



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
NUMBER

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NUMBER

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ENVIRONMENTAL MANAGEMENT

0680/12

Paper 1

October/November 2014

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler

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 **12** printed pages.

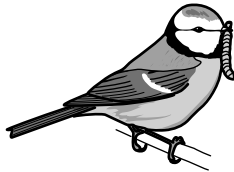
1 (a) Explain the statement, “a forest is an ecosystem where all the living things rely on the Sun”, by referring to the living things below.



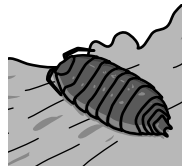
oak tree



oak caterpillar
(an insect)



insect-eating bird



woodlouse eating
dead leaves

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.....[4]

(b) (i) Forest ecosystems are some of the most biodiverse in the world. Explain what this means.

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.....[2]

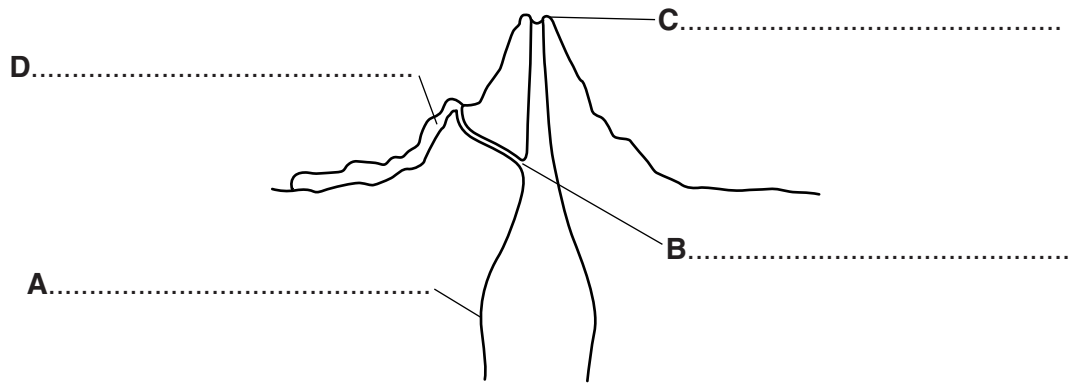
(ii) What human activities are leading to a reduction in biodiversity?

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.....[2]

(iii) Suggest why biodiversity should be conserved.

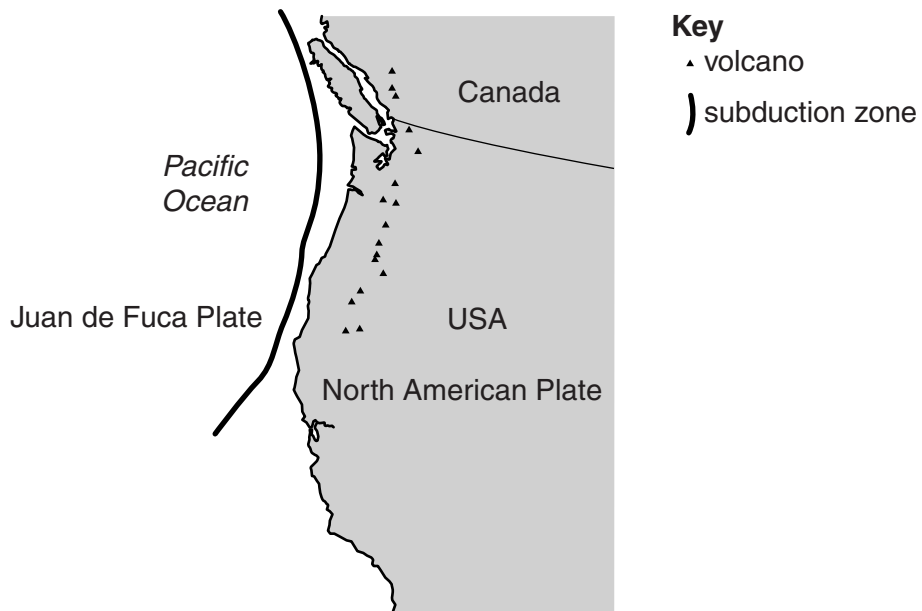
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.....[2]

2 (a) (i) Look at the diagram below of a volcano. Name the features labelled **A** to **D**.



[2]

(ii) The map below shows the Cascadia subduction zone in the north western part of North America.



Explain the distribution of volcanoes shown on the map.

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..... [3]

- (b) (i) In 1995 the Soufrière Hills volcano on the island of Montserrat began erupting. Since then the people living in the southern part of the island have been evacuated. This part of Montserrat is still dangerous and is an exclusion zone (it is illegal to go there). The population is currently estimated at 5028, before the eruption it was over 11 000.

Suggest how the 1995 eruption affected the following people who still live on the island:

a farmer

.....

.....

a taxi driver

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.....

an hotel owner

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.....[3]

- (ii) Why is the number of deaths from earthquakes usually much greater than those from a volcanic eruption?

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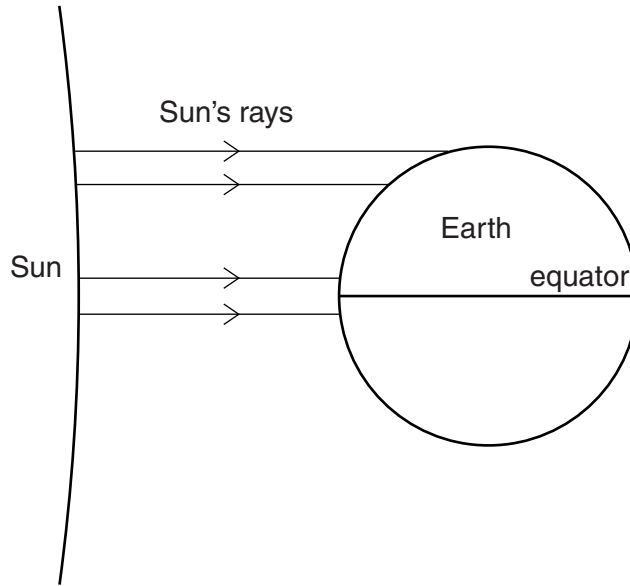
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.....[2]

- 3 (a) Tropical climates are hot and near the equator. Cold climates have low temperatures and are far from the equator.

Using the diagram below and your own knowledge, explain why this difference exists.



.....[3]

- (b) Crop growing and pastural grazing are two types of farming.

- (i) What type of farming is most likely to be found in an equatorial climate and what type in a savanna climate? Give reasons for your answer.

equatorial climate

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savanna

.....

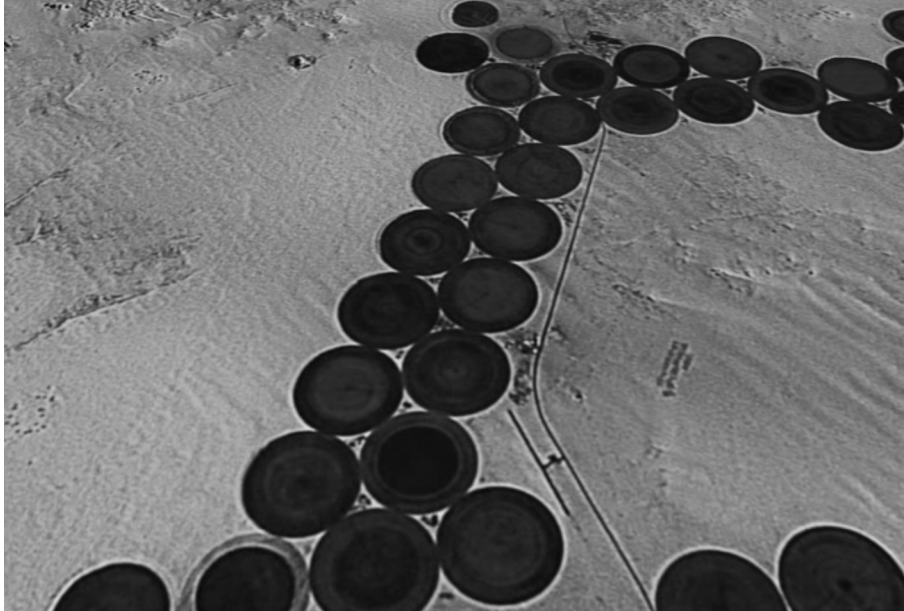
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.....[4]

- (ii) Climate is a very important factor in determining what might need to be done to make farming possible.

Study the aerial photograph below of crops growing in a desert region.

Name the requirement for plant growth that is being added to the ground **and** name the strategy that is providing it.



name of requirement

name of strategy [2]

- (iii) Name **one** other plant requirement which farmers may add to desert soil to improve crop yield.

.....[1]

4 (a) (i) Complete the following passage about rocks using words from the list below. The words may be used once, more than once or not at all.

erosion igneous pressure sediment sedimentary tectonic

Igneous and rocks can both be changed into metamorphic rocks by the action of heat and All three rock types may be uplifted and then will lead to the formation of and then, after compaction, rocks. [2]

(ii) Describe how a named rock is used in industry and farming.

name of rock
use
.....
.....
.....
..... [3]

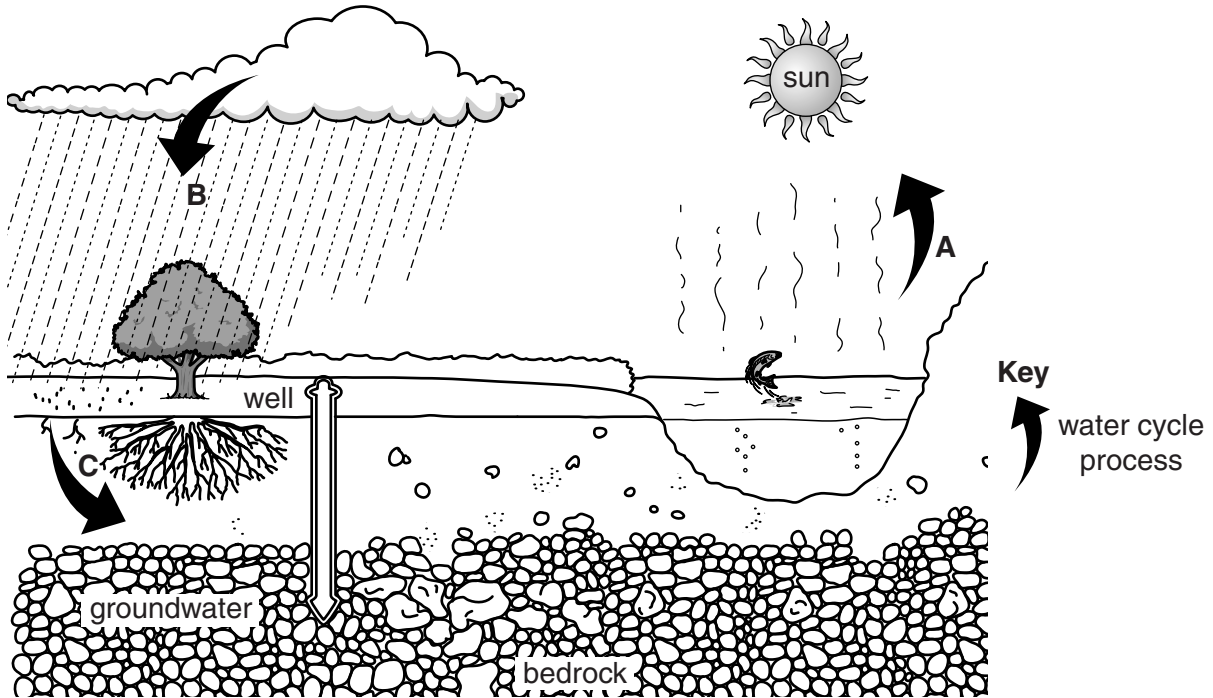
(b) (i) Describe how producing energy from coal causes environmental problems.

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..... [3]

(ii) Suggest ways in which an individual might help to conserve fossil fuels.

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..... [2]

- 5 (a) The diagram below shows the water cycle and human involvement in it. Use the diagram to help answer the following questions.



- (i) Name the source of energy that powers the water cycle.

.....[1]

- (ii) Name the processes shown by:

arrow A

arrow B

arrow C

[2]

- (iii) There are other water cycle processes which are listed below. Add labelled arrows to the diagram to show these.

interception run-off transpiration

[2]

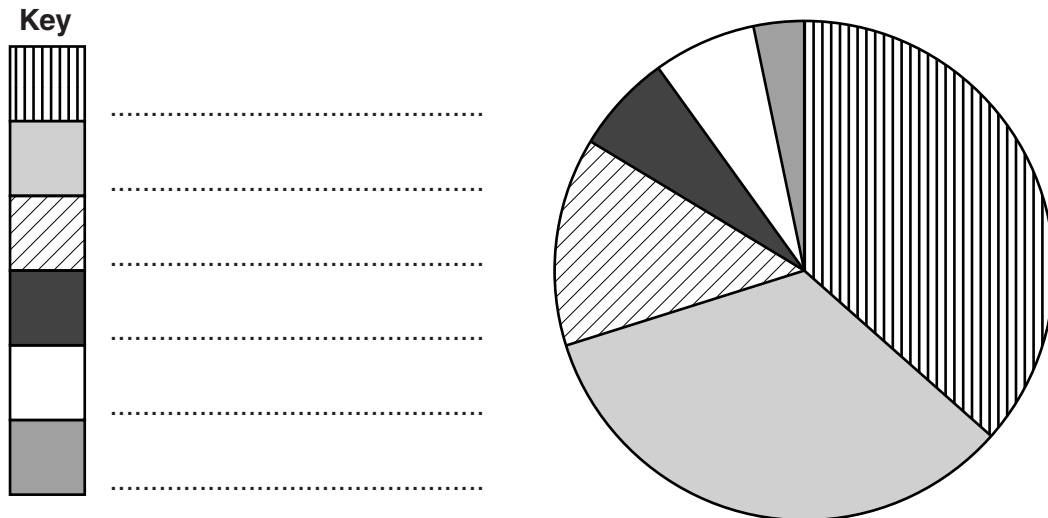
- (iv) The diagram shows one way in which humans obtain safe clean water for domestic use. This method is used mainly in rural areas. State **one** other way in which humans in rural areas might get safe clean water.

.....[1]

- (b) (i) The table below shows how one person in a developed country uses on average 150 litres of water each day.

use	volume of water / litres per day
car washing	5
dish washing	10
drinking	10
laundry	20
personal washing	50
WC flushing	55
TOTAL	150

These figures can be put in a pie graph, as shown below.



Complete the key.

[2]

- (ii) Providing safe clean water is expensive. Water that has been used for washing dishes is suitable for re-use in several ways. Suggest one such use, from the table, for this water. Explain your answer.

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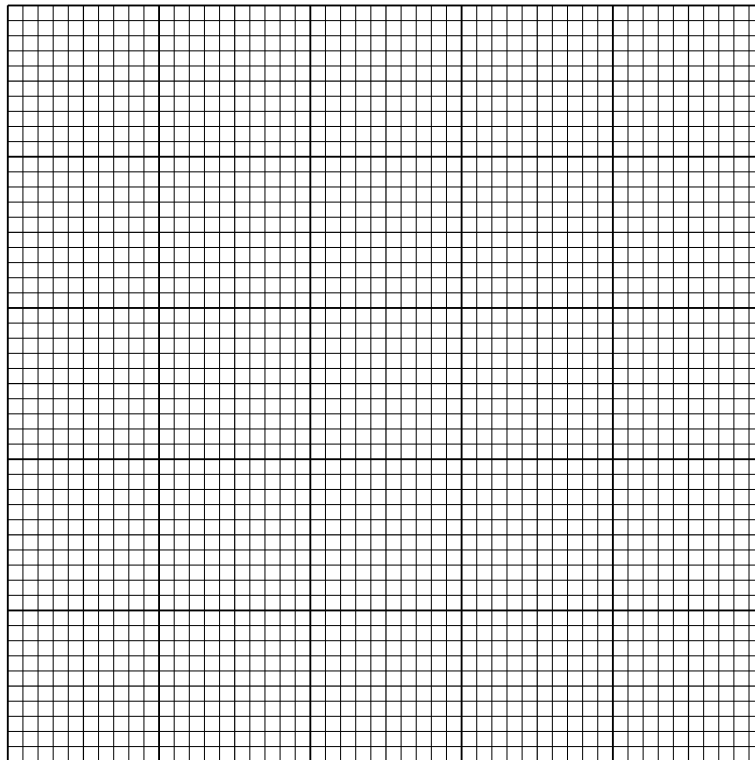
.....[2]

- 6 (a) Human population growth needs to be managed. One way of managing growth is by family planning.

Study the following table.

method of family planning	millions of couples
modern	660
none by choice	300
none available	140
traditional	80
TOTAL couples	1180

- (i) Plot these data (not the TOTAL) as a bar graph on the grid below.



[3]

- (ii) Suggest other strategies for managing population growth.

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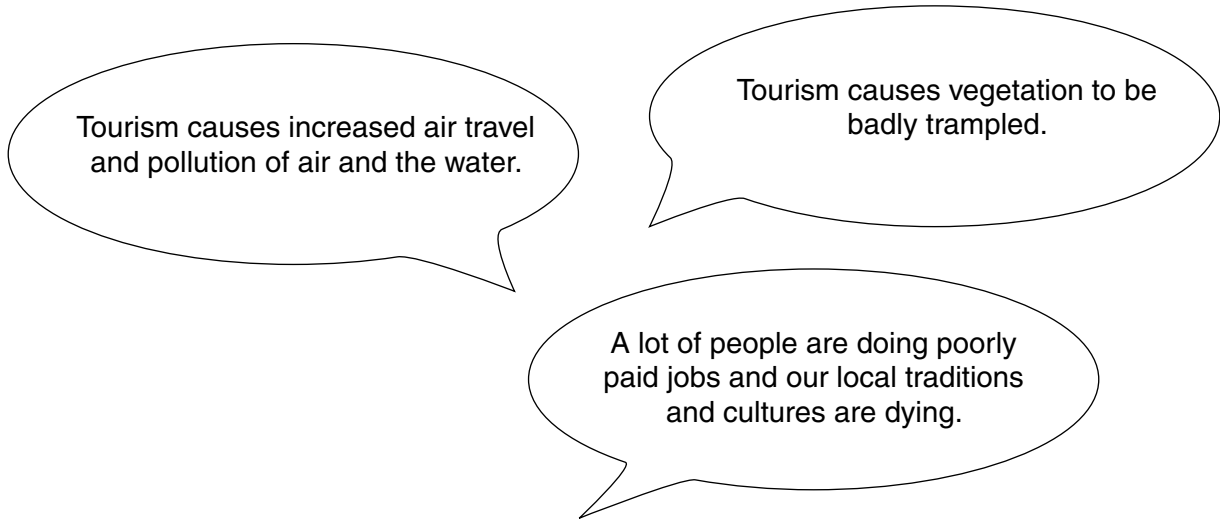
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[3]

(b) Another impact of increasing numbers of people is increased tourism.

Here is what some people said about tourism.



One way of managing this is by ecotourism. Tourists pay money to spend time in ecosystems, observing and learning about living things. Some of this money is used to protect the ecosystem and some goes to local people.

Discuss to what extent ecotourism may reduce the impacts of tourism quoted above.

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..... [4]

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Question 3a © Google Maps

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