CAMBRIDGE
International Education

# Cambridge IGCSE™

CANDIDATE NAME

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**ENVIRONMENTAL MANAGEMENT** **0680/12**

Paper 1 Theory **February/March 2026**

**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. Do **not** use correction fluid or tape.
- 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 **20** pages. Any blank pages are indicated.

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## Section A

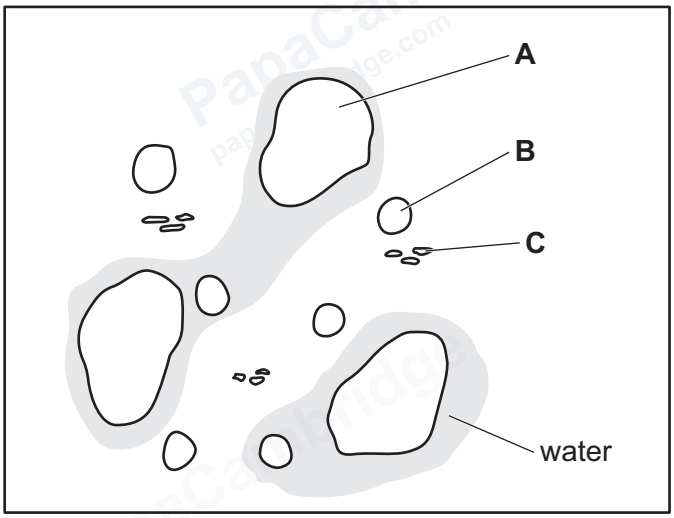
**1** **(a)** The table shows some components of soil.

Tick (✓) **all** the components of soil that are organic content.

| components of soil | organic content |
|---|---|
| air | |
| animals | |
| microorganisms | |
| mineral particles | |

[2]

**(b)** The diagram shows the structure of a soil. Three types of mineral particle are labelled **A**, **B** and **C**.




**(i)** The diagram is drawn to scale.

Name the **three** types of mineral particle, **A**, **B** and **C**.

**A** .....

**B** .....

**C** .....

[2]

**(ii)** Draw a label line and a label on the diagram to identify an air space. [1]

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**(c)** Soils contain mineral ions.

State the chemical formula for nitrate ions and the chemical formula for phosphate ions.

nitrate ions .....

phosphate ions .....
[2]

[Total: 7]



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**2** The table shows information about four countries in 2023.

| country | area of country / km$^2$ | population of country / people | population density / ..... |
|---|---|---|---|
| Australia | 7 741 220 | 26 461 166 | 3.42 |
| Bangladesh | 148 460 | 167 184 465 | 1126.13 |
| Greenland | 2 166 086 | 57 777 | |
| Rwanda | 26 338 | | 508.79 |

**(a)** Write the unit of population density in the table. [1]

**(b)** Use the data shown in the table to identify the country with:

the largest population .....

the smallest area. .....
[2]

**(c)** Population density is calculated using the formula shown.

$$\text{population density} = \frac{\text{population}}{\text{area}}$$

**(i)** Use the formula to calculate the population density of Greenland.

Give your answer to **two** decimal places.

..... [2]

**(ii)** Use the formula to calculate the population of Rwanda.

..... [1]

[Total: 6]

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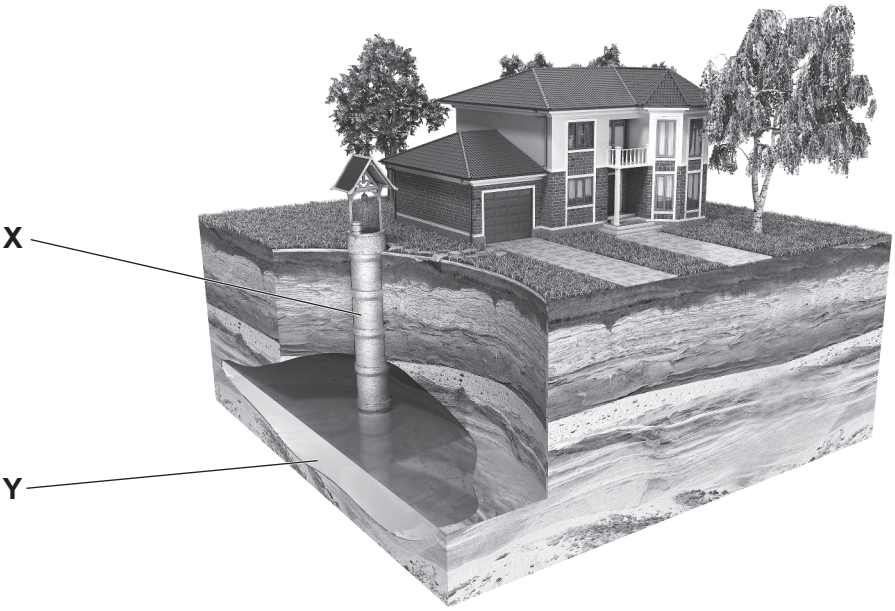
**3** The diagram shows a source of fresh water used by people.




**(a)** **(i)** Identify structure **X**.

..... [1]

**(ii)** Name water source **Y**.

..... [1]

**(b)** State **one** other source of fresh water used by people.

..... [1]

**(c)** Trees affect interception in the water cycle.

Describe how trees affect interception.

.....

.....

.....

..... [2]

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**(d)** After heavy precipitation, through-flow and ground water flow occur.

Describe **one** similarity and **one** difference between through-flow and ground water flow.

similarity .....

.....

difference .....

.....

[2]

[Total: 7]



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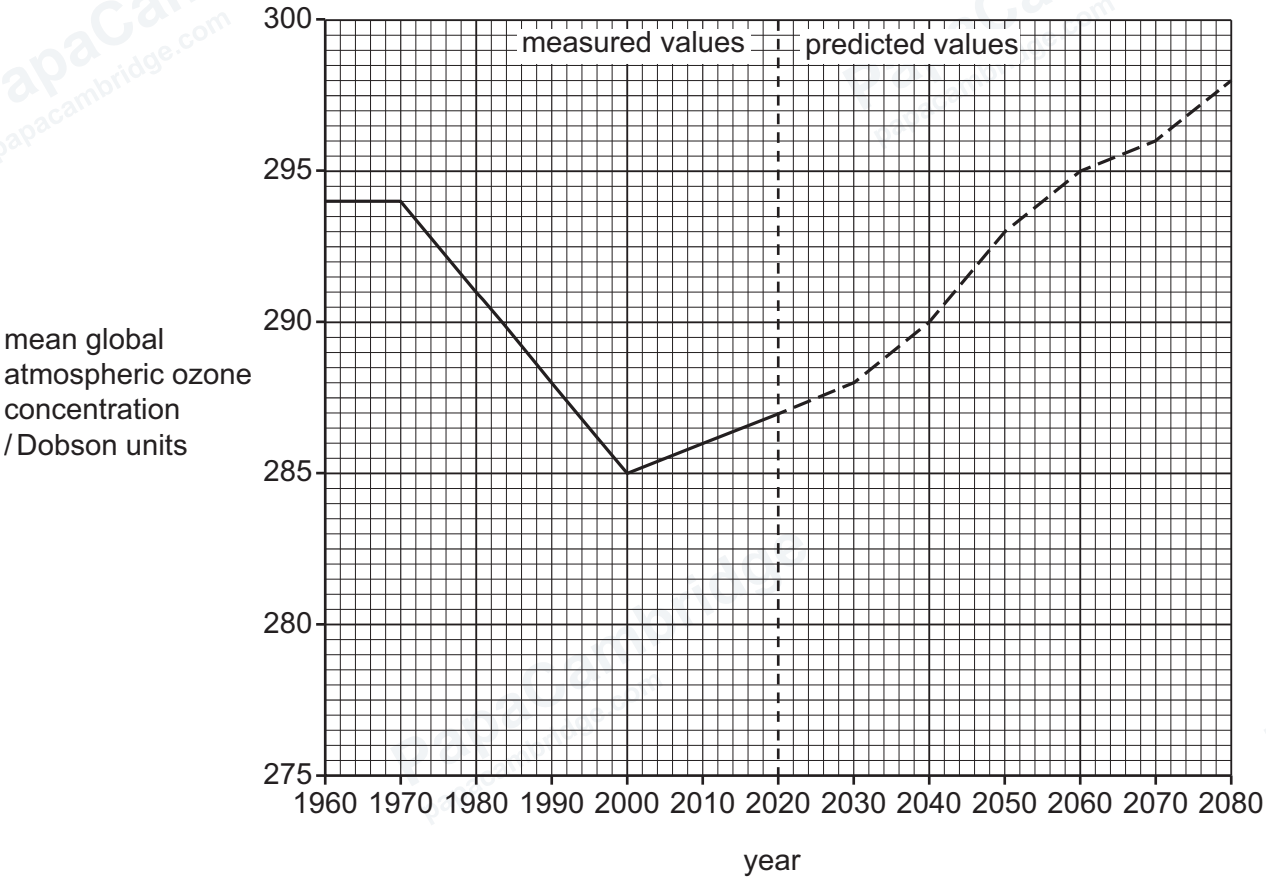
## Section B

**4** **(a)** The graph shows the mean global atmospheric ozone concentration measured every 10 years between 1960 and 2020. The values after 2020 are predicted values.




**(i)** Describe the trend in the mean global atmospheric ozone concentration between 1960 and 2020.

.....

.....

.....

.....

.....

..... [3]

**(ii)** Identify the year that the mean global atmospheric ozone concentration is predicted to be the same as the concentration in 1960.

..... [1]

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**(iii)** Suggest **two** reasons why the predicted mean global atmospheric ozone concentrations shown on the graph may **not** be accurate.

1 .....

.....

2 .....

.....
[2]

**(b)** State **one** impact of ozone depletion on human health and explain how ozone depletion causes this impact.

impact .....

explanation .....

.....

.....
[2]

**(c)** State the name of the layer of the atmosphere that contains the ozone layer.

..... [1]

**(d)** State **one** strategy used to reduce ozone depletion.

.....

..... [1]

[Total: 10]

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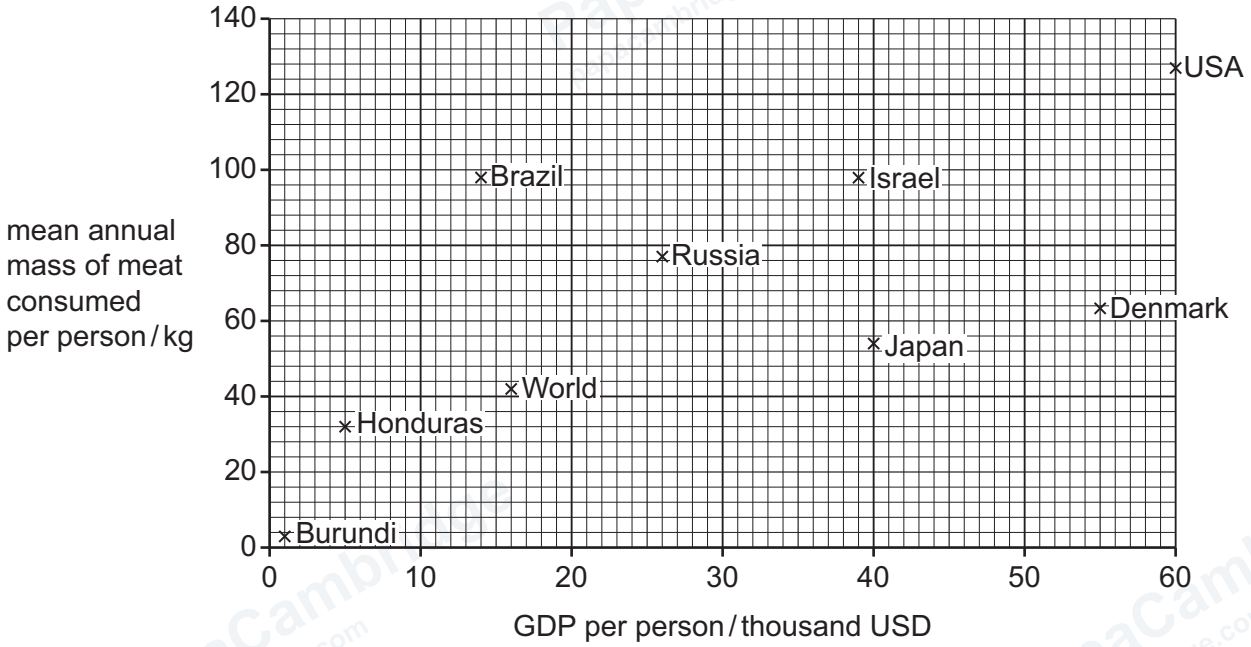
**5** **(a)** The graph shows mean annual mass of meat consumed per person plotted against gross domestic product per person.

The graph shows information for eight countries and a mean value for the world.

Gross domestic product, GDP, is a measure of a country's economy.




**(i)** Identify **all** the countries with a GDP less than the mean value for the world.

..... [1]

**(ii)** A student writes conclusions about the data.

Tick (✓) to show if each conclusion is supported by the data or **not** supported by the data.

| | **supported by data** | **not supported by data** |
|---|---|---|
| All countries with a GDP per person greater than 30 thousand USD consume more meat per person than countries with a GDP per person less than 30 thousand USD. | | |
| Every person in Japan consumes 54 kg of meat per year. | | |
| People in Russia consume more meat per person than people in Israel. | | |
| The USA has the highest GDP per person and the highest mean mass of meat consumed per person. | | |

[2]

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**(b)** The photograph shows intensive livestock farming of cattle in the USA.

**(i)** Describe **three** negative impacts of the cattle farming shown in the photograph.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

**(ii)** Cattle produce methane gas.

Discuss the ways cattle farming contributes to climate change.

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..... [5]



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**(c)** Cattle are used to produce meat and milk.

Describe how a farmer uses selective breeding to breed cattle with a high yield of milk.

.....

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.....

.....

..... [4]

[Total: 15]

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**6** **(a)** The photograph shows an area affected by flooding.

**(i)** Climate change is one cause of flooding.

Suggest **two** other causes of the flooding shown in the photograph.

1 .....

.....

2 .....

.....
[2]

**(ii)** One impact on the people living in the area affected by the flooding is an increase in water-related diseases.

Describe other negative impacts on the people living in the area affected by the flooding shown in the photograph.

.....

.....

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.....

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..... [3]

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**(iii)** Explain how flooding sometimes creates opportunities for people.

.....

.....

.....

..... [2]

**(b)** Malaria is a water-related disease.

**(i)** Complete the sentences about the life cycle of the malaria parasite.

The malaria parasite is called ..... .

The mosquito is known as the malaria ..... .

An infected mosquito bites an uninfected person and the malaria parasite passes to the person.

The parasite reproduces in the human ..... .

The parasite infects the ..... blood cells.

An uninfected mosquito consumes the parasite when it feeds on an

..... person.

[5]

**(ii)** Describe how antimalarial drugs control malaria.

.....

.....

.....

..... [2]

**(iii)** State **two** other ways of controlling malaria.

1 .....

.....

2 .....

.....

[2]

[Total: 16]



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**7** **(a)** The photograph shows a healthy mangrove forest in a coastal ecosystem.

During a 24-hour period, the tides cause the height of the sea water to rise and fall.

**(i)** Suggest **two** abiotic factors that affect mangrove forests.

1 .....

2 .....
[2]

**(ii)** Mangrove trees are producers.

The roots of mangrove trees provide shelter for marine organisms such as fish, shrimp and lobster.

Crabs eat mangrove roots and dead leaves. Fish eat crabs. Humans eat crabs, fish, shrimp and lobster.

Use the information to write a food chain with **four** trophic levels.

..... [2]

**(iii)** Describe what is meant by the term producer.

.....

.....

.....

..... [2]

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**(iv)** Complete the sentences about mangrove ecosystems.

Mangrove forests include many different species of plant. Organisms of the same species in an area are called a ..... .

Each organism has a role in the ecosystem due to its biotic and abiotic interactions.

This role is known as its ..... .

[2]

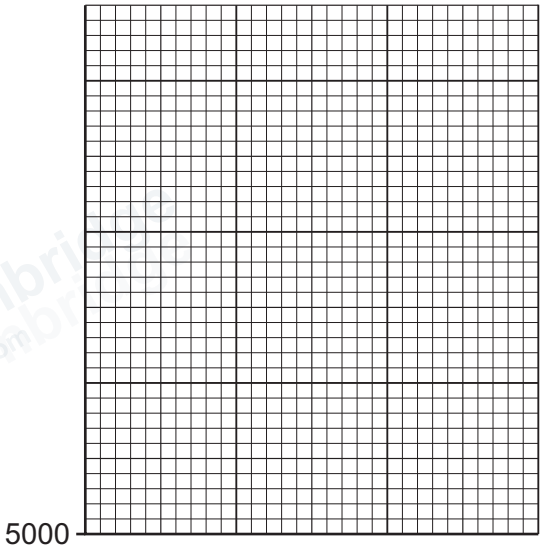
**(b)** The table shows the area of mangrove forest in China from 2000 to 2020.

| year | area of mangrove forest / hectares |
|---|---|
| 2000 | 5 500 |
| 2005 | 6 600 |
| 2010 | 8 400 |
| 2015 | 8 800 |
| 2020 | 11 000 |

**(i)** Plot a line graph to show the area of mangrove forest in China from 2000 to 2020.

The scale on the *y*-axis (vertical axis) has been started for you.

Draw a straight line between each plotted point.




[4]

**(ii)** Use the data to identify the 5-year period with the smallest increase in area of mangrove forest.

..... [1]



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**(c)** Some communities harvest mangrove trees.

A person says:

> Harvesting mangrove trees has more benefits than negative impacts.

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

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..... [6]

[Total: 19]

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