Cambridge O Level

Cambridge Assessment International Education
Cambridge Ordinary Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER					

ENVIRONMENTAL MANAGEMENT

5014/11

Paper 1 Theory

May/June 2019

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 in the spaces at the top of this page.
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 **16** printed pages.

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Cambridge Assessment International Education

[Turn over

Section A

1 The table shows world insecticide use in arbitrary units in 2009 and 2014.

world region	insecticide use / arbitrary units	
	2009	**2014**
Africa and Middle East	1 865	2 215
Asia and Oceania	11 000	12 820
Central and South America	8 330	10 820
Eastern Europe	3 960	4 575
North America	11 985	13 340
Western Europe	7 905	8 230

(a) State the world region with the lowest insecticide use in 2014.

..... [1]

(b) Calculate the increase in insecticide use in Asia and Oceania from 2009 to 2014.

..... arbitrary units [1]

(c) Suggest **two** reasons why some world regions use more insecticide than other world regions.

1 .....

.....

2 .....

.....
[2]

(d) State **two** ways, other than insecticide use, to reduce the impact of pests on crops.

1 .....

.....

2 .....

.....
[2]

[Total: 6]

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2 The photograph shows part of a farm in southern Africa.

(a) Describe the vegetation shown in the photograph.

.....

.....

.....

..... [2]

(b) The farm in the photograph has had four years of drought.

Explain why cattle can no longer be kept on the farm.

.....

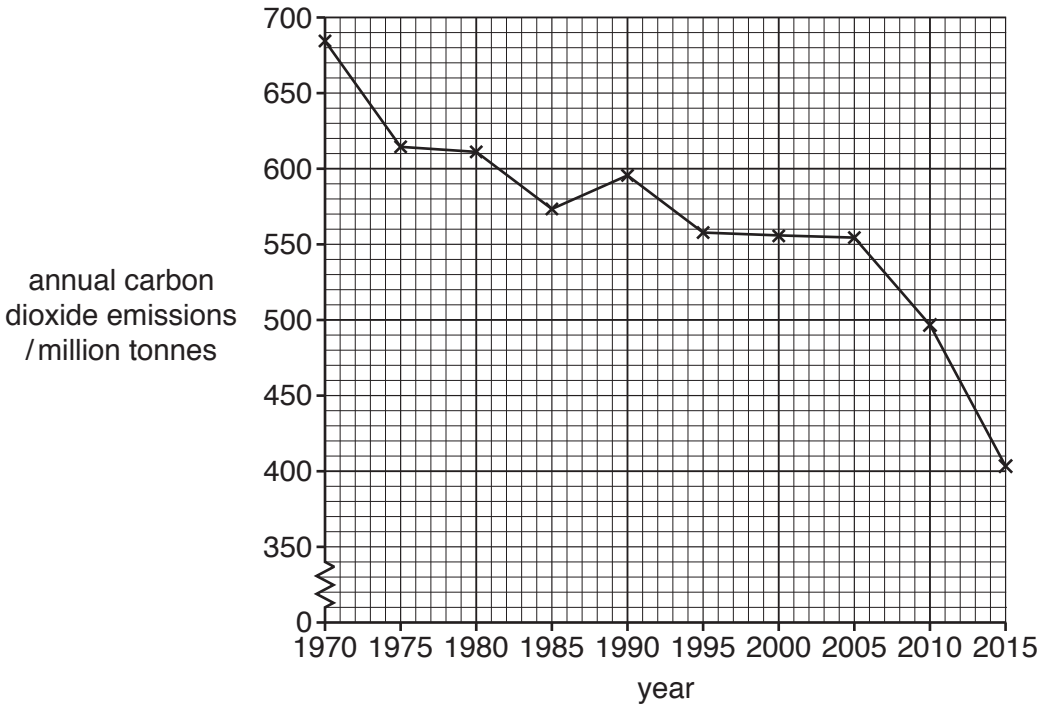
.....

.....

..... [2]

[Total: 4]

3 The graph shows carbon dioxide emissions for a more economically developed country (MEDC) from 1970 to 2015.



(a) Calculate the change in carbon dioxide emissions from 1970 to 2015.

..... million tonnes [2]

(b) Which 10-year period showed the greatest decrease in carbon dioxide emissions?

..... [1]

(c) Explain why the government of the MEDC needed to decrease carbon dioxide emissions.

.....

.....

.....

..... [2]

[Total: 5]

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4 The table shows the major volcanic eruptions in 2015 and 2016.

month and year	country	deaths	injuries
February 2015	Indonesia	0	0
April 2015	Chile	0	0
May 2015	Indonesia	0	0
July 2015	Papua New Guinea	0	0
October 2015	Indonesia	1	0
May 2016	Indonesia	1	4
May 2016	Indonesia	7	3
June 2016	USA	1	0
September 2016	Indonesia	0	0
October 2016	Japan	0	0

(a) State the country that had the most volcanic eruptions in 2015.

..... [1]

(b) Complete the sentence using information from the table.

The longest period without a major volcanic eruption was

from ..... to ..... .

[1]

(c) Suggest **three** reasons why these major volcanic eruptions only caused a small number of deaths and injuries.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

[Total: 5]

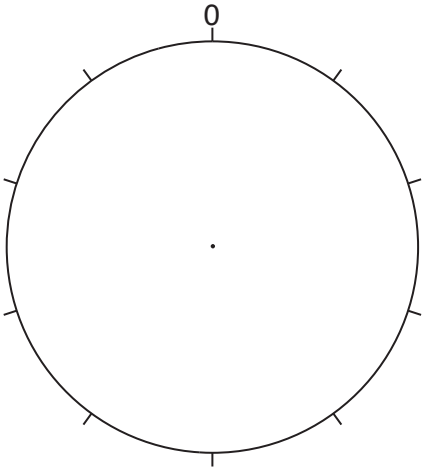
Section B

5 **(a)** The table shows the population structure for two countries in 2015.

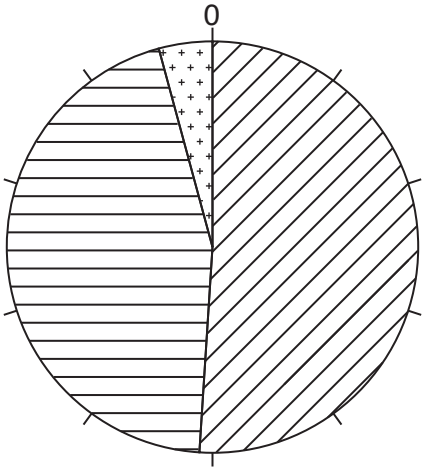
country	population structure (percentage in each age group)		
	0–14 years	**15–59 years**	**60 years and over**
Japan	13	54	33
Niger	51	45	4

(i) Complete the pie chart to show the population structure of Japan.
Use the key provided.

population structure of Japan



population structure of Niger



Key

- 0 – 14 years
- 15 – 59 years
- 60 years and over

[3]

(ii) Suggest **two** problems that Japan may have as a result of its population structure.

1 .....

.....

2 .....

.....

[2]

(iii) Explain why Niger's population structure means its population may increase rapidly.

.....

.....

.....

..... [2]

(iv) Suggest **two** problems that Niger may have as a result of a rapid population increase.

1 .....

.....

2 .....

.....
[2]

(v) Describe **two** strategies that the government of Niger could use to control the rate of population increase.

1 .....

.....

2 .....

.....
[2]

(b) Can a less economically developed country (LEDC), such as Niger, feed its increasing population sustainably?

Give reasons for your answer.

.....

.....

.....

.....

.....

.....

.....

..... [4]

[Total: 15]

6 **(a)** The table shows the percentage of the population of ten countries in Africa with access to safe drinking water in 1990 and in 2015.

country	**percentage of the population with access to safe drinking water**	
	1990	**2015**
Angola	42	49
Botswana	92	96
Ethiopia	13	57
Ghana	56	89
Malawi	43	90
Niger	34	58
Rwanda	59	76
South Africa	83	93
Tanzania	54	56
Zimbabwe	79	77
average	55.5	.....

(i) Complete the table by calculating the average percentage of the population with access to safe drinking water in 2015. [1]

(ii) State the country that had:

a decrease in access to safe drinking water from 1990 to 2015

.....

the lowest access to safe drinking water in 2015

.....

the largest increase in access to safe drinking water from 1990 to 2015.

.....
[3]

(iii) Explain why access to safe drinking water is important for people.

.....

.....

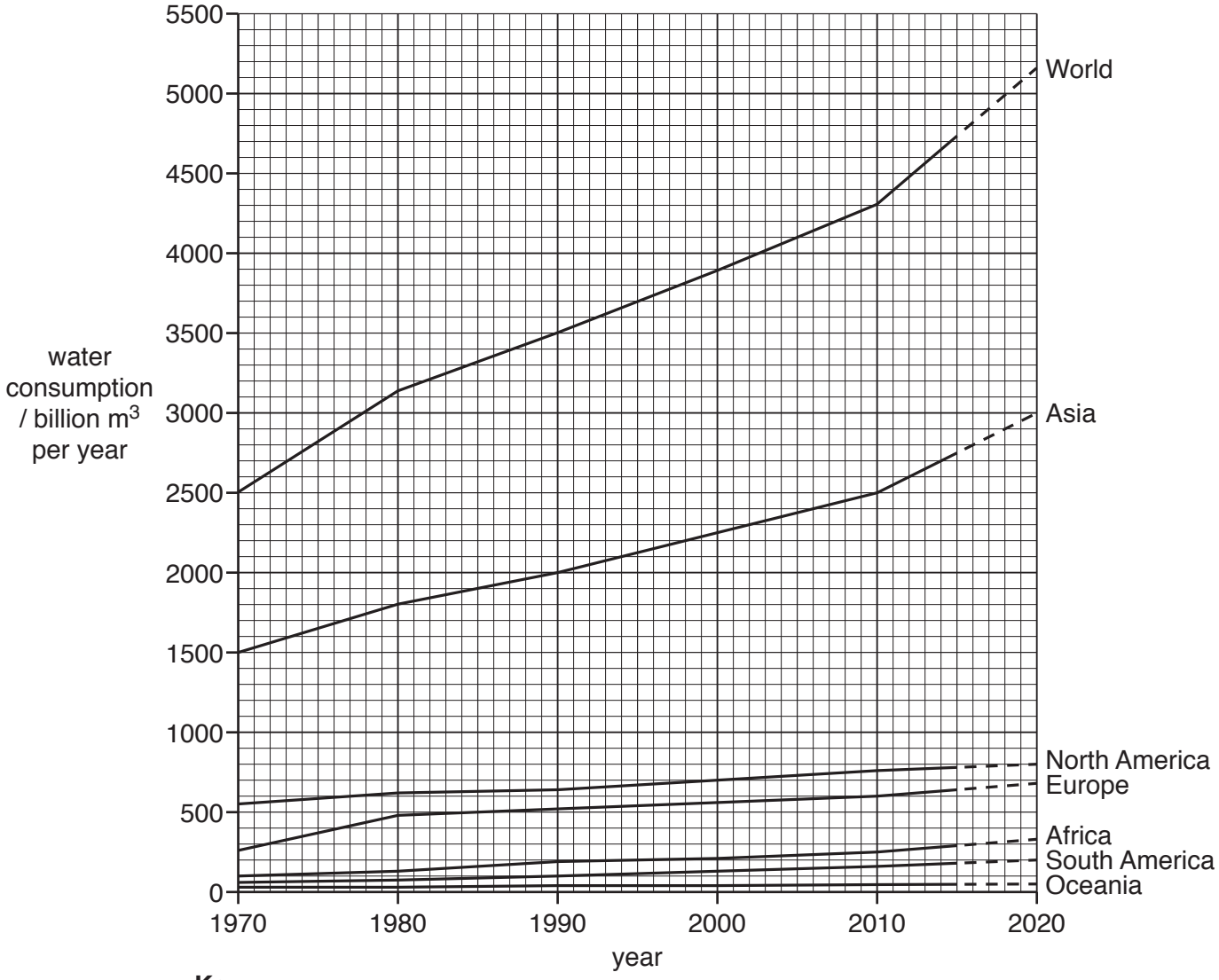
.....

.....

.....

..... [3]

(b) The graph shows global water consumption by continent from 1970 to 2015 and predicted to 2020.



Key

——— actual water consumption

– – – – predicted water consumption

(i) State the water consumption in Europe in 2010.

..... billion m^3 per year [1]

(ii) Compare water consumption in Asia with that in North America from 1970 to 2020.

.....

.....

.....

.....

.....

..... [3]

(iii) Calculate the percentage of the world's water consumed in Asia in 1990.
Circle the correct answer.

51% **54%** **57%** **60%** **63%**

[1]

(iv) The population of Africa in 2015 was 1.25 billion.

Use this figure and the graph to calculate the average water consumption per person per year in Africa in 2015.

..... m^3 per person per year [2]

(v) Explain why global water consumption keeps increasing.

.....

.....

.....

.....

.....

..... [3]

(c) Describe how human activities in towns and cities can pollute water sources.

.....

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.....

..... [4]

(d) 'Water pollution is a more serious problem than the enhanced greenhouse effect.'

How far do you agree with this statement? Give reasons for your answer.

.....

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..... [6]

[Total: 27]

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7 **(a)** Describe the formation of oil.

.....

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.....

.....

.....

..... [3]

(b) Describe the advantages and disadvantages of oil as an energy resource.

advantages .....

.....

.....

.....

disadvantages .....

.....

.....

.....
[4]

(c) The map shows average oil consumption per person in 2015.

Key

- low oil consumption per person
- medium oil consumption per person
- high oil consumption per person

(i) State the continent where oil use per person is low in all countries.

..... [1]

(ii) State the continent with high oil use per person.

..... [1]

(iii) Explain why oil use per person is much higher in some countries than in others.

.....

.....

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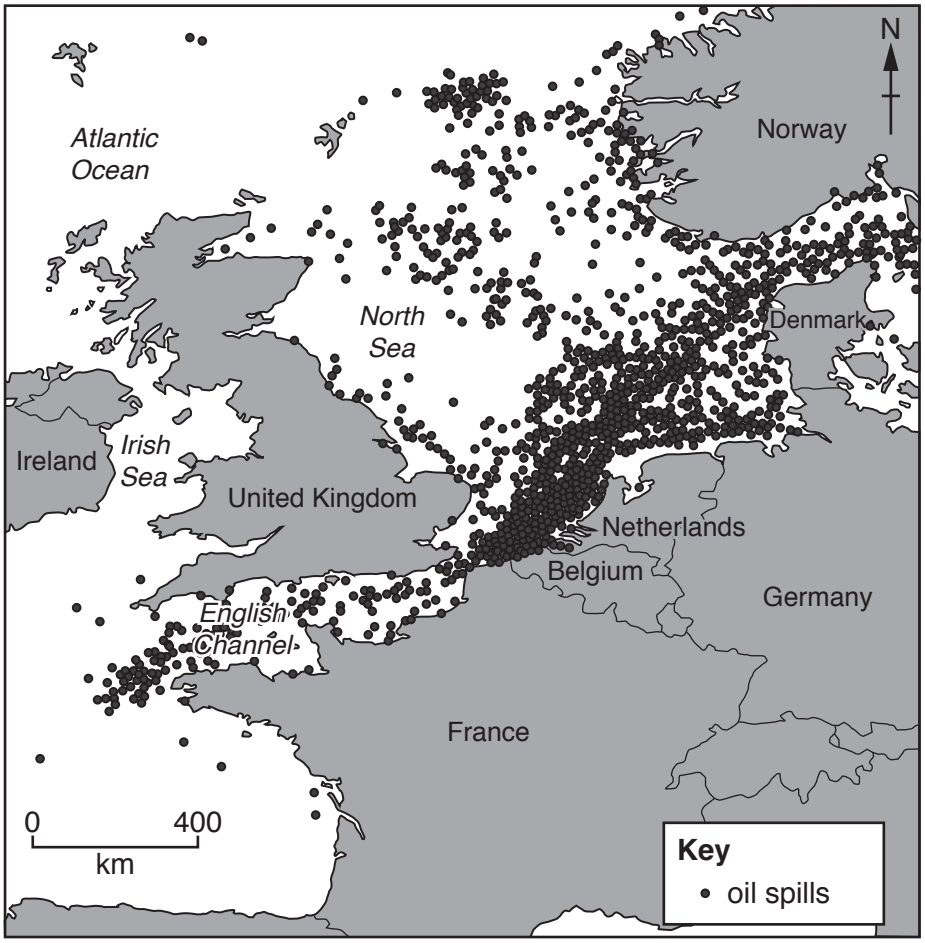
.....

.....

..... [3]

(d) The map shows the location of oil spills in a seven-year period in the seas around part of north-west Europe.



(i) Describe the distribution of the oil spills shown on the map.

.....

.....

.....

.....

.....

..... [3]

(ii) Discuss strategies for minimising the impact of oil spills at sea.

.....

.....

.....

.....

.....

..... [3]

[Total: 18]

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