www.dynamicpapers.com

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

2568116675

ENVIRONMENTAL MANAGEMENT **0680/12**

Paper 1 **May/June 2015**

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

Electronic calculators may be used.
You may lose marks if you do not show your working or if you do not use appropriate units.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **15** printed pages and **1** blank page.

© UCLES 2015

CAMBRIDGE International Examinations

www.dynamicpapers.com

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

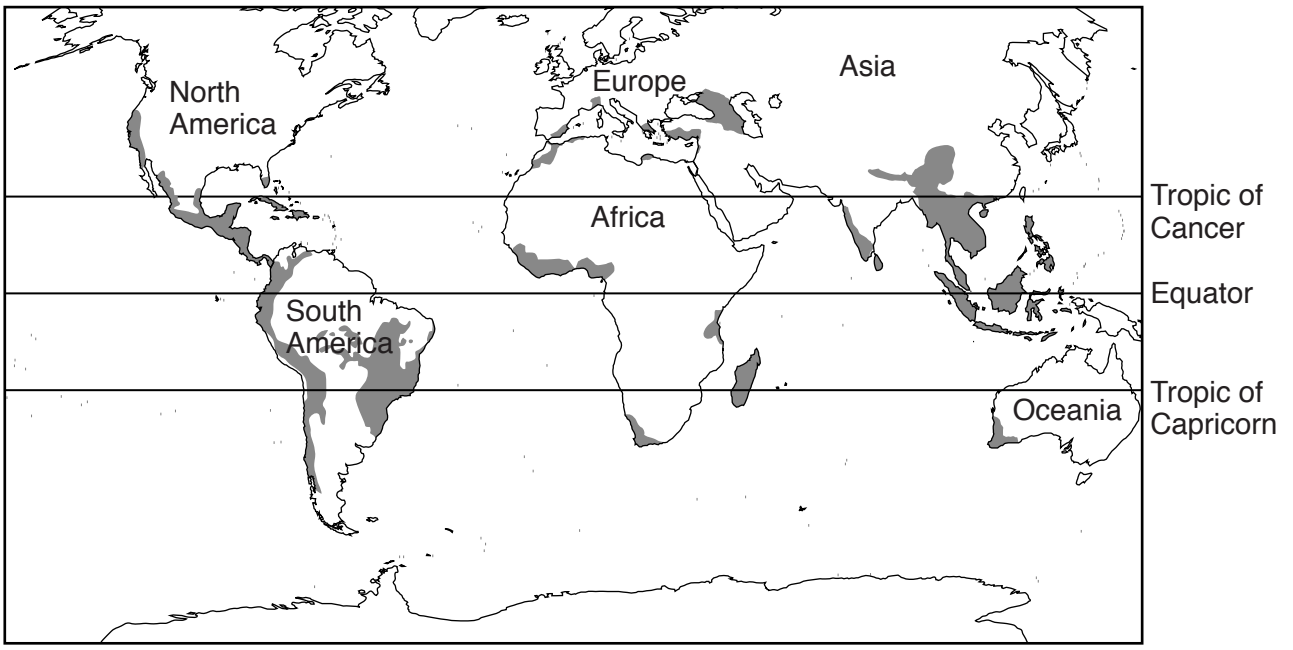
.....

.....

.....

.....[2]

The map below shows biodiversity hot spots. These are places where the biodiversity of plants and animals is under threat from humans.



Key

region of hot spot

(ii) Describe the distribution of the biodiversity hot spots shown on the map.

.....

.....

.....

.....

.....

.....

.....[3]

© UCLES 2015

www.dynamicpapers.com

(b) (i) Biodiversity is being lost around the world. State **two** reasons why this is a problem.

.....

.....

.....

.....[2]

(ii) Describe a strategy for conservation of biodiversity.

.....

.....

.....

.....

.....

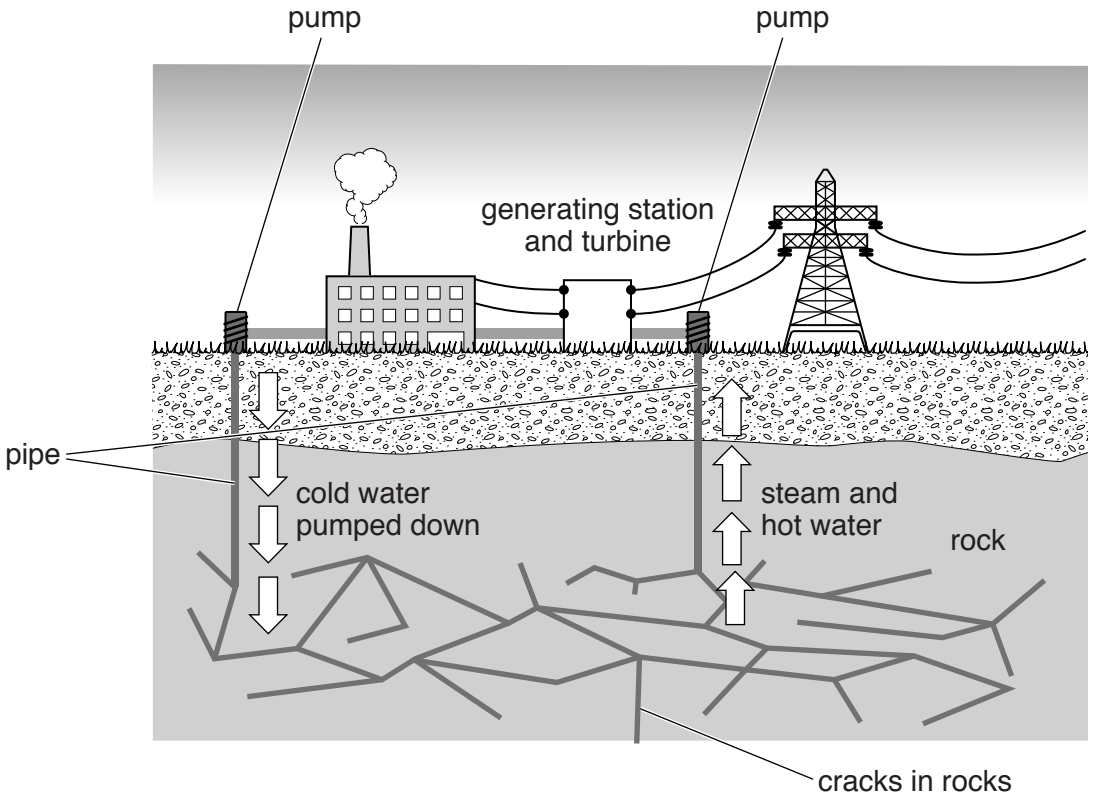
.....[3]

© UCLES 2015

[Turn over

www.dynamicpapers.com

2 **(a)** Look at the diagram below which shows one way of generating electricity at a power station.



(i) State the name of the energy source being used at the power station.

.....[1]

(ii) Use the diagram to describe how this energy source is converted into electricity.

.....

.....

.....

.....

.....

.....[3]

(iii) The energy source in the diagram is an example of alternative energy.
State the names of **two** other alternative energy sources.

1 .....

2 .....
[2]

© UCLES 2015

www.dynamicpapers.com

(b) (i) Define the term *alternative energy*.

.....

.....[1]

(ii) Suggest reasons for needing alternative energy sources.

.....

.....

.....

.....

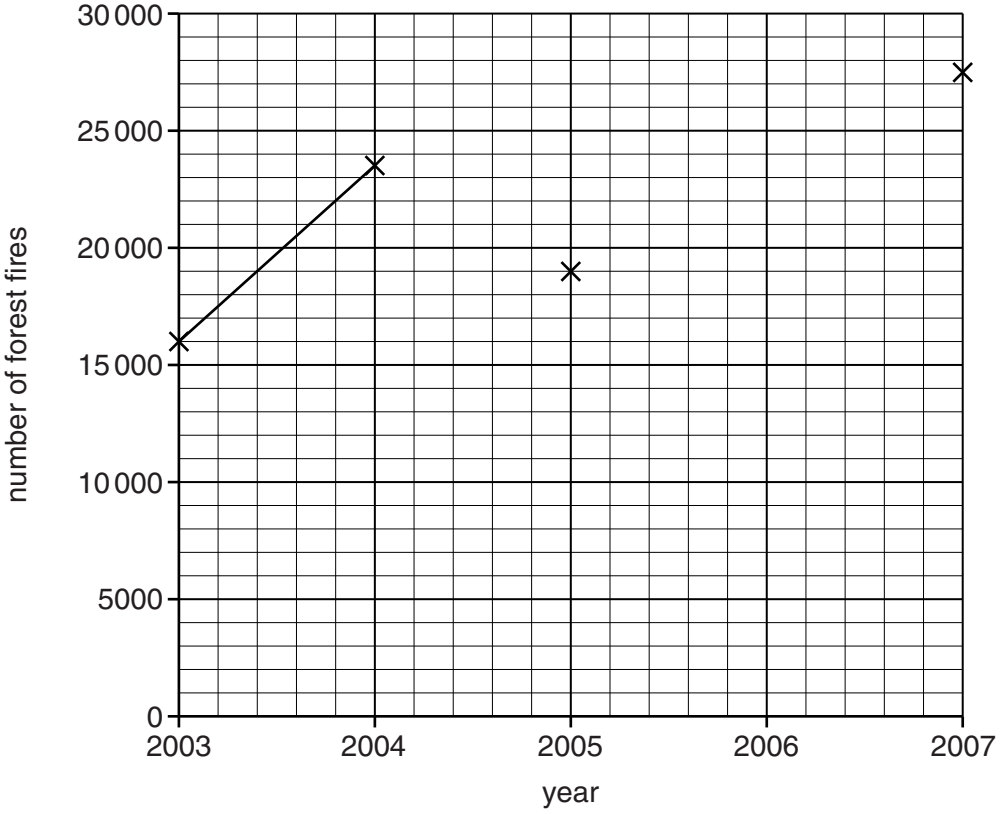
.....

.....[3]

www.dynamicpapers.com

3 **(a)** Look at the table and graph below which give information about Amazon forest fires in the Mato Grosso region of Brazil.

year	number of forest fires in the Mato Grosso region
2003	16000
2004	23500
2005	19000
2006	14000
2007	27500

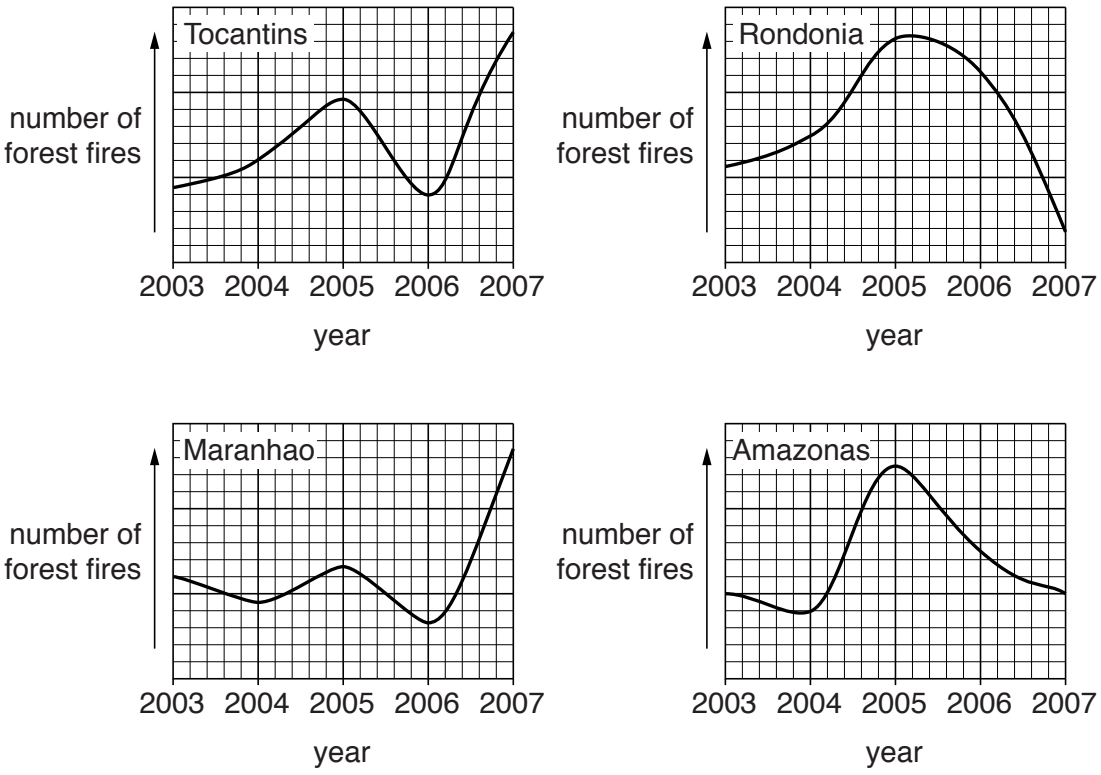


(i) Use the data in the table to complete the line graph to show how the number of forest fires changed between 2003 and 2007. [2]

© UCLES 2015

www.dynamicpapers.com

The four graphs below show data for the same period for four other regions of Amazon rainforest.



(ii) A report published in 2008 concluded that there has been "a big increase in Amazon forest fires." How far do you agree with this statement?
Use data from the five graphs to support your answer.

.....

.....

.....

.....

.....

.....

.....

.....[4]

© UCLES 2015

[Turn over

www.dynamicpapers.com

(b) Explain how forest fires contribute to global warming.

.....

.....

.....

.....

.....

.....

.....

.....[4]

4 **(a)** Look at the table below which contains some water cycle data.

	precipitation / km^3 per year	evaporation / km^3 per year	run-off and infiltration / km^3 per year
North America	18300	10000	8300
South America	28400	16200	12200
Europe	8300	5300	3000
Asia	32200	18100	14100
Africa	22400	17800	4600
Oceania	7100		2500
Antarctica	2300	0	2300
totals	119000	72000	47000

(i) Calculate the volume of water which evaporates from Oceania in a year.

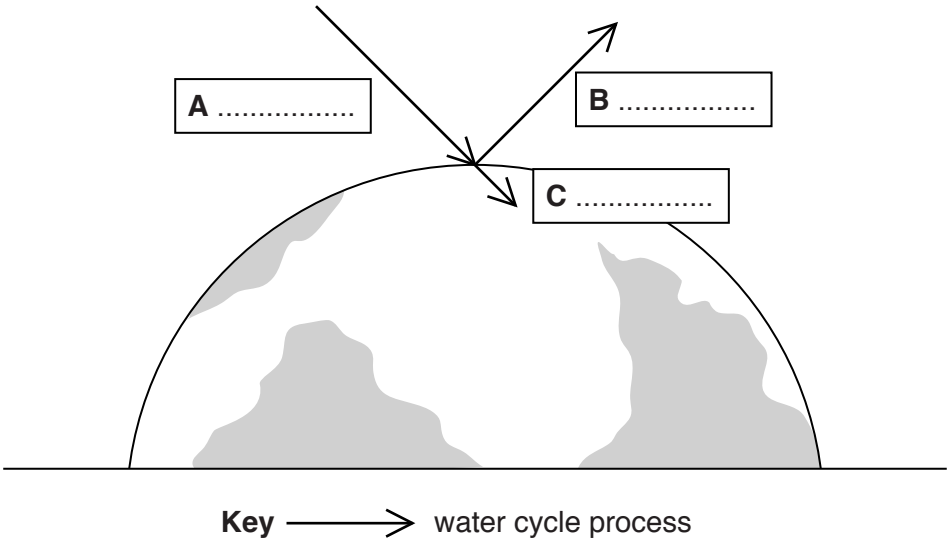
Space for working.

..... km^3 [1]

www.dynamicpapers.com

(ii) Using the table in **4(a)**, write the correct figures from the column **totals** in boxes **A**, **B** and **C**.

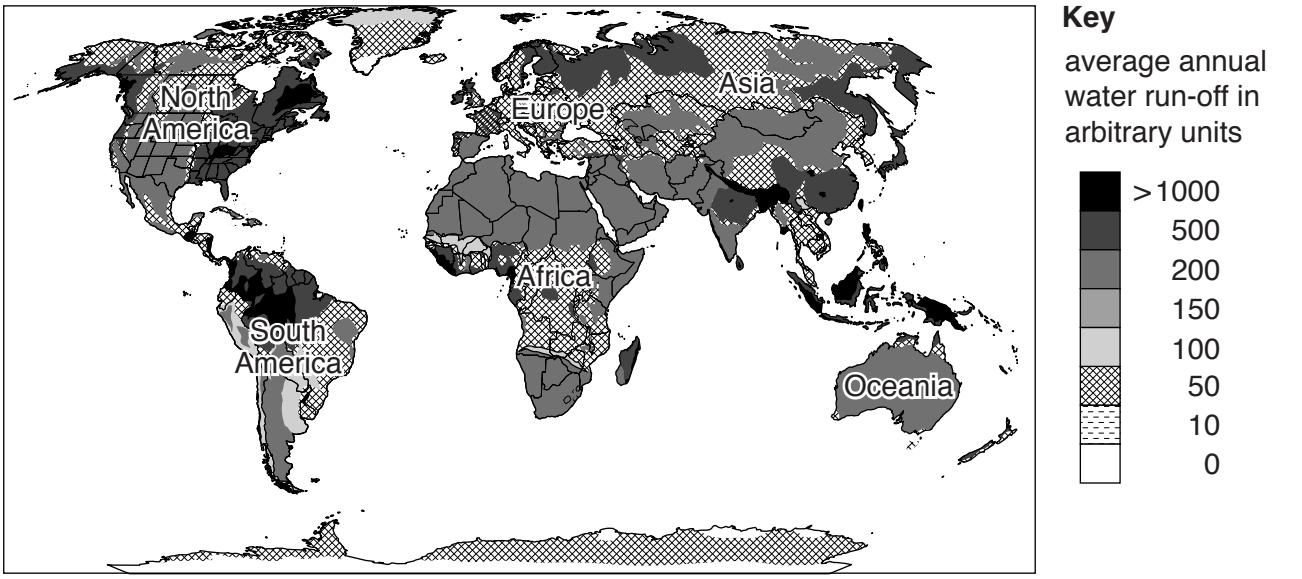
[2]



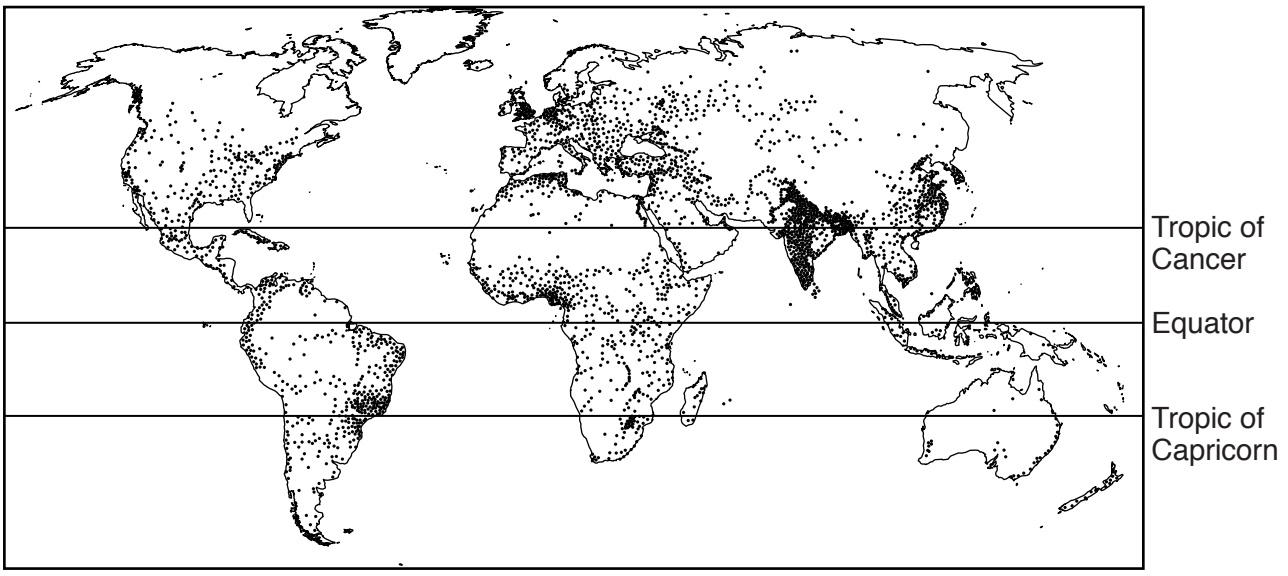
www.dynamicpapers.com

(b) **Map one** shows average annual water run-off and **map two** shows world population distribution.

map one



map two



Key

· area with large population

© UCLES 2015

www.dynamicpapers.com

A textbook states,

"Water isn't always where you need it most."

(i) Use the maps to discuss how far you agree with the textbook statement.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(ii) Explain why, in some parts of the world, water quality is better in urban areas than in rural areas.

.....

.....

.....

.....

.....

.....[3]

www.dynamicpapers.com

5 **(a)** In the United States of America ten tonnes of minerals which are not fuels are used per person per year.

(i) Circle **two** minerals which are **not** used as fuels.

coal **copper ore** **iron** **iron ore** **oil** [2]

(ii) Name **one** mineral that is used as a fuel **and** describe how it was formed.

.....

.....

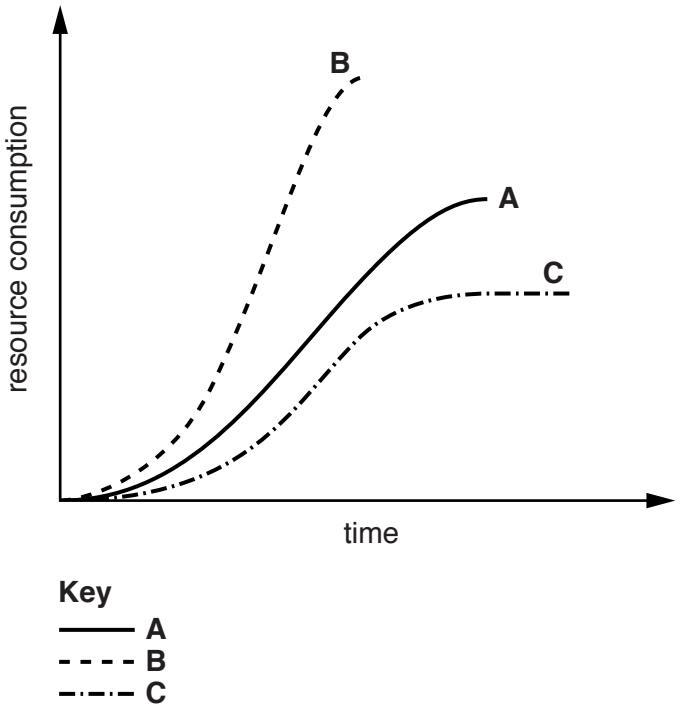
.....

.....

.....

.....[3]

(b) The graph below shows three ways in which the use of a mineral can be managed over time.



www.dynamicpapers.com

(i) On the lines below, match the letter of the curve with the correct description.

rapid consumption .....

conservation .....

conservation plus recycling .....

[2]

(ii) Discuss whether mineral resources can be used sustainably.

.....

.....

.....

.....

.....

.....[3]

www.dynamicpapers.com

6 **(a)** Look at the photograph below of two plants, bracken (a fern) and heather, on an upland area in Europe.



(i) Describe the distribution of the two plants in this area.

.....

.....

.....

.....[2]

A report on bracken control in areas of heather stated,

"If it is not controlled, bracken grows very quickly. It takes the place of other plants, such as heather, at a rate of five percent per year. It can grow to three metres in height. It has thick roots that spread out sideways and also go deep into the soil."

© UCLES 2015

www.dynamicpapers.com

(ii) Suggest how competition results in bracken replacing heather.
Use the information in the report and your own knowledge to support your answer.

.....

.....

.....

.....

.....

.....

.....[3]

(iii) Suggest how plants like bracken can be controlled.

.....

.....

.....

.....

.....

.....

.....[2]

(b) Farmers use fertilisers to increase crop yield. Describe and explain **one** way in which fertiliser addition can cause problems for the environment.

.....

.....

.....

.....

.....

.....

.....[3]

© UCLES 2015

www.dynamicpapers.com

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2015