Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

4791362384

ENVIRONMENTAL MANAGEMENT **0680/12**

Paper 1 **February/March 2016**

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

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.

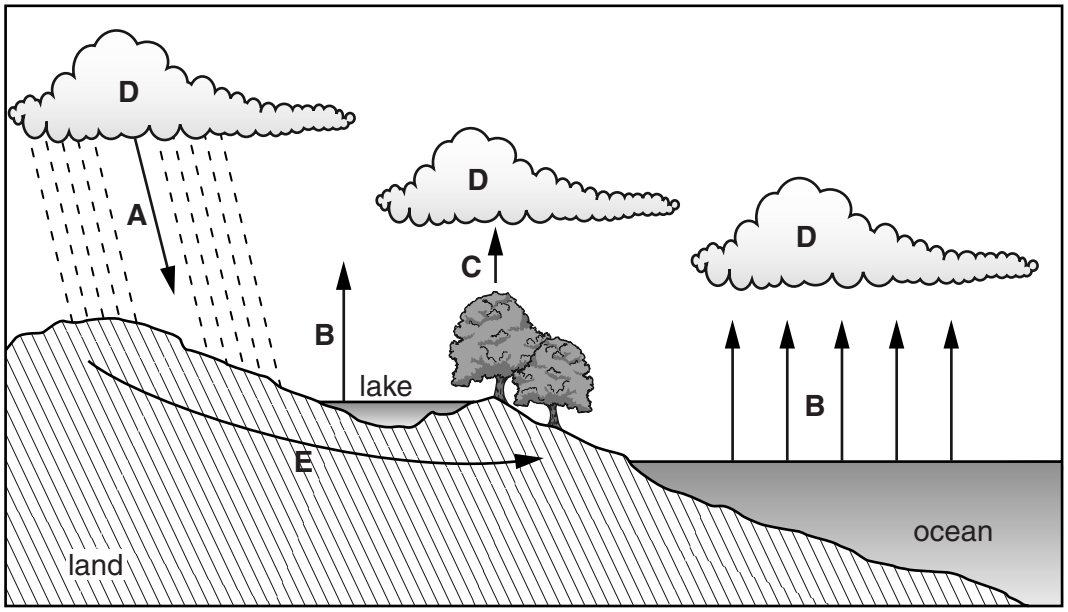
This document consists of **13** printed pages and **3** blank pages.

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CAMBRIDGE International Examinations

[Turn over

1 Look at the diagram below, which shows part of the water cycle.



(a) Complete the table below using letters from the diagram. [3]

water cycle process	letter
condensation	.....
evaporation	.....
groundwater flow	.....
precipitation	.....
transpiration	.....

(b) Large dams are built to store water in reservoirs.

(i) Describe **three** factors that are important when choosing a site for a large dam and reservoir.

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.....[3]

(ii) Explain why people living near the proposed site of a large dam might **not** want it to be built.

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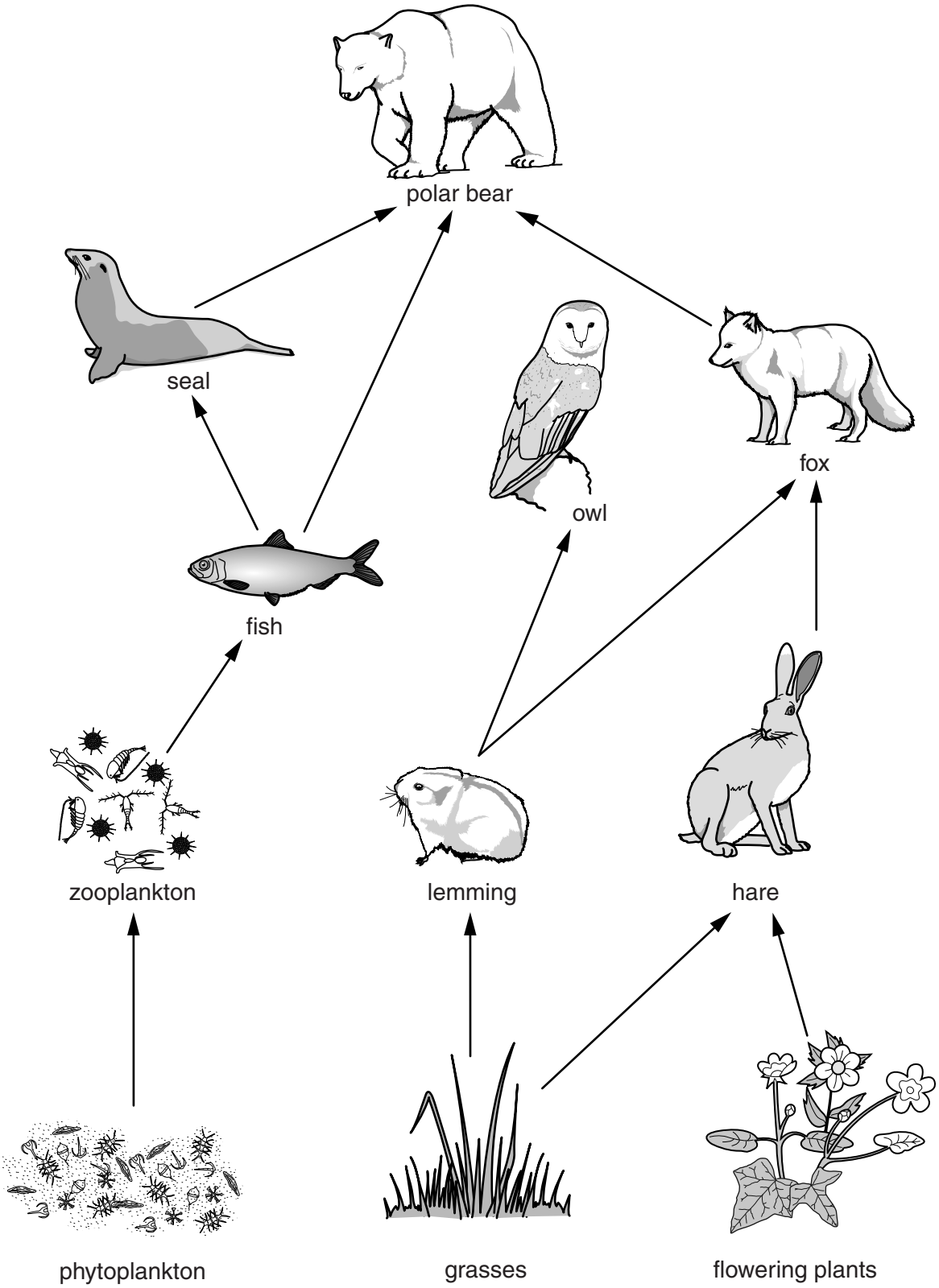
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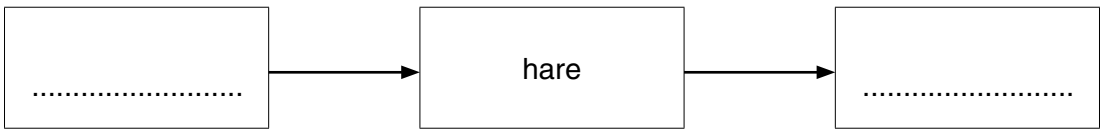
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.....[4]

2 Look at the diagram below, which shows part of a food web in the tundra.



(a) (i) Use the diagram to complete the food chain below. [1]



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(ii) State what the food web shows the polar bears could feed on if there are not enough seals.

.....[1]

(iii) State the largest number of feeding (trophic) levels shown in the food web.

.....[1]

(iv) The arrows in the food web show the flow of energy.

State and explain what happens to the amount of energy passing along a food chain in this ecosystem.

.....

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.....

.....[2]

(b) State and explain **two** characteristics of vegetation in the tundra.

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.....[4]

(c) Scientists have reported that temperatures are increasing in the tundra.

Suggest how increasing temperatures might affect vegetation in the tundra.

.....

.....[1]

3 Look at the report below about global energy consumption in 2013.

Global Energy Report for 2013

Global energy consumption grew by 2.3% in 2013.

Global hydro-electric power (H.E.P.) output was 6% of global energy consumption.

Coal accounted for 30% of global energy consumption. This was its highest share of global primary energy since 1970. Oil remained the world's leading fuel with 32% of global energy consumption.

Global natural gas consumption grew to 23% of global energy consumption.

Nuclear power (4% of global energy consumption) grew by 0.9%, the first increase since 2010. Japanese nuclear output fell by 18.6% and has fallen by 95% since 2010.

Renewable forms of energy (other than H.E.P.) accounted for 5% of global energy consumption.

(a) (i) Complete the table below with the names of **three** fossil fuels and their percentage share of global energy consumption in 2013. [3]

fossil fuel	percentage share of global energy consumption in 2013
.....	.....
.....	.....
.....	.....

(ii) Describe government strategies that can be used to conserve fossil fuel supplies.

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.....[4]

(b) Suggest reasons why some countries do **not** want nuclear power stations.

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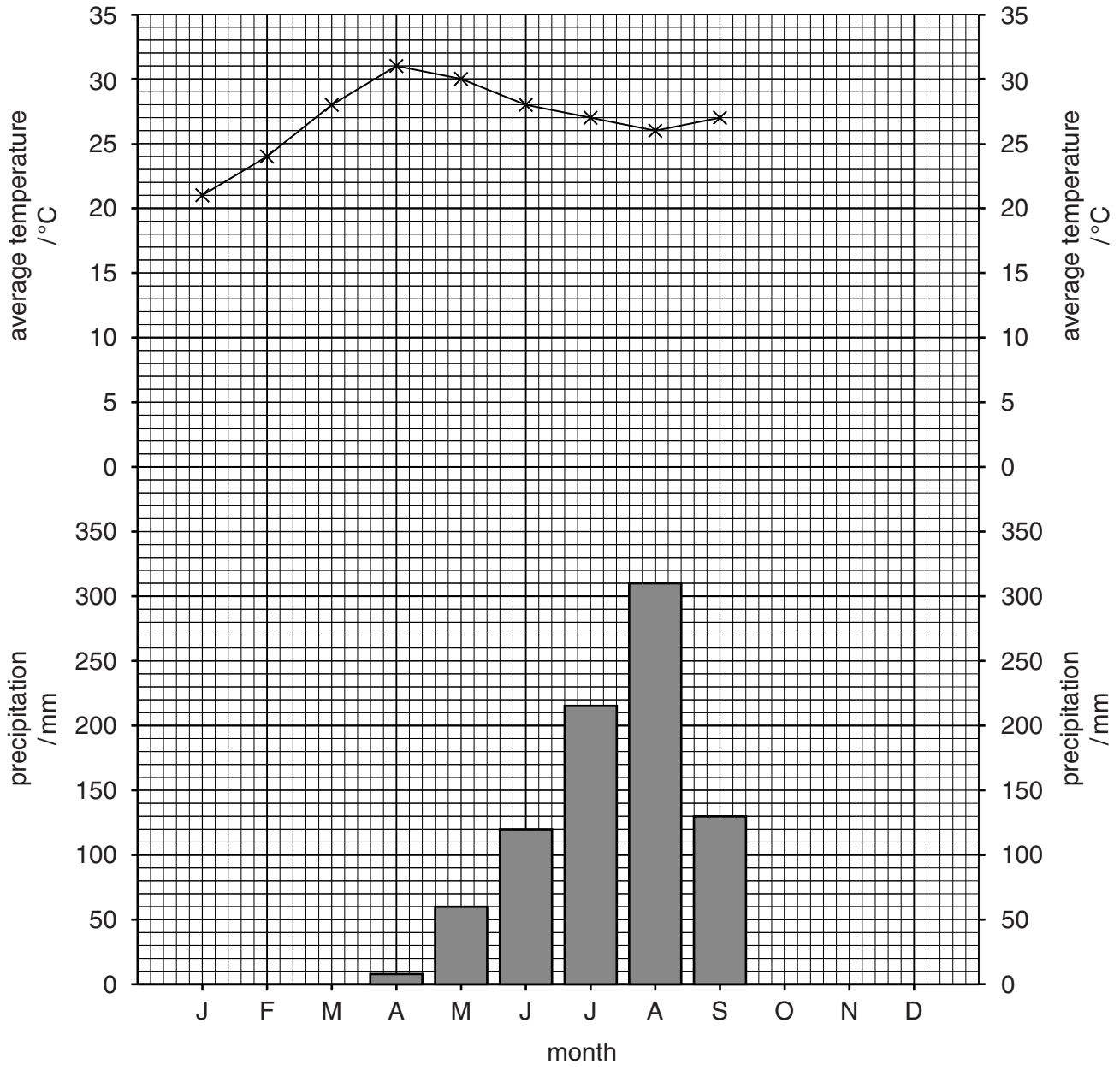
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.....[3]

4 Look at the climate graph below for a weather station.



(a) (i) Complete the graph using these figures for October, November and December. [3]

month	average temperature / °C	precipitation / mm
October	28	18
November	26	10
December	24	0

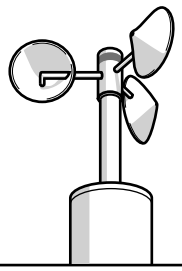
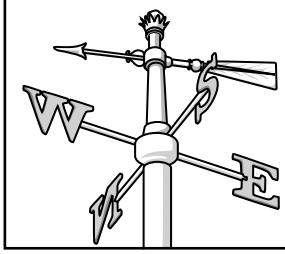
(ii) Circle the type of climate shown in the graph. [1]

desert **equatorial** **savanna** **tundra**

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(b) The table below shows three instruments used to measure the weather.

For each instrument complete the table with the name of the instrument and what it measures. [3]

instrument	name of instrument	what it measures
	.....	....
	.....	....
	.....	....

(c) In many parts of the world irrigation is needed for crop growing.

Explain the advantages of trickle drip irrigation.

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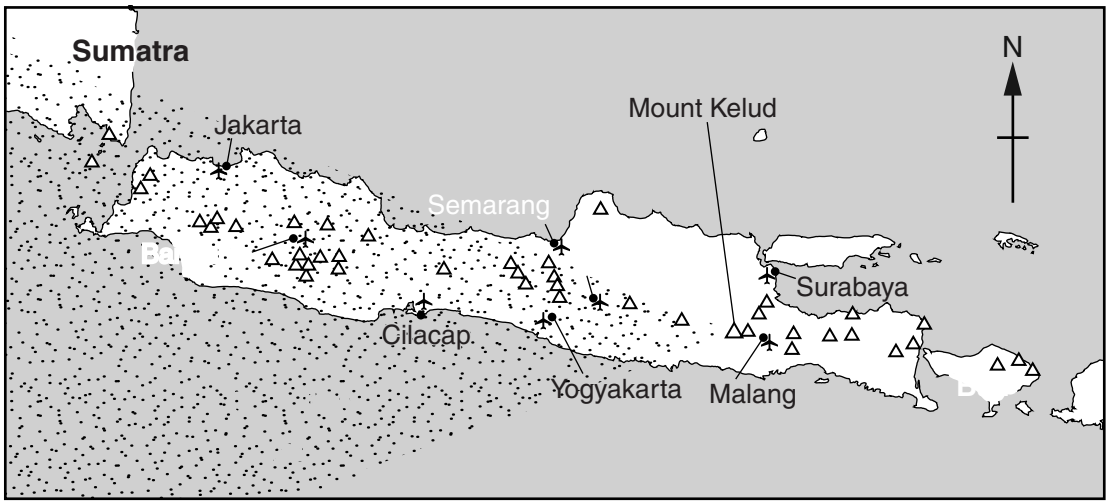
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.....[3]

5 Look at the newspaper report below. The map shows the location of some of the volcanoes in Java.

Mount Kelud Erupts



Mount Kelud on the Indonesian island of Java erupted yesterday throwing hot ash and rocks high into the sky. The eruption was heard in Surabaya, the country's second largest city. Airports were closed and 200 000 people close to Mount Kelud were evacuated.

Four people were killed when the roofs of their homes collapsed under the weight of volcanic ash. Several centimetres of ash covered central Java.

There are 130 active volcanoes in Indonesia.

(a) Use the newspaper report to answer these questions.

(i) State the direction in which ash from the volcano travelled.

.....[1]

(ii) Determine the distance of Surabaya from Mount Kelud.

..... km [1]

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(iii) The island of Java has 45 active volcanoes.

Calculate the percentage of Indonesia's active volcanoes in Java.

..... % [1]

(b) Suggest reasons why, during the eruption:

some of the airports on Java were closed .....

.....

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.....

.....

thousands of people were evacuated. .....

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[3]

(c) Java is one of the most densely populated places in the world.

Suggest reasons why millions of people live close to active volcanoes.

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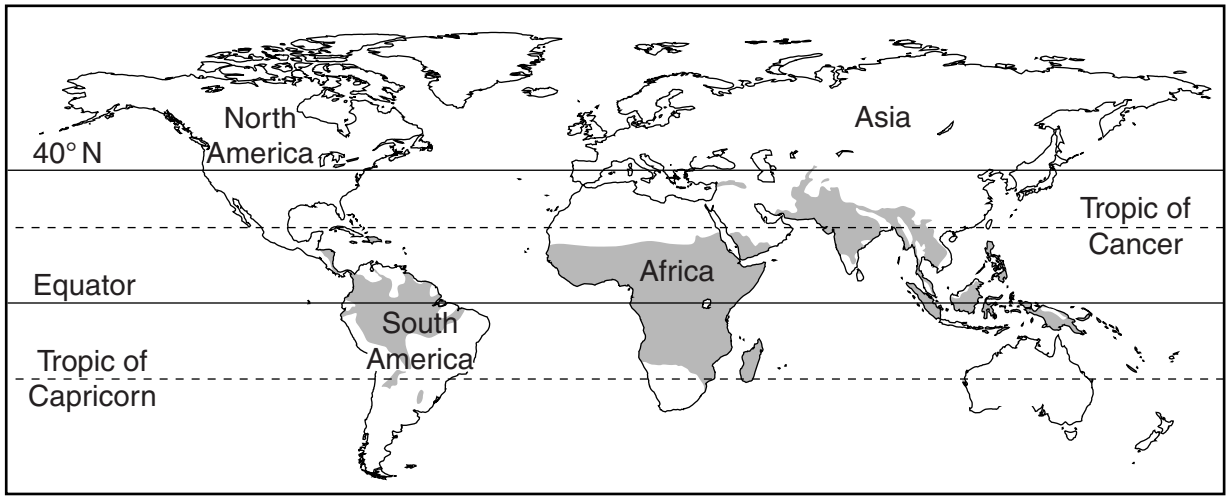
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.....[4]

6 Look at the map below, which shows the areas in the world where malaria occurs.



Key

areas where malaria occurs

(a) (i) Describe the distribution of malaria shown on the map.

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.....

.....

.....[3]

(ii) State and explain **one** way of controlling malaria.

.....

.....

.....

.....[2]

(iii) Malaria is a water-related disease.

State the names of **two** other water-related diseases.

1 .....

2 ..... [2]

(b) Suggest **three** reasons why, in many parts of the world, the water in urban areas is usually safer to drink than water in rural areas.

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.....

.....[3]

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