



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**ENVIRONMENTAL MANAGEMENT**

**0680/22**

Paper 2

**February/March 2015**

**1 hour 45 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 **both** 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 **14** printed pages and **2** blank pages.



- (v) Some people live in areas where volcanic eruptions occur because there is work mining various metal ores. Suggest **other** reasons why people might live near volcanoes.

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.....[3]

- (b) Look at the table, which shows details of copper mining, processing and use. Copper and other metal ores are often found in areas of igneous rock.

region	copper / thousand tonnes		
	mined within region*	processed within region (including recycled copper)	used within region
Africa	1449	1057	251
North and South America	9384	5067	2837
Asia	3134	9732	12 130
Europe	1691	3796	4201
Oceania	1042	460	112
world total	16 700	20 112	19 531

\*This is the amount of copper within the mined ore.

- (i) In which region was the greatest amount of copper mined?

.....[1]

- (ii) In which region was the greatest amount of copper used?

.....[1]

- (iii) Calculate how much more copper was processed than was mined worldwide.

Space for working.

..... thousand tonnes [1]

(iv) Copper ores often contain only one percent copper. Suggest **one** reason why some of the processing of the copper ore is done at the mine.

.....  
.....[1]

(v) Recycling of copper is the reason why more copper is processed worldwide than mined each year. Describe the benefits of recycling copper.

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.....[4]

(c) The processing of copper ores releases large amounts of sulfur dioxide. Describe how releasing sulfur dioxide into the atmosphere can cause acid rain.

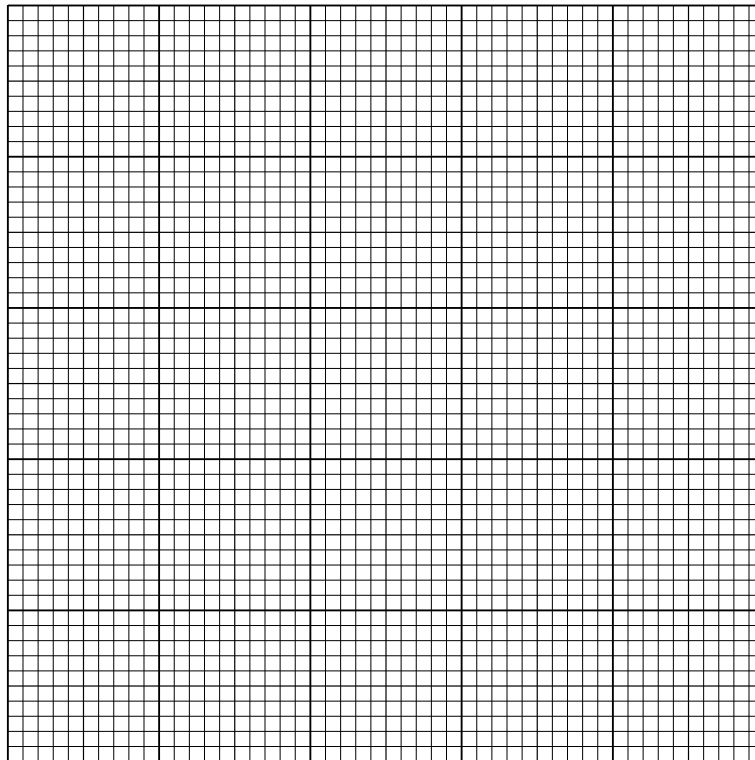
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- (iii) The table shows global sulfur dioxide (SO<sub>2</sub>) emissions released into the atmosphere from 1980 to 2010.

year	sulfur dioxide / million tonnes
1980	17.7
1985	16.0
1990	15.9
1995	11.8
2000	11.0
2005	9.7
2010	7.5

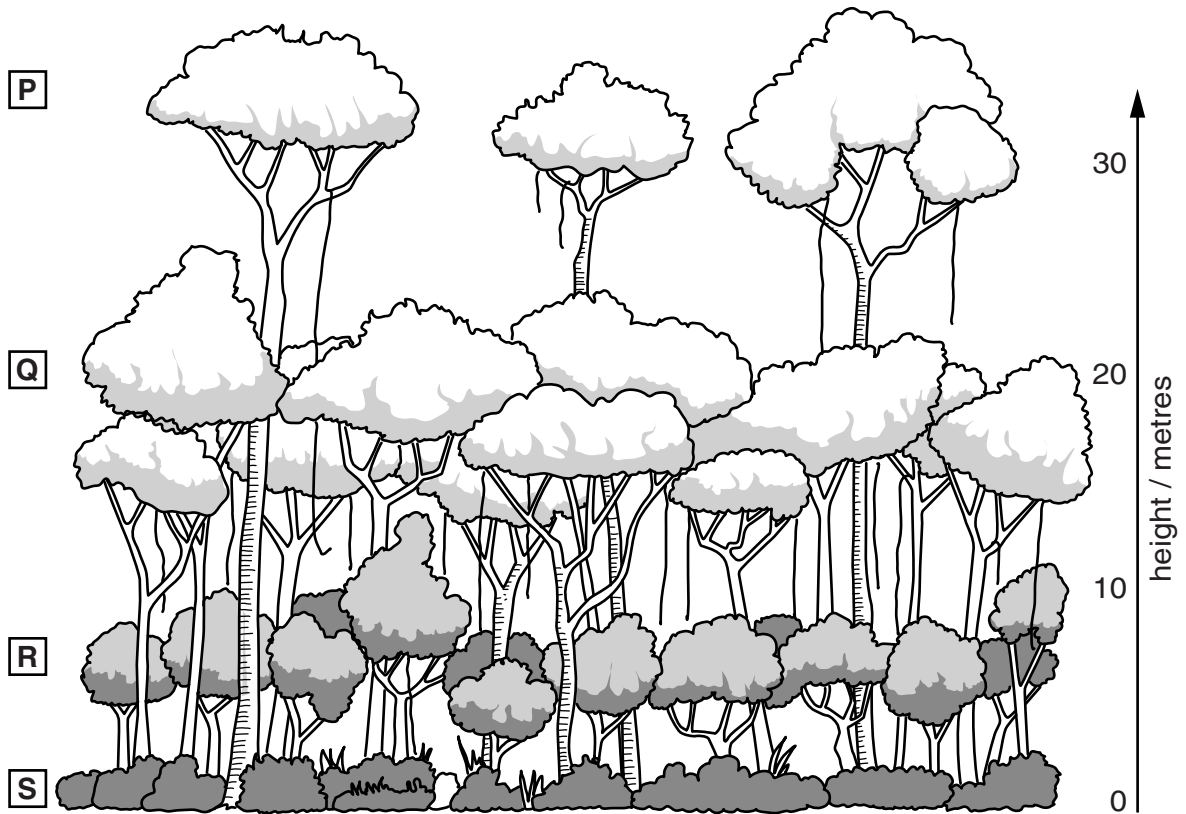
Draw a line graph on the grid below to show sulfur dioxide emissions from 1980 to 2010.



[4]



2 (a) Look at the diagram of a tropical rainforest.



(i) Match the letters **P**, **Q**, **R** and **S** shown on the diagram to the names of the layers of the tropical rainforest.

name	letter
canopy	.....
emergent	.....
ground layer	.....
understory	.....

[3]

(ii) Explain why some trees grow so tall in tropical rainforests.

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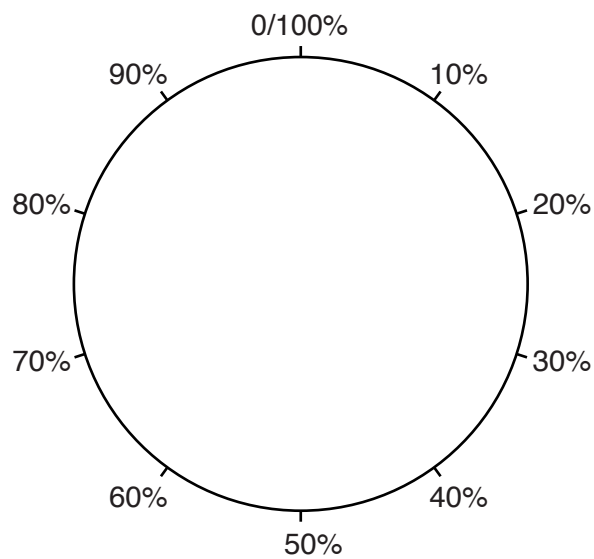
.....[2]



(b) Look at the table below, which shows the percentage amount of tropical rainforest by continent.

continent	world tropical rainforest / %
South America	45
Africa	30
Asia	16
Oceania	9

Draw a pie graph in the circle below to show the percentage of tropical rainforest in each continent and complete the key.

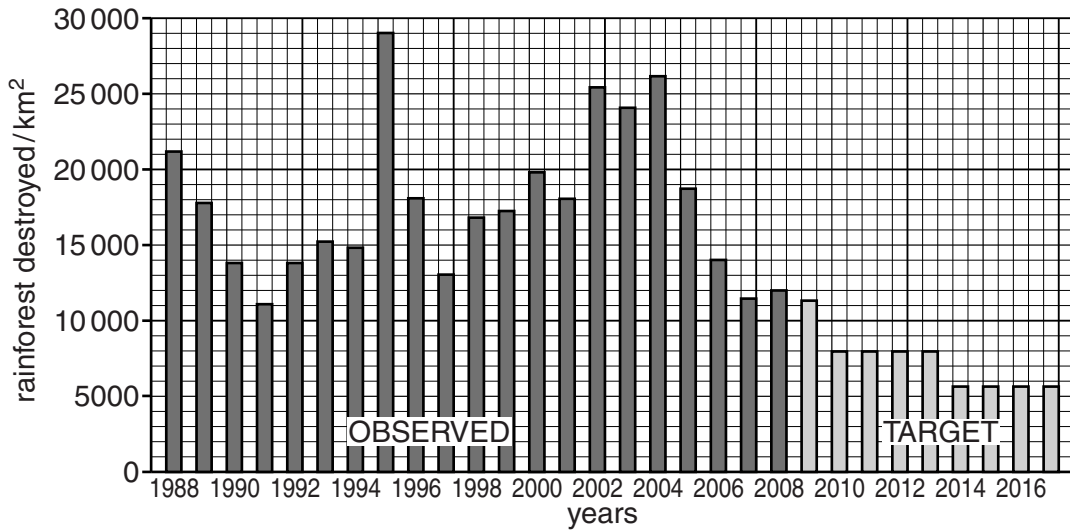


**Key**

	South America
	Africa
	Asia
	Oceania

[3]

(c) Look at the graph, which shows the rate of deforestation of the Amazon rainforest in Brazil and the target to reduce the rate of deforestation. This target was set by the government of Brazil in 2008.



(i) In which year was deforestation greatest and how much forest was destroyed?

year .....

amount of forest destroyed ..... km<sup>2</sup> [2]

(ii) Describe the trend in deforestation from 2002 to 2008.

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 ..... [3]

(iii) State the target for deforestation for 2017.

target for deforestation ..... km<sup>2</sup> [1]

(iv) Suggest reasons why the government of Brazil set targets to reduce deforestation of the Amazon rainforest.

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(v) Suggest reasons why it might be difficult to reduce deforestation of the Amazon rainforest.

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.....[3]









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