Cambridge Assessment International Education

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ENVIRONMENTAL MANAGEMENT **0680/11**

Paper 1 Theory **October/November 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 **20** pages. Any blank pages are indicated.

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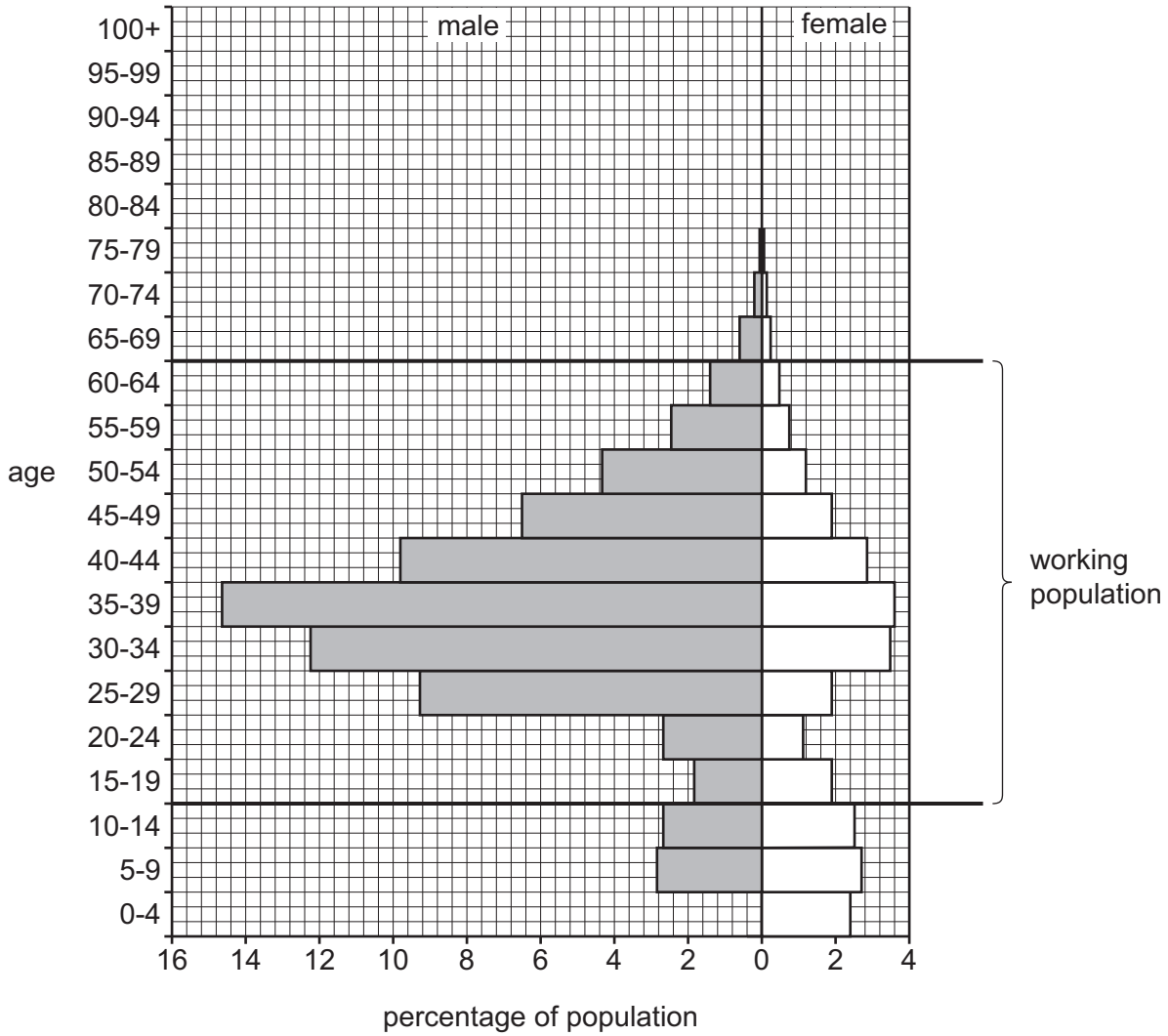
[Turn over

Section A

1 The diagram shows part of the population pyramid for Qatar, a country in the Middle East.



(a) Complete the bar for males aged 0–4 to show 2.4%. [1]

(b) Describe **two** features the pyramid shows about the working population in Qatar.

1 .....

.....

2 .....

.....

[2]

(c) State the maximum age of females in Qatar shown in the population pyramid.

..... [1]

(d) Tick (✓) the strategies that could increase the number of children under 5-years old in the future.

increased availability of contraceptives	☐
improved health care	☐
introduction of an antinatalist policy	☐

[1]

(e) State **two** features of a population pyramid for a LEDC that are different from a MEDC.

1 .....

2 .....

[2]

[Total: 7]

2 The photograph shows a mine.

(a) State the type of mine shown in the photograph.

..... [1]

(b) Landscapes are restored when a mine closes.

Put the processes, **X**, **Y** and **Z**, for land restoration in the correct order.

X add topsoil

Y plant vegetation

Z replace overburden

first process		last process
.....	.....	.....

[1]

(c) Bioremediation is a strategy to restore landscapes damaged by mining.

Describe bioremediation.

.....

..... [1]

(d) Draw a line from the name of each rock to the correct type of rock.

Each type of rock can be used once, more than once or not at all.

name of rock	**type of rock**
basalt	
granite	igneous
limestone	metamorphic
marble	sedimentary
shale	

[2]

(e) State what is meant by the term sustainable development.

.....

.....

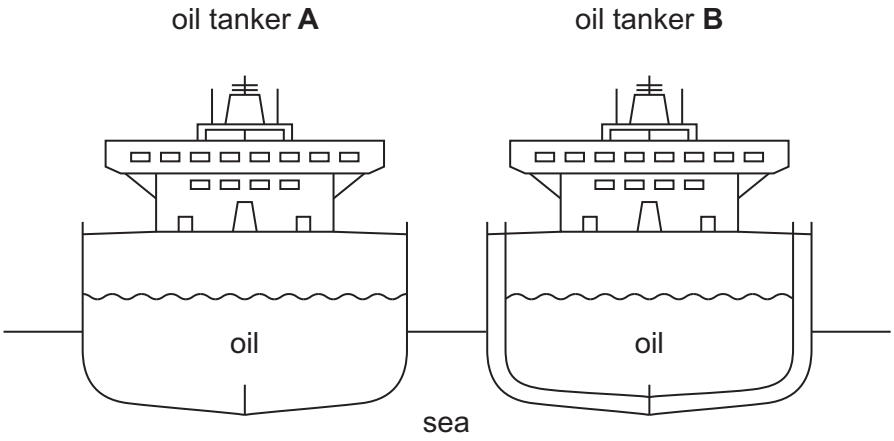
.....

..... [2]

[Total: 7]

3 Oil is transported in tankers across oceans.

(a) The diagram shows oil tankers **A** and **B**.



State the advantage of using oil tanker **B** compared to oil tanker **A** for transporting oil.

.....

..... [1]

(b) Describe how a skimmer is used to reduce the impact of an oil spill on marine ecosystems.

.....

.....

.....

..... [2]

(c) Describe the impacts of an oil spill on marine mammals.

.....

.....

.....

.....

.....

..... [3]

[Total: 6]

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Section B

4 More than 800 million people live without access to electricity.

(a) Suggest **two** reasons why living without access to electricity reduces life expectancy.

1 .....

.....

2 .....

.....

[2]

(b) Solar power is one way of providing people with access to electricity.

The photograph shows solar panels on a roof.

Solar panel efficiency is the percentage of solar energy the solar panel converts to electricity on a sunny day with temperatures of 25 °C.

The table shows the efficiency of 5 different solar panels, **A** to **E**.

solar panel	percentage efficiency
A	21
B	19
C	16
D	20
E	17

(i) Calculate the mean percentage efficiency of the 5 solar panels.

.....% [1]

(ii) Suggest **two** reasons why the actual percentage efficiency of solar panels is lower than the values in the table.

1 .....

.....

2 .....

.....

[2]

(c) The maps show the percentage of electricity generated from solar power in 1992 and in 2022 in North and South America.

Key

- no data
- 0–1%
- 1–2%
- 2–3%
- 3–4%
- 4%

N

1992

2022

Compare the percentage of electricity generated from solar power in 1992 and in 2022.

.....

.....

.....

.....

.....

..... [3]

(d) Biofuels are another way of generating electricity.

Describe the advantages and disadvantages of using biofuels compared to fossil fuels to generate electricity.

advantages .....

.....

.....

.....

.....

.....

disadvantages .....

.....

.....

.....

.....

.....

[4]

(e) Coal is a fossil fuel.

Describe how coal is formed.

.....

.....

.....

.....

.....

..... [3]

[Total: 15]

5 Singapore is a small island country in southeast Asia.

(a) The diagram shows the volume of water used per person per day in Singapore. The value for 2030 is a target volume.

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(i) Use the diagram to calculate the predicted percentage decrease in water use in the 30 years from 2000 to 2030.

.....% [1]

(ii) Suggest **one** reason why the government of Singapore wants to decrease the volume of water used per person by 2030.

.....

..... [1]

(iii) Houses in Singapore have water meters fitted to their water supply to monitor the volume of water used.

The diagram shows the meter readings from one house for two months measured in m^3.

2	7	1	0	5	5	31 July

2	7	4	7	3	1	31 August

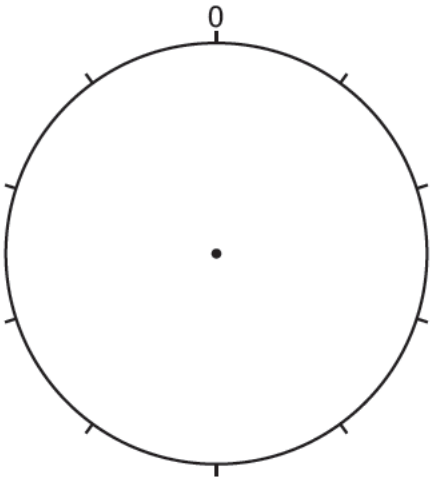
Calculate the volume of water used in the house.
Give your answer to **one** decimal place.

..... m^3 [2]

(b) The table shows the different ways people use water.

use	percentage
preparing food and washing dishes	20
showers and baths	40
toilet flushing	15
washing clothes	15
other	10

Use the data to complete the pie chart and key.



Key

..... [4]

(c) Desalination is one source of fresh water in Singapore.

(i) Describe how desalination makes sea water suitable for drinking.

.....

.....

.....

..... [2]

(ii) Desalination uses electricity to make sea water suitable for drinking.

Suggest **two** reasons why Singapore wants to use less electricity for desalination.

1 .....

.....

2 .....

..... [2]

(d) Singapore has no large natural lakes and no rivers longer than 10 km.

Suggest **two** ways fresh water can be obtained in Singapore other than by desalination and rainwater harvesting.

1 .....

2 .....

[2]

(e) The vector for malaria and dengue fever is mosquitoes.

Dengue fever is a disease caused by a virus spread by mosquitoes.

The graph shows the number of people with dengue fever in Singapore each week for two years.

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(i) In 2020, the government of Singapore introduced an intensive two-week vector control strategy to manage the disease. This strategy was successful.

Circle the week when the strategy was introduced.

1 **23** **29** **39** **52** [1]

(ii) Compare the trend in the number of people with dengue fever in 2020 and 2019.

.....

.....

.....

.....

.....

..... [3]

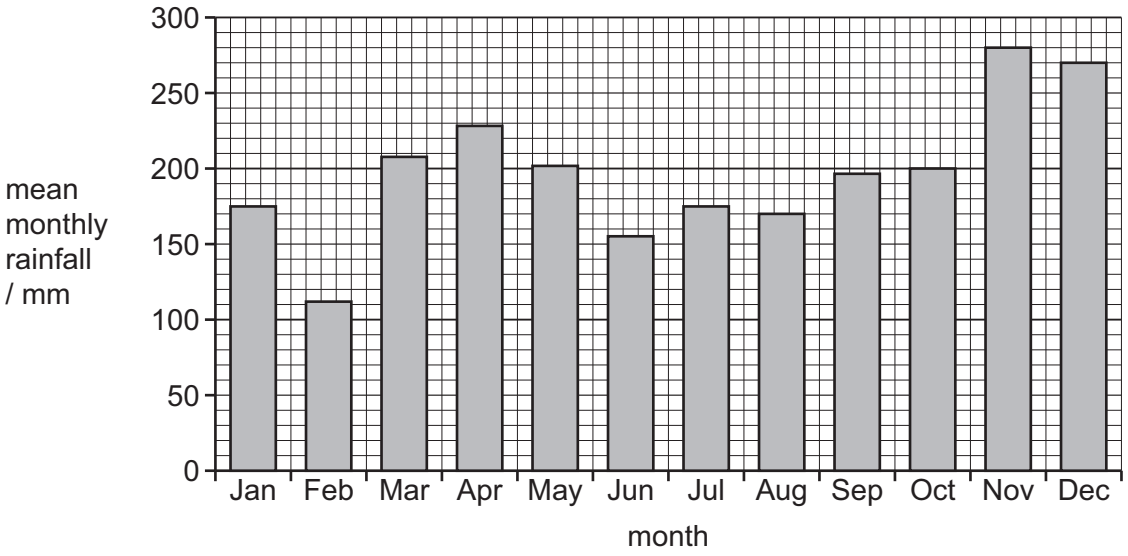
(iii) Some people in Singapore collect rainwater.

Suggest **one** reason why rainwater containers should be covered with a lid.

.....

..... [1]

(f) The bar chart shows the mean monthly rainfall in Singapore.



(i) Calculate the range in rainfall for the months July, August, September, October, November and December.

..... mm [2]

(ii) Identify the driest month in Singapore.

..... [1]

(iii) Explain why the driest month has the lowest plant growth.

.....

.....

.....

..... [2]

[Total: 24]

6 A report stated that 62% of women in Africa are farmers.

(a) The population of women in Africa was 734 million in 2023.

Calculate the number of women farmers in Africa in 2023.

..... million [1]

(b) Many of these women are subsistence farmers.

State what is meant by subsistence farming.

.....

..... [1]

(c) One group of farmers were given seeds from plants that were adapted to grow in hot and dry conditions.

Explain why there is an increasing need for this type of seed.

.....

.....

.....

..... [2]

(d) Explain how the use of chemicals increases crop yields.

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [5]

(e) Scientists have produced a map of soil fertility across the whole of Africa.

The map gives information about pH, organic content and mineral ions in soil.

(i) Describe **three** ways the map will help African farmers improve crop yields.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

(ii) The map includes data from predictions made using computer models.

Suggest **two** benefits of using computer models for producing this map.

1 .....

.....

2 .....

.....

[2]

[Total: 14]

7 A student reads a report about the availability of clean drinking water.

The report states that more than 800 million people collect water from sources that are more than 30 minutes from their homes.

(a) The photograph shows women carrying drinking water.

The women have collected water in containers.

The containers are recycled cooking oil containers.

Suggest **one** problem of using recycled cooking oil containers to carry drinking water.

.....

..... [1]

(b) The student makes this statement.

Climate change is the main reason why people lack a reliable source of clean water.

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

.....

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.....

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.....

.....

..... [6]

[Total: 7]

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