



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

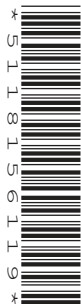
CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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ENVIRONMENTAL MANAGEMENT

0680/11

Paper 1

May/June 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 **13** printed pages and **3** blank pages.

1 (a) (i) What is an ecosystem?

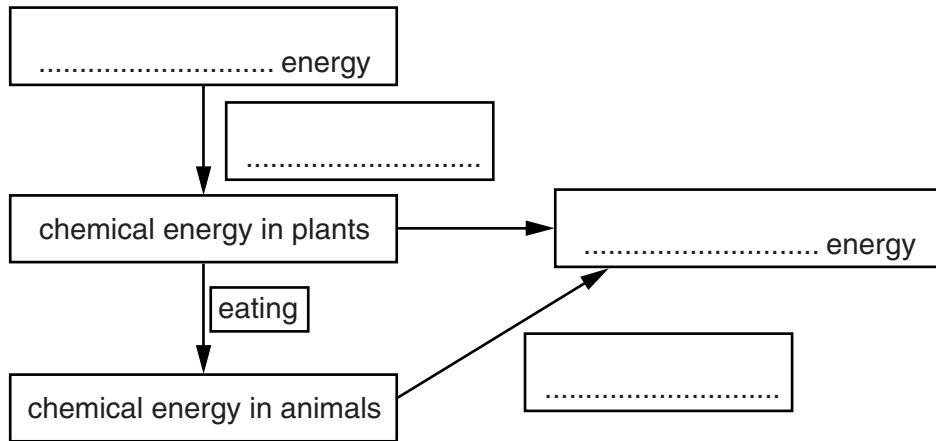
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.....[3]

(ii) The diagram below shows energy flow in an ecosystem.

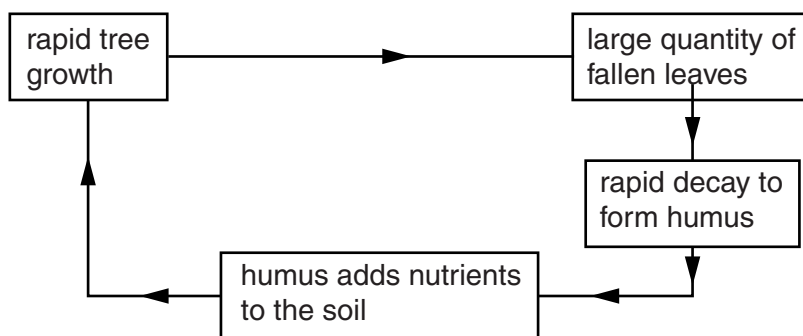


Complete the diagram by filling in the boxes on the lines provided. Use words from the list below.

- transpiration respiration photosynthesis heat
- light mechanical infiltration

[4]

(b) The diagram below shows a nutrient cycle in a tropical rainforest.



Tropical rainforests are being removed for agriculture and other purposes.

Describe how this removal changes the nutrient cycle shown in the diagram above.

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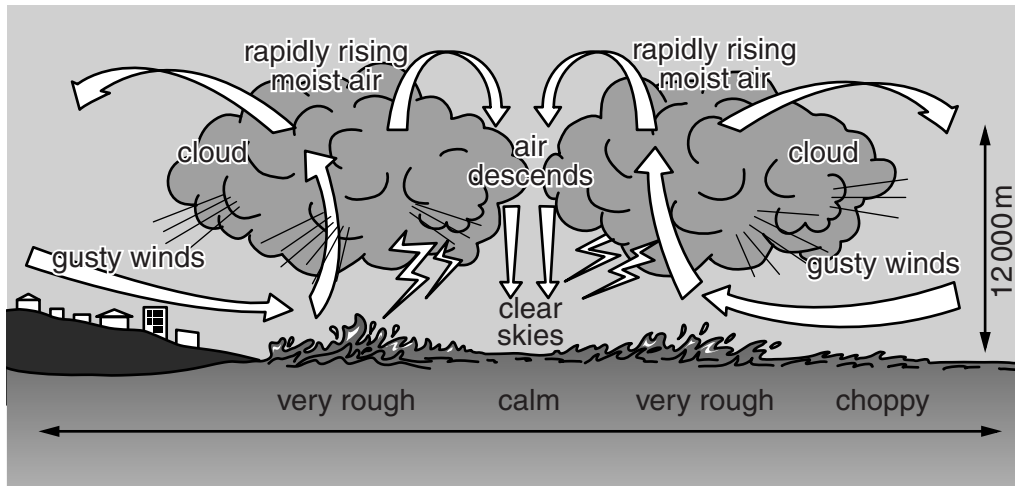
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[3]

- 2 (a) The diagram below shows a section through a cyclone.



- (i) Use the diagram and your own knowledge to explain how a cyclone forms.

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.....[4]

- (ii) Describe **two** different types of damage a cyclone may cause.

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.....[2]

- (iii) In one country in 1970, 300 000 people died in a cyclone. When a more severe cyclone struck the same area 20 years later, 130 000 people died.

Suggest what the authorities may have done to achieve this change.

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.....
..... [2]

- (b) Wind can be used as a source of power.

State two ways in which the power of the wind is used.

1
.....
2
..... [2]

3 Soil acts as a medium for the growth of plants. Some important features of soil are its pH, the nutrients it contains and how well aerated and drained it is.

(a) Water, nitrates, phosphates and oxygen may be found in soil.

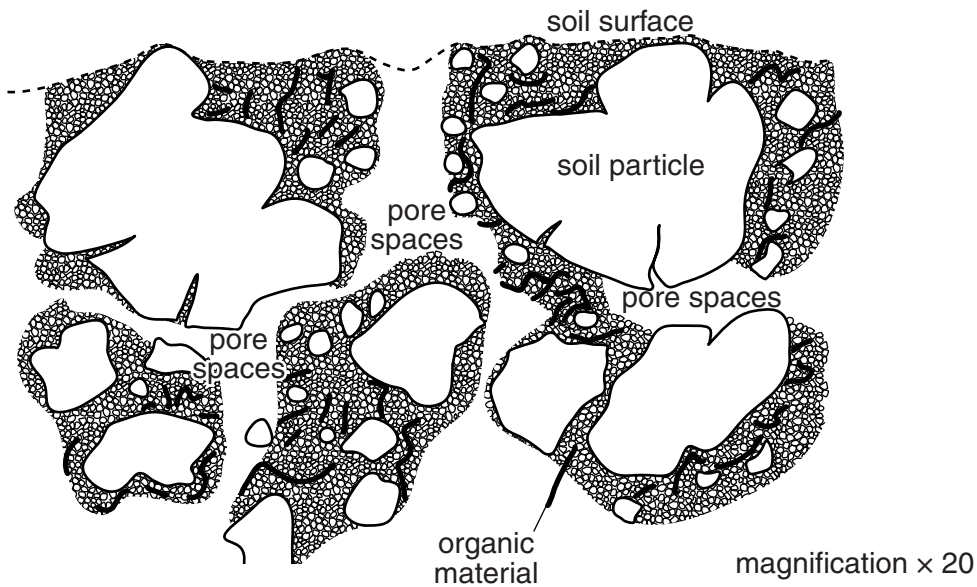
(i) State which of these enables a plant to:

photosynthesise

respire

[2]

(ii) The diagram below shows pore spaces in a soil.



If pore spaces are small, there will be a lot of water in the soil and it can become waterlogged.

Suggest what will be absent from a waterlogged soil and explain this absence.

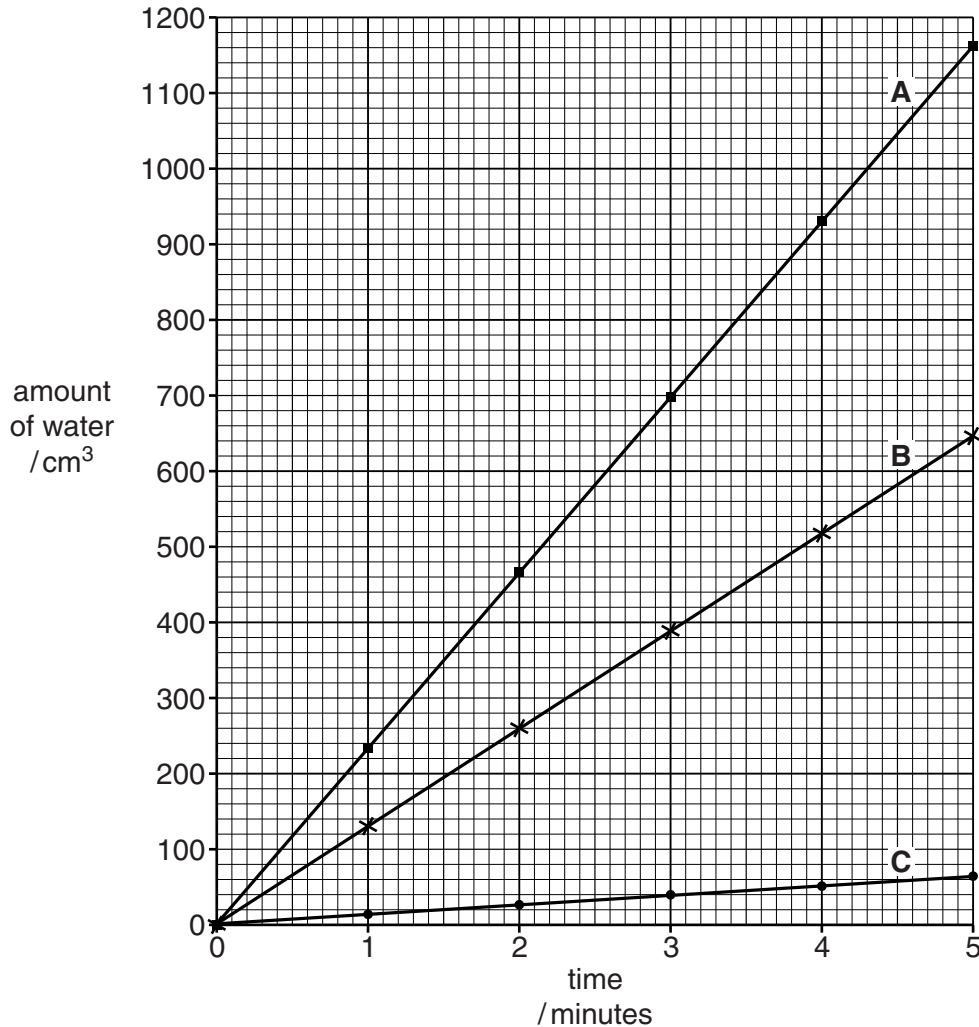
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.....[2]

(iii) Suggest how farmers might reduce the problems caused by waterlogging.

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.....[3]

- (b) The size of the pore spaces in soil is determined by the type of particle that makes up the soil type; silt, sand or clay.

Look at the graph below which shows the total volume of water that has drained through each soil type over five minutes.



- (i) How much more water has drained through soil **A** than soil **C** after 3 minutes?

..... cm³

[1]

- (ii) Match each soil type to each line, **A**, **B** or **C**, shown on the graph.

clay

sand

silt

[2]

- 4 (a) The world's oceans have enormous potential for the provision of resources to humans.

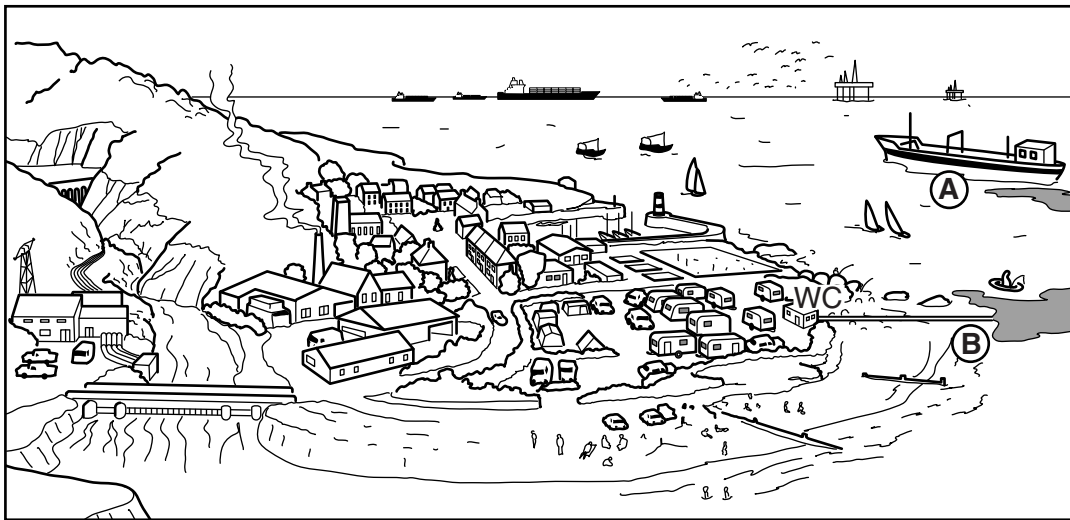
List **three** different resources humans get from the oceans.

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.....[3]

- (b) In using the oceans, humans cause pollution. The following diagram shows some activities on the coast and examples of pollution at **A** and **B**.



(i) Describe the causes of the pollution and its effects on the environment at both **A** and **B**.

cause of pollution at **A**

.....
.....

effect on environment

.....
.....
.....

cause of pollution at **B**

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.....

effect on environment

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[4]

(ii) Explain how pollution at **A** and **B** might be reduced.

A

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B

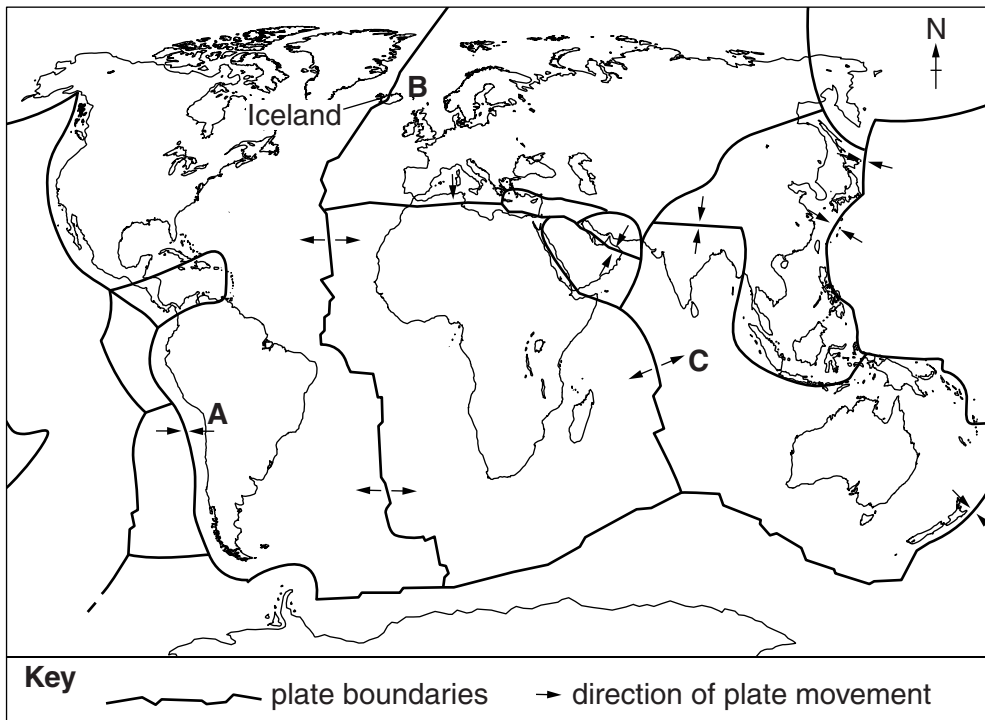
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[3]

5 The diagram below shows the Earth's major tectonic plates and the boundaries between them.



(a) (i) Name the types of plate boundaries found at **A** and at **C**.

A

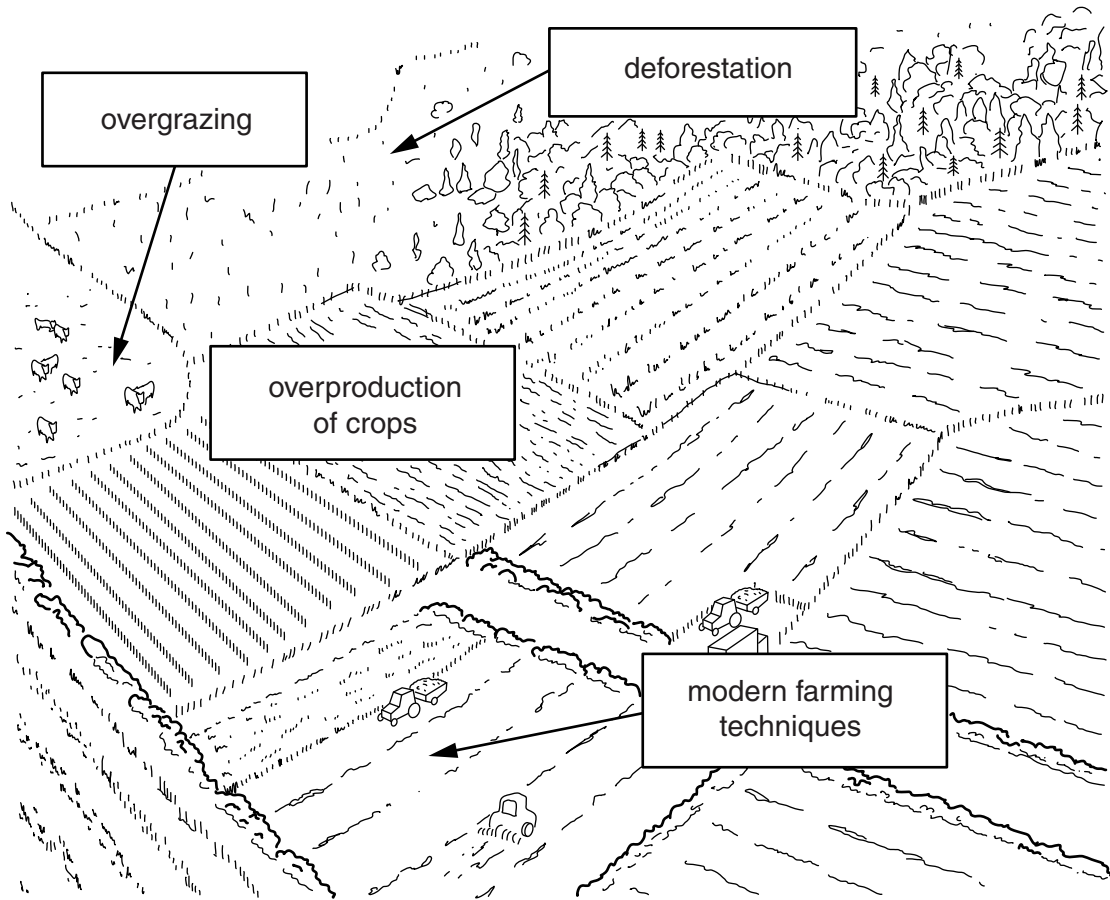
C

[2]

(ii) Draw a labelled diagram in the space below to show what is happening at the plate boundary at **A**.

[4]

6 The diagram below shows some ways in which humans affect their environment.



(a) (i) Overgrazing can cause soil erosion. Explain how this happens.

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.....[4]

(ii) Modern farming may lead to salination (salinisation).

Describe how salination occurs.

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.....[2]

(b) How might forests be managed sustainably?

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[4]

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