribute to global warming?

[2 marks]

Tick (✓) **two** boxes.

- Carbon dioxide ☐
- Hydrogen ☐
- Methane ☐
- Nitrogen ☐
- Oxygen ☐

5

4.7.3.4 Deforestation

Question 17

June 2019 | 8461/2F | Original Q5

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 ☐

4.7.3.4 Deforestation

Question 17 · continued

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. ☐

4.7.3.4 Deforestation

Question 17 · continued

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 ☐

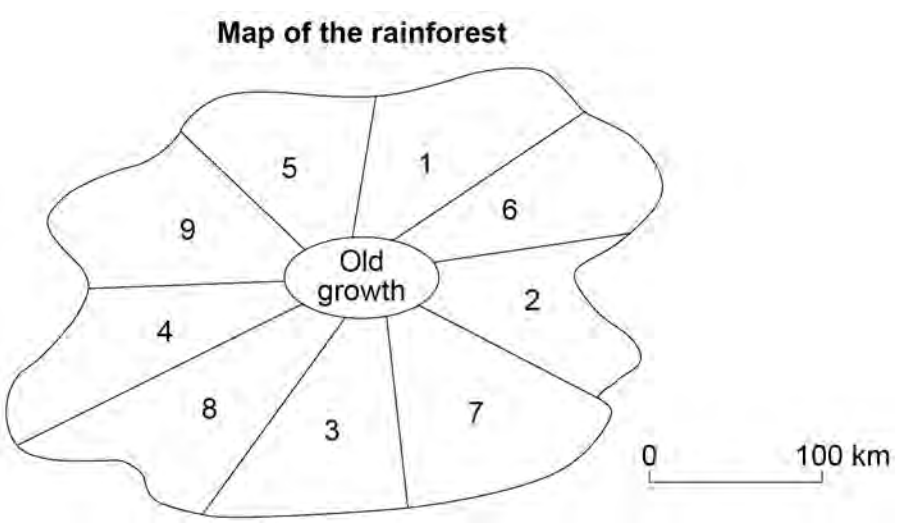
Stay the same ☐

'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



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.

4.7.3.4 Deforestation

Question 17 · continued

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]

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]

13