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Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

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0971224840

ENVIRONMENTAL MANAGEMENT **0680/13**

Paper 1 Theory **May/June 2025**

1 hour 45 minutes

You must answer on the question paper.

No additional materials are needed.

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a calculator.
- You should show all your working and use appropriate units.

INFORMATION

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **16** pages.

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[Turn over

Section A

1 The photograph shows workers extracting coal from a mine.



(a) Circle the name for this method of extracting coal.

opencast **strip** **fracking** **shaft**

[1]

(b) Describe the formation of coal.

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..... [3]

(c) State **two** benefits to local people of a new coal mine opening in an area.

1 .....

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2 .....

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[2]

[Total: 6]

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2 A report states that worldwide, 6.3 billion tonnes of plastic is disposed of each year.

Only 9% of this plastic waste is recycled.

(a) Calculate the mass of plastic that is recycled.

..... billion tonnes [1]

(b) State **two** limitations of using landfill sites for waste disposal.

1 .....

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2 .....

.....

[2]

(c) Bioremediation and soil improvement are strategies for restoring land used for landfill sites.

(i) Explain how bioremediation restores landscapes.

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..... [2]

(ii) Describe how organic matter improves soil.

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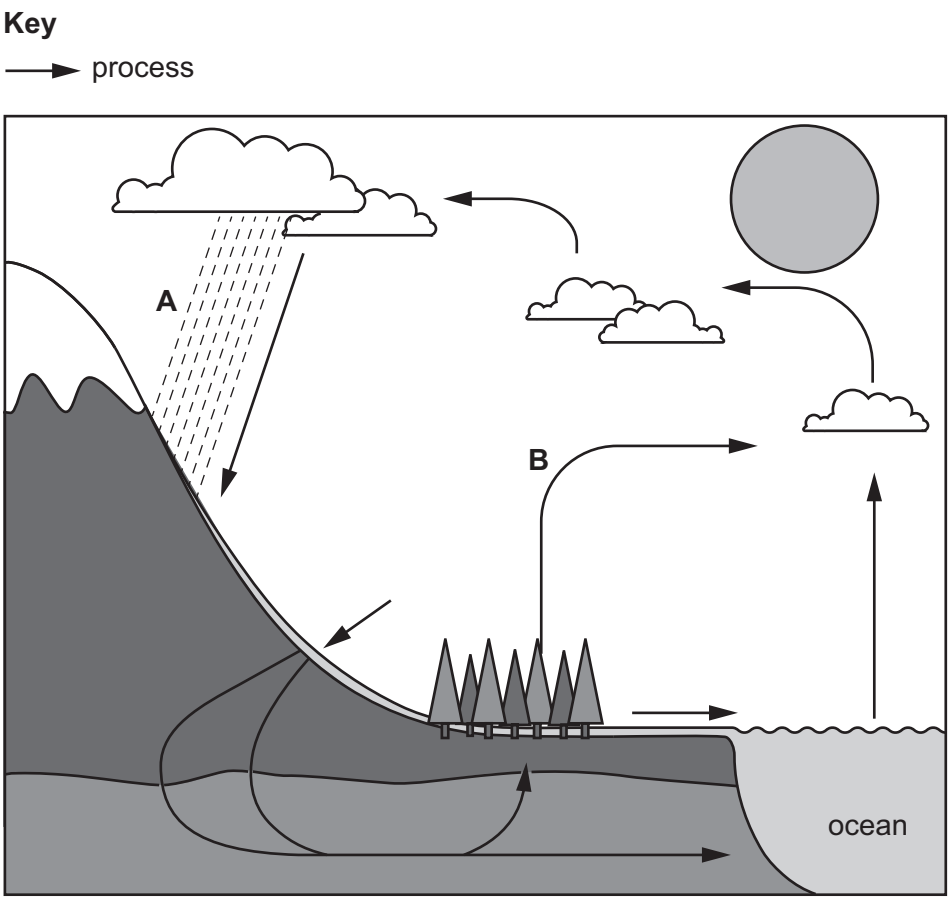
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3 The diagram shows part of the water cycle.



(a) Name process **A** and process **B**.

A .....

B .....

[2]

(b) State **three** sources of fresh water.

1 .....

2 .....

3 .....

[3]

(c) Explain why sewage in water is a risk to humans.

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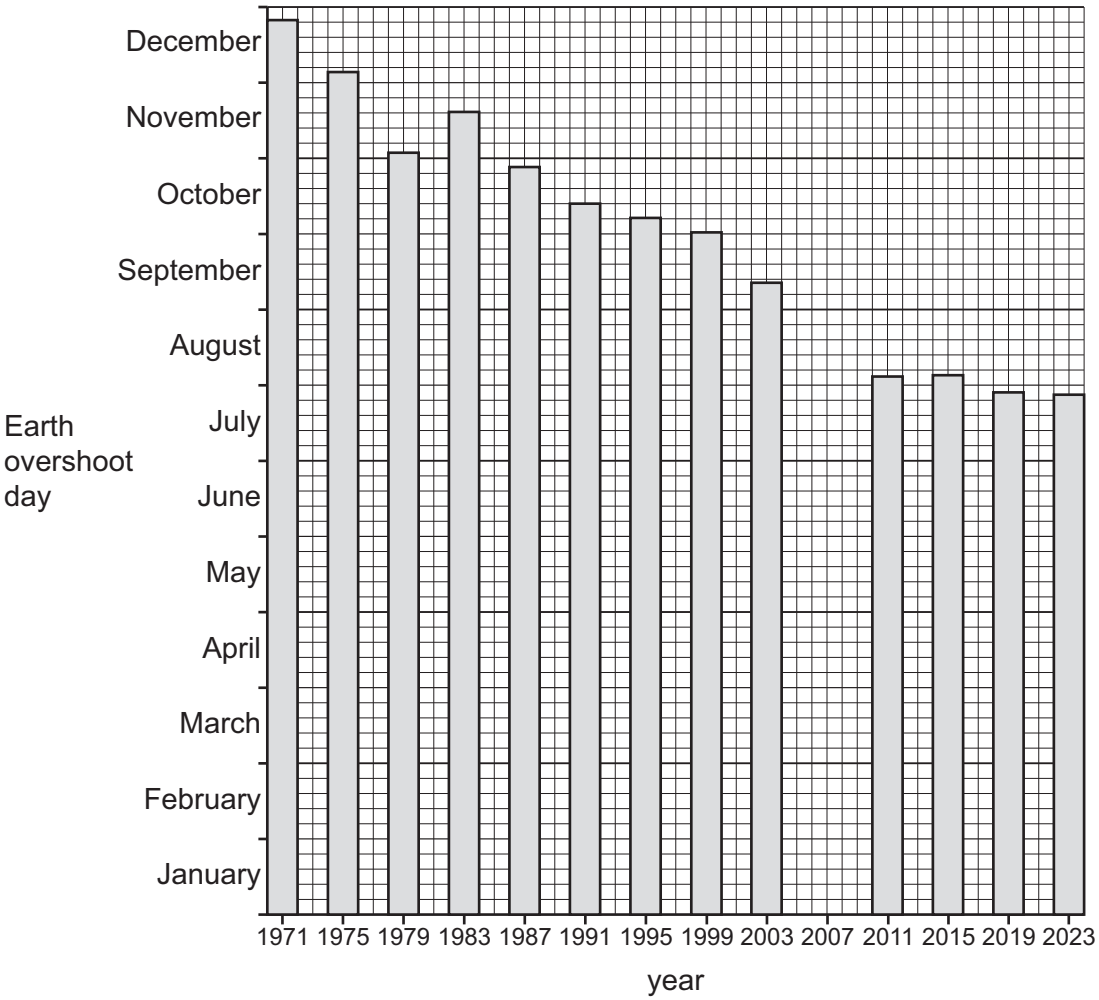
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Section B

4 **(a)** The diagram shows Earth overshoot day from 1971 to 2023.

Earth overshoot day is the day when scientists predict that people use up all the resources that the Earth's ecosystems can produce in that year.



(i) The predicted Earth overshoot day for 2007 was 15 August.

Complete the diagram to show this day. [1]

(ii) Describe the trend in predicted Earth overshoot day shown in the diagram.

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(b) Reducing birth rate will delay Earth overshoot day.

(i) State **three** strategies to reduce the birth rate in a country.

1 .....

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2 .....

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3 .....

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[3]

(ii) Suggest **two** reasons why strategies to reduce the birth rate in some countries are **not** successful.

1 .....

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2 .....

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[2]

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(c) Recycling is one way resources are used efficiently.

A student collects information about recycling different materials.

recycled material	information
paper	1 tonne of recycled paper saves 17 trees and 27 000 dm^3 of water
clothing	nearly 100% of clothing is recyclable
glass	using recycled glass to make a bottle takes 2700 kJ of energy compared to 3900 kJ if making it from raw materials
copper	using recycled copper saves 90% of energy used to extract copper from rocks

(i) Explain the benefits of recycling.

You may use information from the table to support your answer.

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..... [5]

(ii) Suggest **two** ways to increase recycling.

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2 .....

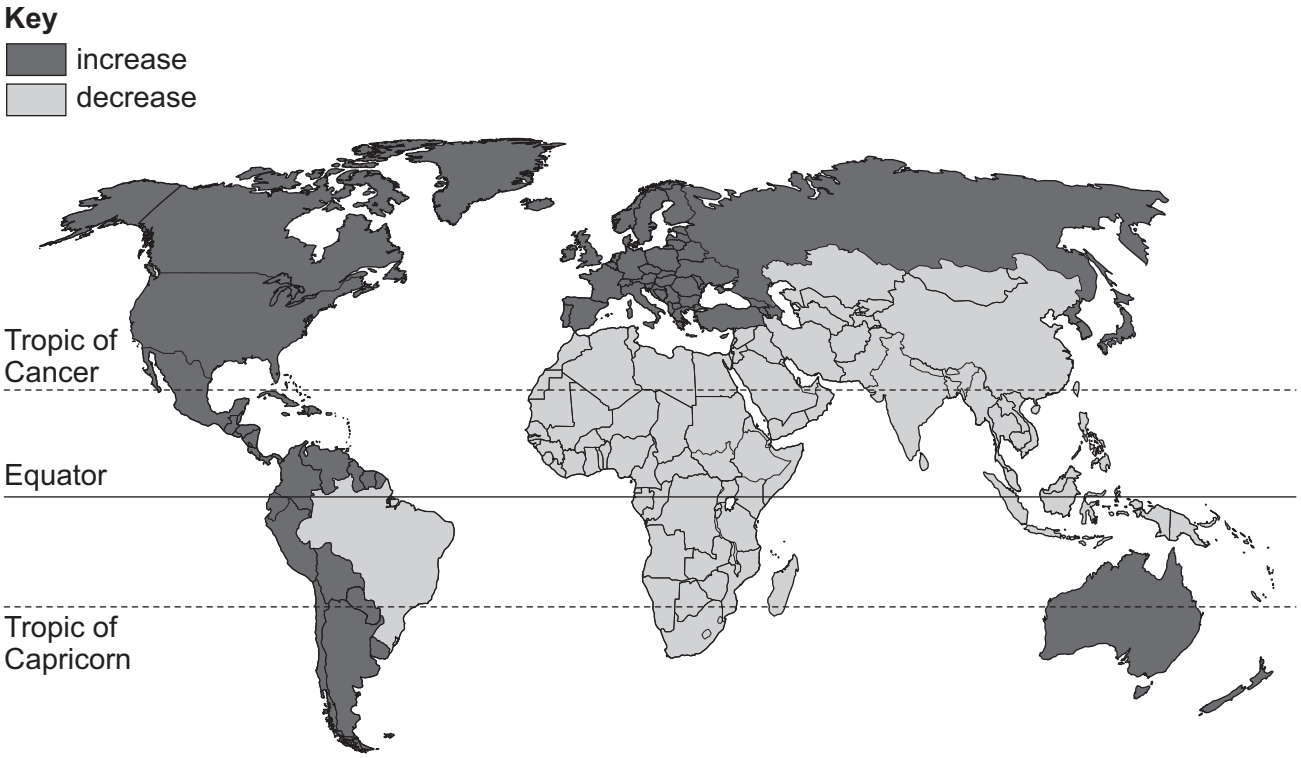
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5 The map shows the predicted change in global agricultural yield between 2018 and 2050.



(a) Describe the predicted changes shown on the map.

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(b) Intensive agricultural practices affect global agricultural yield.

(i) Describe the meaning of intensive agricultural practices.

.....

..... [1]

(ii) Describe how over cultivation causes soil erosion.

.....

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..... [3]

(c) Describe how these strategies maintain crop yields.

trickle drip irrigation .....

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contour ploughing .....

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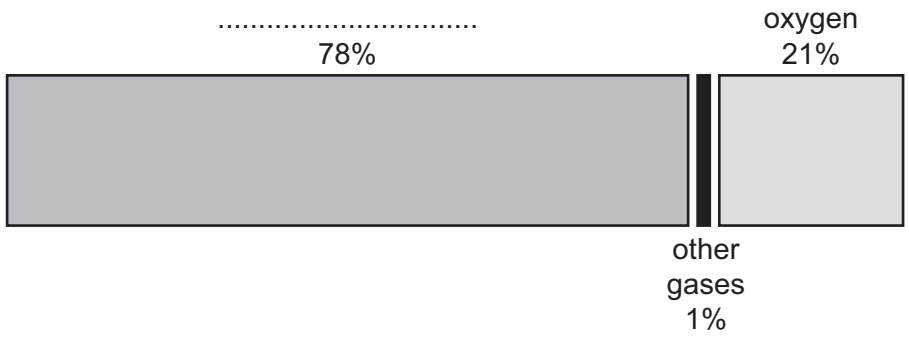
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6 **(a)** The diagram shows some of the gases in unpolluted, dry air.



(i) Complete the label for the gas which is 78% of unpolluted, dry air. [1]

(ii) Name **two** gases which are included in the category 'other gases'.

1 .....

2 .....
[2]

(b) Explain the importance of oxygen in the atmosphere to living organisms.

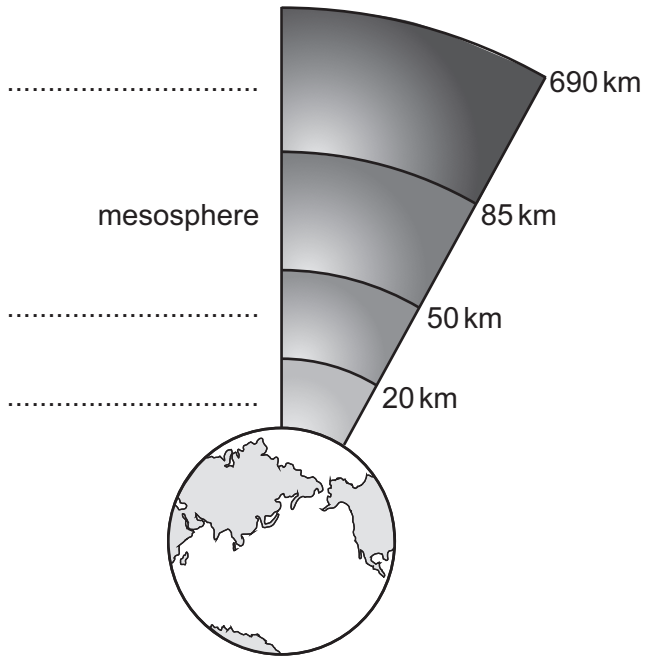
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[2]

(c) The diagram shows layers of the Earth's atmosphere.



Complete the diagram by labelling the layers of the Earth's atmosphere. [3]

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7 **(a)** The Earth's structure has three main layers.

Use the words from the list to complete the sentences about the Earth's structure.

The words may be used once, more than once, or not at all.

core	**constructive**	**cyclones**	**destructive**
earthquakes	**igneous**	**magma**	**sedimentary**

The three main layers in the Earth are the mantle, the crust and the ..... .

The crust contains rocks. Basalt is ..... rock.

The crust is made up of tectonic plates. When these plates move away from each other the plate movement is called ..... .

The edges of plates are a location for ..... .

[4]

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(b) **Diagram 1** shows an area at risk of flooding.

diagram 1

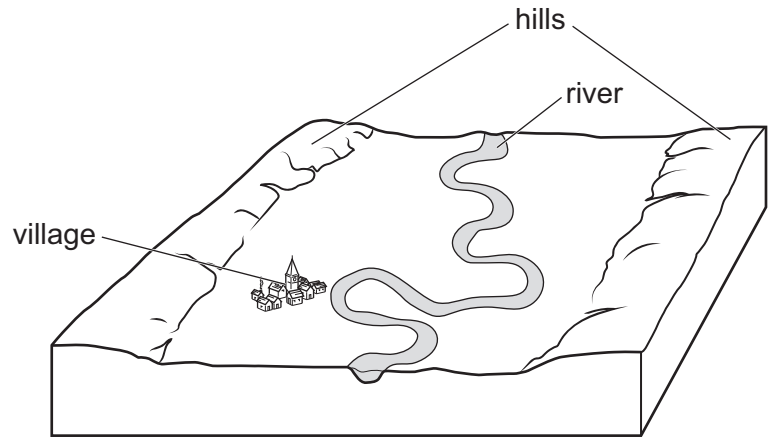
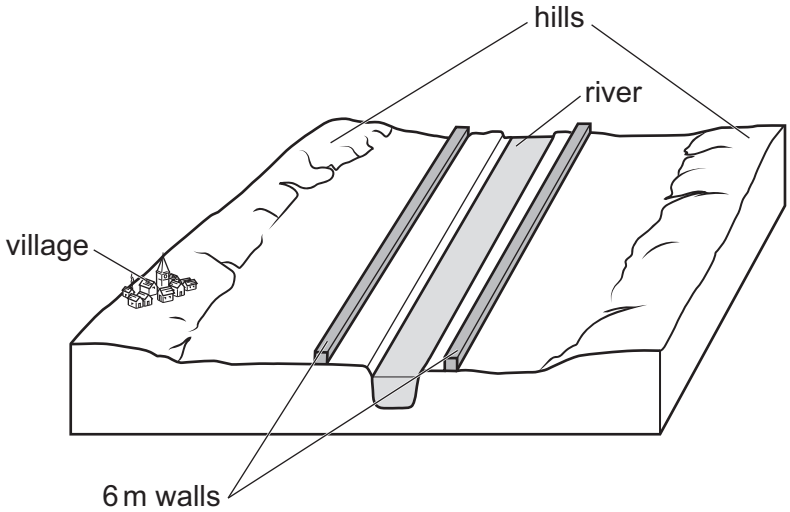


Diagram 2 shows the same area after flood management techniques are introduced.

diagram 2



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(i) Use **diagram 2** to identify **three** flood management techniques that have been used to reduce the risk of flooding.
Explain how each technique reduces the risk of flooding.

technique 1 .....

explanation .....

.....

technique 2 .....

explanation .....

.....

technique 3 .....

explanation .....

.....

[3]

(ii) Flood management techniques are strategies to reduce the impact of flooding.

State **two** other strategies to reduce the impact of flooding.

1 .....

.....

2 .....

.....

[2]

(iii) State **one** opportunity flooding can provide to local people.

.....

..... [1]

[Total: 10]

8 **(a)** Define these components of an ecosystem:

biotic factor .....

.....

community .....

.....

niche. .....

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[3]

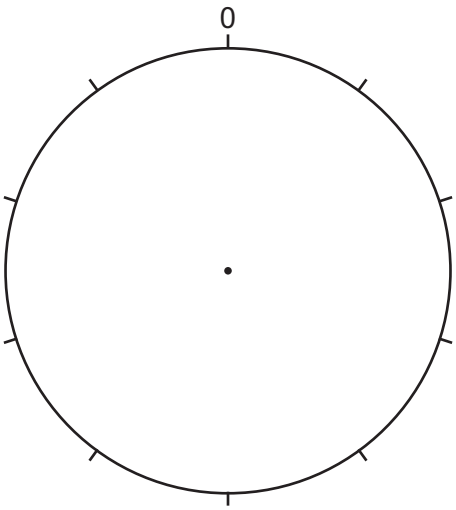
(b) Human activity impacts ecosystems.

One impact is the extinction of animal species.

The table shows the reasons for animal extinctions.

reason for animal extinction	percentage of extinctions
habitat destruction	36
hunting	23
introduction of non-native species	39
other	2

(i) Use the data in the table to complete the pie chart and the key.



Key

☐ .....

☐ .....

☐ .....

☐ .....

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(ii) Suggest reasons why the introduction of non-native animal species causes the extinction of other animal species.

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(c) A student says:

> Many ecosystems are too damaged to be conserved.
>
> Government money should be invested in protecting ecosystems that are **not** damaged.
>
> Money should **not** be used on ecosystems which are damaged.

To what extent do you agree with this statement? Give reasons for your answer.

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..... [6]

[Total: 16]

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