

Cambridge International Examinations

Cambridge International General Certificate of Secondary Education

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

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.

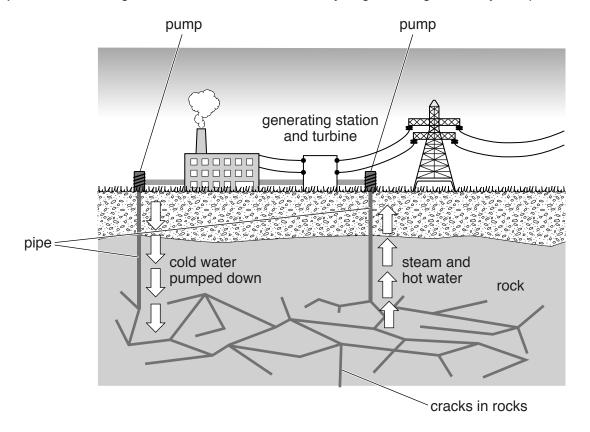
The number of marks is given in brackets [] at the end of each question or part question.



(a) (i)	Define the term biodiversity.
	The map below shows biodiversity hot spots. These are places where the biodiversity
	plants and animals is under threat from humans.
	North America Asia
	Africa Tropic of Cancer
- G	South
	Oceania Tropic of Capricorr
	The same of the sa
Key regior	n of hot spot
(ii)	Describe the distribution of the biodiversity hot spots shown on the map.

(b) (i)	Biodiversity is being lost around the world. State two reasons why this is a problem.
		[2
(i	i)	Describe a strategy for conservation of biodiversity.
		[3

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.

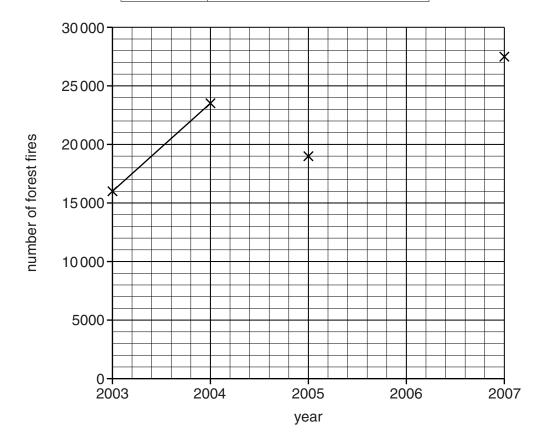
		[1]
(ii)	Use the diagram to describe how this energy source is converted into electricity.	
		[3]
(iii)	The energy source in the diagram is an example of alternative energy. State the names of two other alternative energy sources.	
	1	
	2	

[2]

(i)		
		[1]
(ii)	Suggest reasons for needing alternative energy sources.	
		[J.
		(ii) Suggest reasons for needing alternative energy sources.

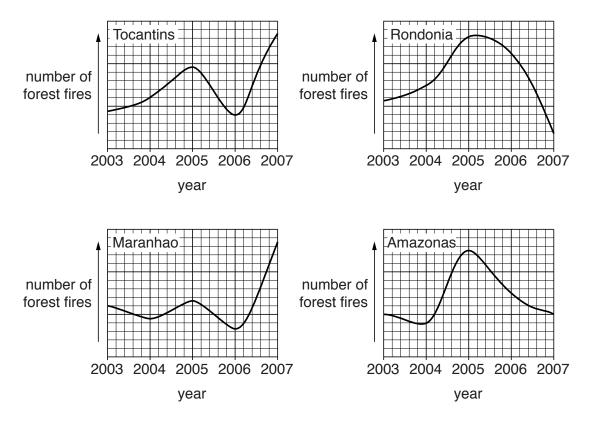
3 (a) Look at the table and graph below which give information about Amazon forest fires in the Mato Grosso region of Brazil.

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]

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



i)	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.

0)	Explain how forest fires contribute to global warming.
	[4]

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

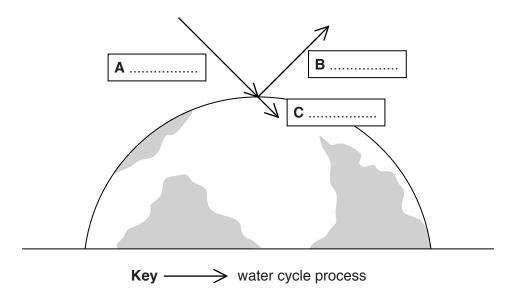
	precipitation/ km³ per year	evaporation/ km ³ per year	run-off and infiltration/ km ³ per year
North America	18300	10000	8300
South America	28400	16200	12200
Europe	8300	5300	3000
Asia	32200	18100	14100
Africa	22400	17800	4600
Oceania	7100		2500
Antarctica	2300	0	2300
totals	119000	72000	47 000

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

	$\mathrm{km^3}$	[1]
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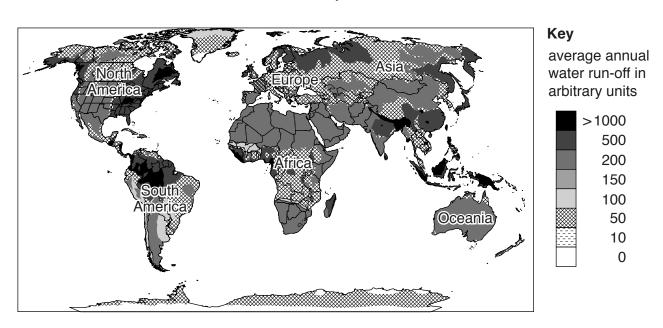
(ii) Using the table in 4(a), write the correct figures from the column totals in boxes A, B and C.

[2]

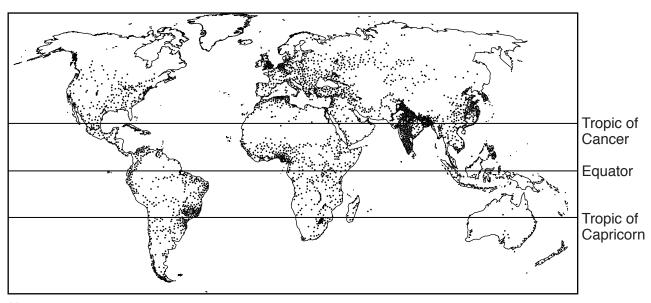


(b) Map one shows average annual water run-off and **map two** shows world population distribution.

map one



map two



Key

· area with large population

A textbook states,

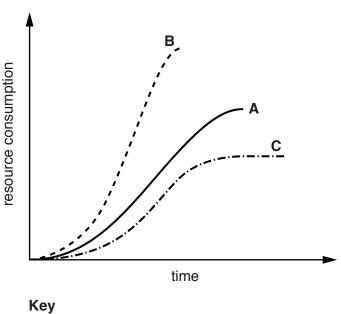
"Water isn't always where you need it most."

(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

- **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 c	one minera	I that is used as a	a fuel and o	describe how	it was formed.	
							•••••

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



Key
---- B

(1)	On the lines below,	match the letter of the curve with the correct description.	
	rapid consumption		
	conservation		
	conservation plus recycling		[2]
(ii)	Discuss whether min	neral resources can be used sustainably.	
			[3

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



[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."

(ii)	(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		
	rmers use fertilisers to increase crop yield. Describe and explain one way in which fertilise dition can cause problems for the environment.		
	[3		

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