Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

ENVIRONMENTAL MANAGEMENT **0680/21**

Paper 2 **October/November 2017**

1 hour 45 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 **both** questions.

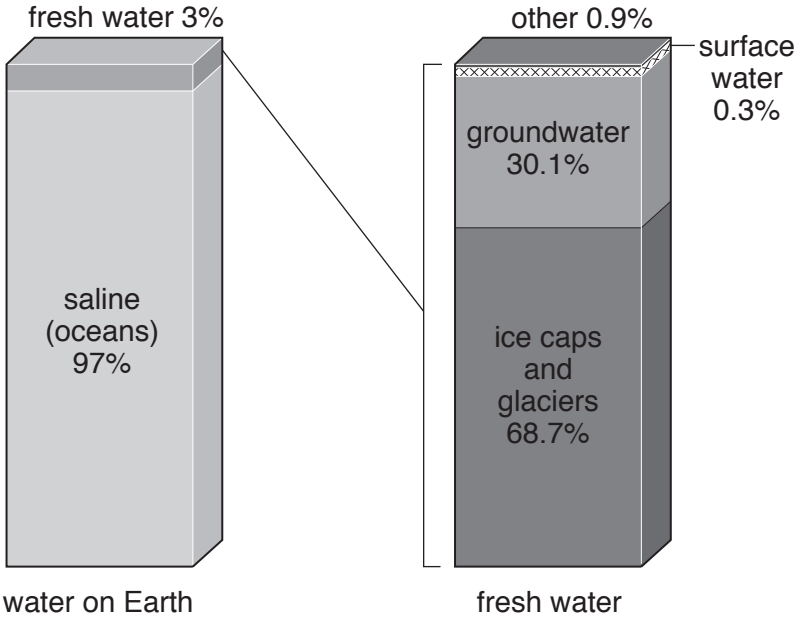
Electronic calculators may be used.
You may lose marks if you do not show your working or if you do not use appropriate units.

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 **16** printed pages.

CAMBRIDGE International Examinations

1 **(a)** The diagram shows the distribution of water on Earth.



(i) State the percentage of fresh water available on Earth.

.....% [1]

(ii) Explain what is meant by the term *groundwater*.

.....

.....[1]

(iii) Suggest a reason why the water stored in ice caps and glaciers is not directly available for human use.

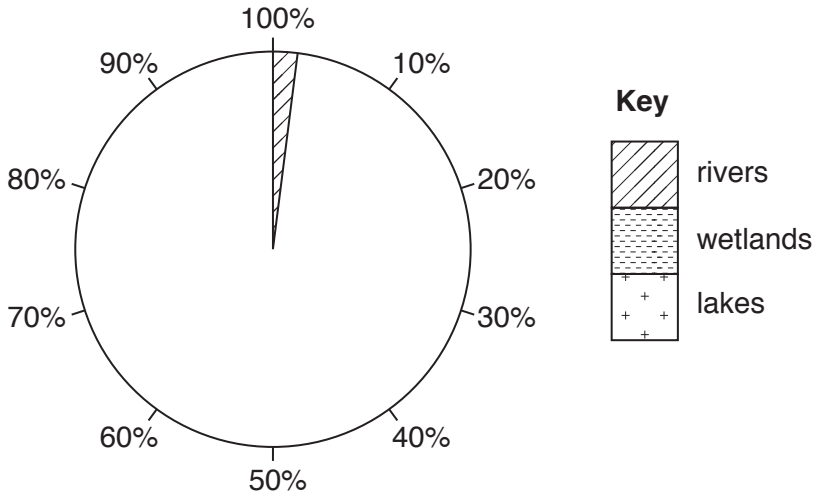
.....

.....[1]

(iv) The table shows the sources of fresh surface water on Earth.

Complete the pie graph using the key to show this information.

source of fresh surface water	percentage
rivers	2
wetlands	11
lakes	87



[3]

(v) Water in rivers and lakes is often polluted.

Describe how human activity can cause rivers and lakes to become polluted.

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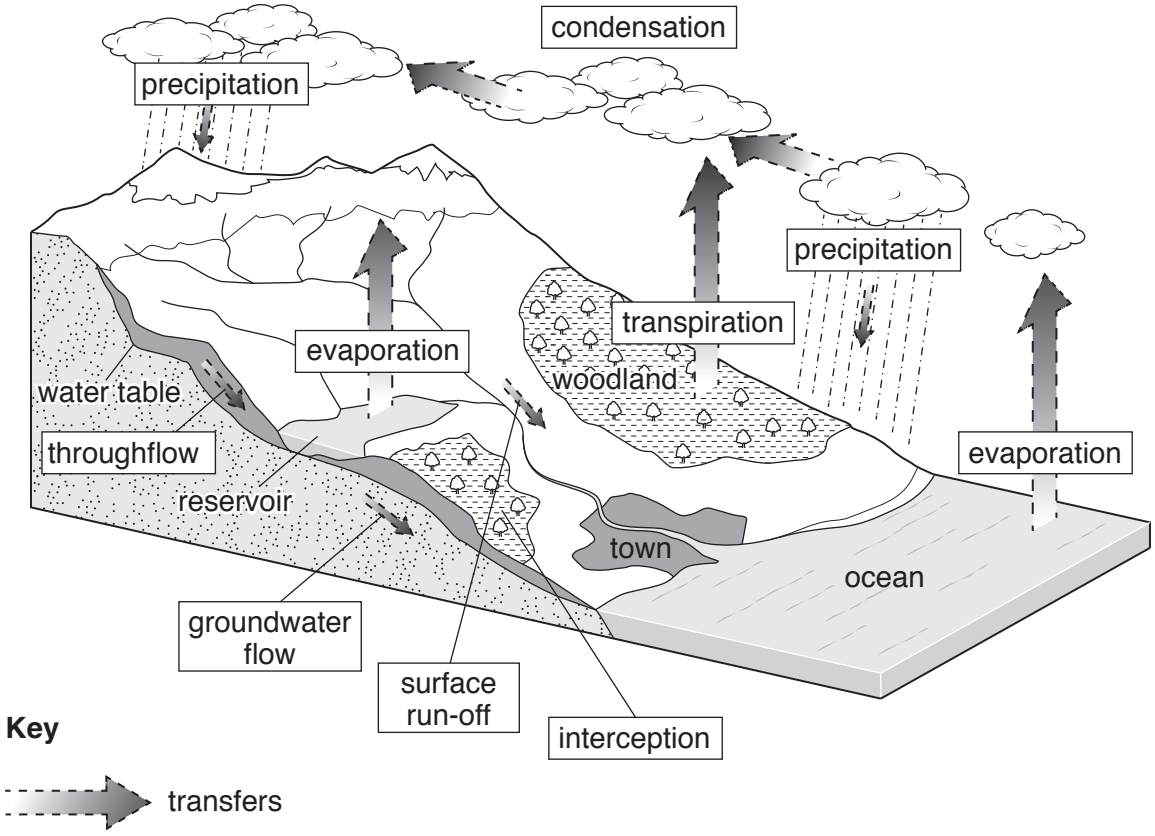
.....[5]

[Turn over

(b) The diagram shows the water cycle.



(i) State **two** transfers of water shown on the diagram.

1 .....

2 .....

[2]

(ii) State the water storage scheme, shown on the diagram, that is the result of human activity.

.....[1]

(iii) State the name of the alternative source of energy that could be provided by this water storage scheme.

.....[1]

(iv) Complete the table of definitions using terms from the diagram.

definition of water cycle term	term from diagram
water is stopped from reaching the ground by trees and plants	
water is heated by the Sun and turns into water vapour	
water returning to the ground as rain, ice, sleet or snow	

[3]

(v) Suggest reasons why river flooding might occur if:

the woodland shown in the diagram was removed

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the area of the town was increased.

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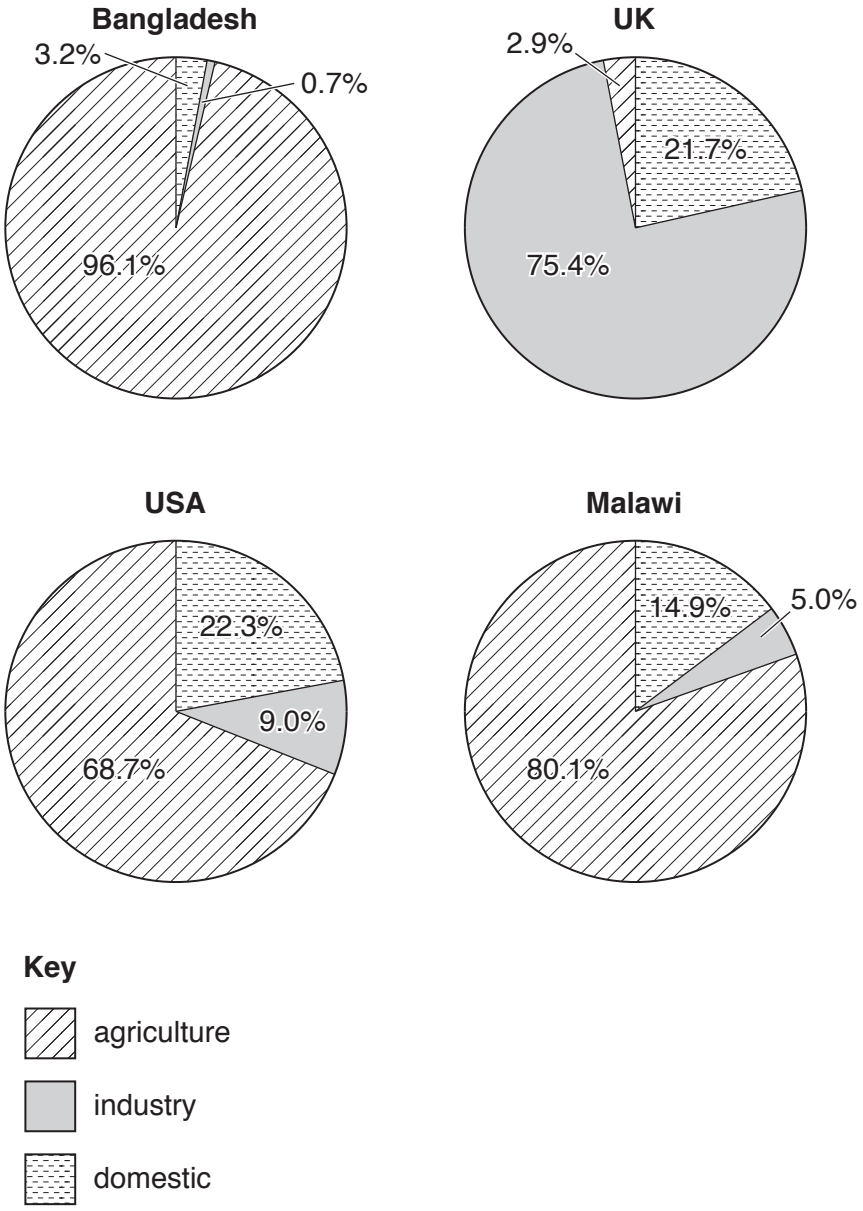
[5]

[Turn over

(c) The pie graphs show the use of water in four countries.



(i) State the name of the country that uses the greatest percentage of their water for agriculture.

.....[1]

(ii) State the name of the country that uses the smallest percentage of their water for industry.

.....[1]

(iii) Domestic use is water used in the home.

Calculate the difference in the percentage of water used for domestic use in the UK compared with Bangladesh.

.....% [1]

(iv) Suggest reasons why the UK, which is a developed country, uses a greater percentage of their water in the home than Bangladesh which is a developing country.

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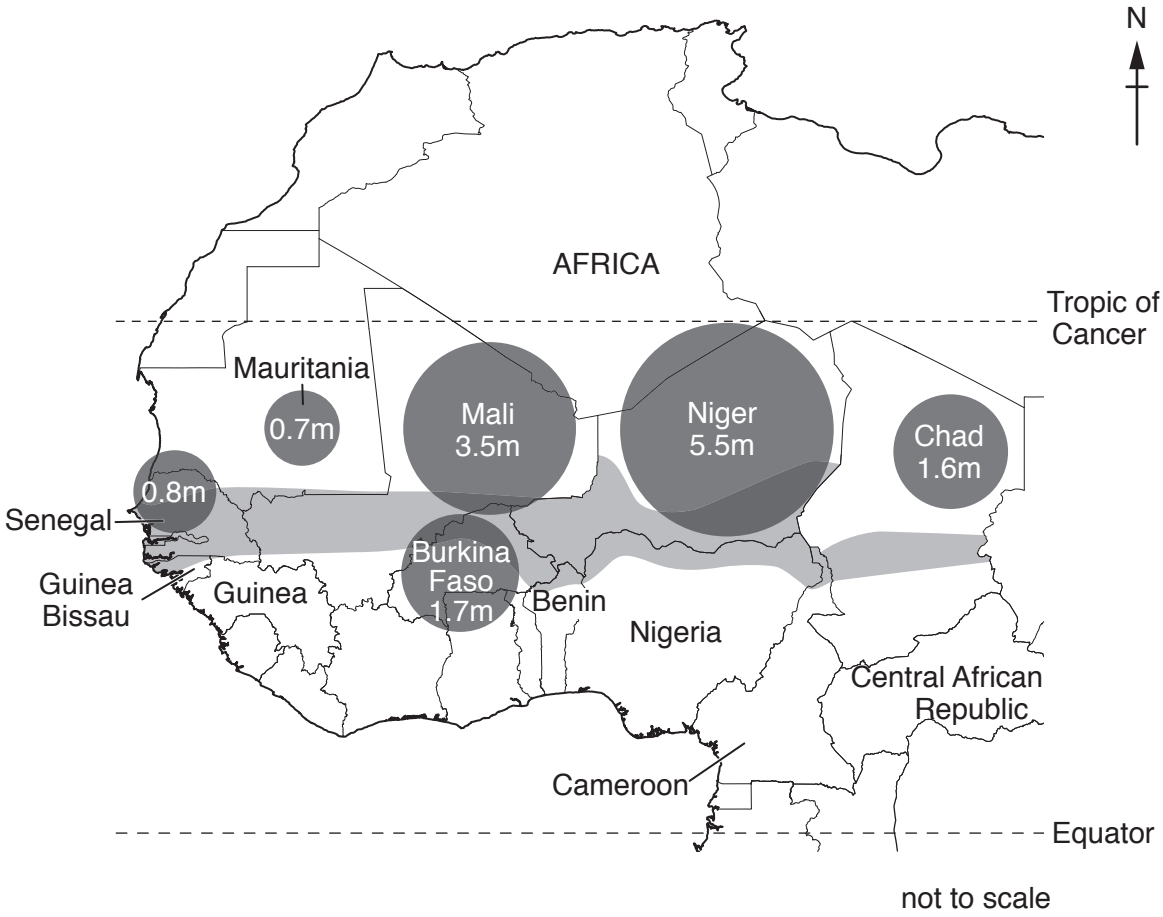
.....[3]

(d) The map shows countries affected by drought in the Sahel region of Africa. It also shows the number of people at risk of food shortage.



Key

Sahel area at risk of drought

number of people at risk of food shortage

m = millions of people

international boundary

(i) State the name of a country with part of its land at risk of drought, which shares a border with Cameroon.

.....[1]

(ii) Describe the distribution of the area affected by drought.

.....

.....

.....

.....[2]

(iii) The circles on the map show the number of people in each country that are at risk of food shortage.

Write the names of these countries into the table in rank order. Two have been completed for you.

rank order	name of country
1	
2	
3	
4	
5	Senegal
6	Mauritania

[2]

(e) Suggest reasons why people in some areas suffer more from the effects of drought than people in other areas.

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.....[6]

[Turn over

2 **(a)** The table shows a classification of some farming types.

	crops	grazing	subsistence	commercial
rice farming	✓		✓	
dairy farming		✓		✓
shifting cultivation	✓		✓	
cattle ranching		✓		✓
plantations	✓			✓

(i) State **one** type of subsistence farming shown in the table.

.....[1]

(ii) State **one** type of commercial farming shown in the table where animals are grazed.

.....[1]

(iii) Explain the difference between commercial and subsistence farming.

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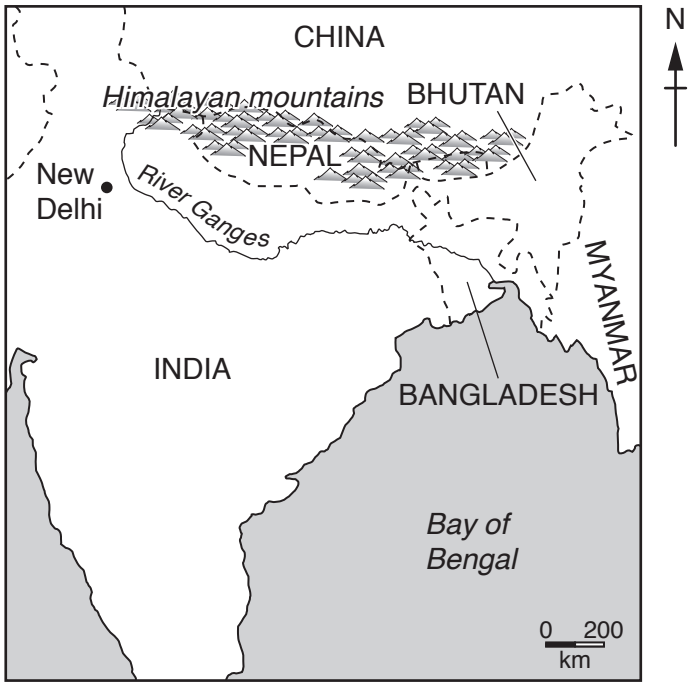
.....[2]

(iv) State **one** other way that can be used to classify farming.

.....[1]

(b) The map shows part of Asia.



Key

River Ganges

international boundary

city

(i) Describe the location of the River Ganges.

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.....[2]

(ii) The table shows some information about a farming system for rice cultivation along the River Ganges.

requirements	farming activities	products
heavy rain high temperatures fertile soil flat land hand tools hand labour water buffalo	ploughing planting seeds transplanting seedlings weeding	rice to feed the family small profits fish for protein manure

Place the following into the correct column in the table.

harvesting seeds [2]

(iii) State **one** piece of evidence that this farming system is:

growing crops .....

.....

subsistence farming. .....

.....

[2]

(c) (i) A subsistence farmer was given a loan to increase the yield from their farm.

Choose **two** of the following and explain how each would help the farmer to increase yields.

- irrigation
- pesticides
- high-yielding varieties of seeds

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.....[4]

(ii) Fertilisers can also be used to increase yields.

Explain why it is important not to overuse fertilisers.

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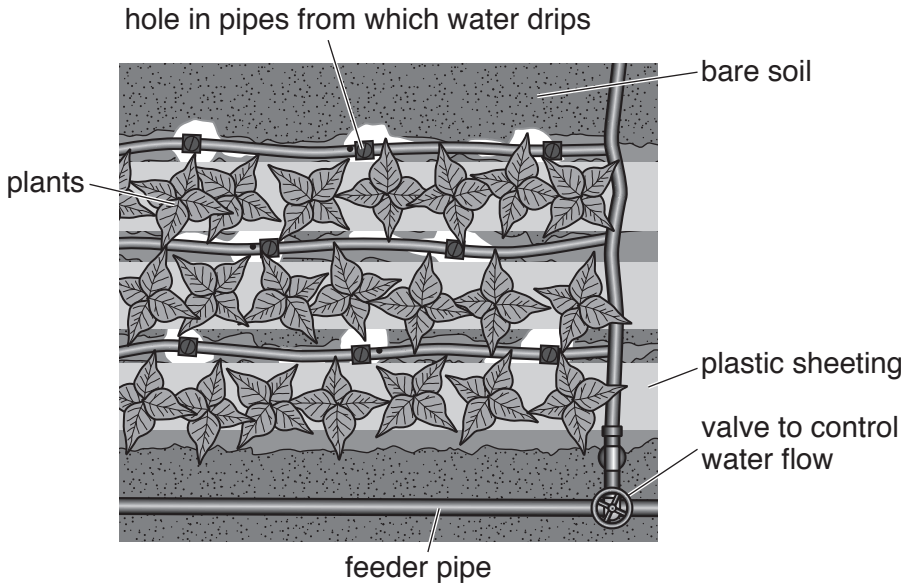
.....[3]

(d) (i) The diagram shows trickle drip irrigation, as seen from above.



Suggest how the irrigation system shown in the diagram works.

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.....[3]

(ii) Suggest **two** advantages of this type of irrigation.

1 .....

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2 .....

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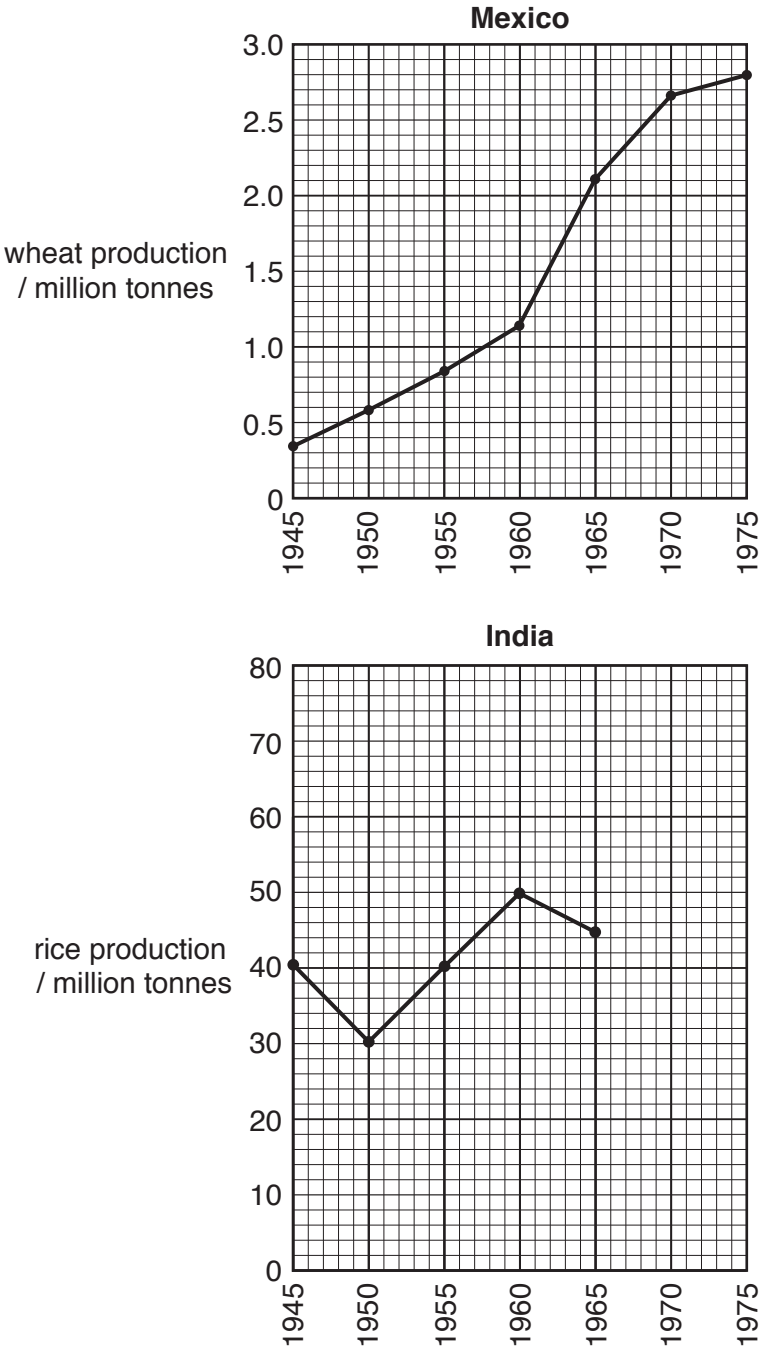
[2]

(e) The graphs show wheat production in Mexico and rice production in India during the green revolution.



(i) Use the information from the graphs to describe the trend in wheat production in Mexico from 1945 to 1975.

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.....[2]

(ii) State the five-year period during which wheat production increased the most in Mexico.

.....[1]

(iii) Complete the line graph for India by plotting the following information.

year	rice production / million tonnes
1970	65
1975	71

[2]

(iv) Calculate the increase in rice production in India between 1945 and 1975. Give the unit.

.....[1]

(v) Suggest reasons why some people did not agree with the green revolution even though production increased.

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.....[3]

(f) Many people in rural areas of developing countries use fuelwood. For example, 90% of people in countries like Burkina Faso and Nepal rely on fuelwood. It can be a renewable energy source as long as trees are replanted at the same rate as they are cut down. Unfortunately, population growth means that too many trees are being cut down leading to soil erosion and desertification.

(i) State what is meant by a *renewable energy source*.

.....[1]

(ii) State what percentage of people rely on sources other than fuelwood in Burkina Faso and Nepal.

.....[1]

(iii) Suggest why some people are in favour of using biomass as an alternative energy source whilst others are not.

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