UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

CANDIDATE NAME	

CENTRE NUMBER						CANDIDATE NUMBER				

ENVIRONMENTAL MANAGEMENT **5014/12**

Paper 1 **May/June 2010**

2 hours 15 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler

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 a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.
All questions in Section A carry 10 marks.
Both questions in Section B carry 40 marks.

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.

For Examiner's Use	
1	
2	
3	
4	
5	
6	
Total	

This document consists of **22** printed pages and **2** blank pages.

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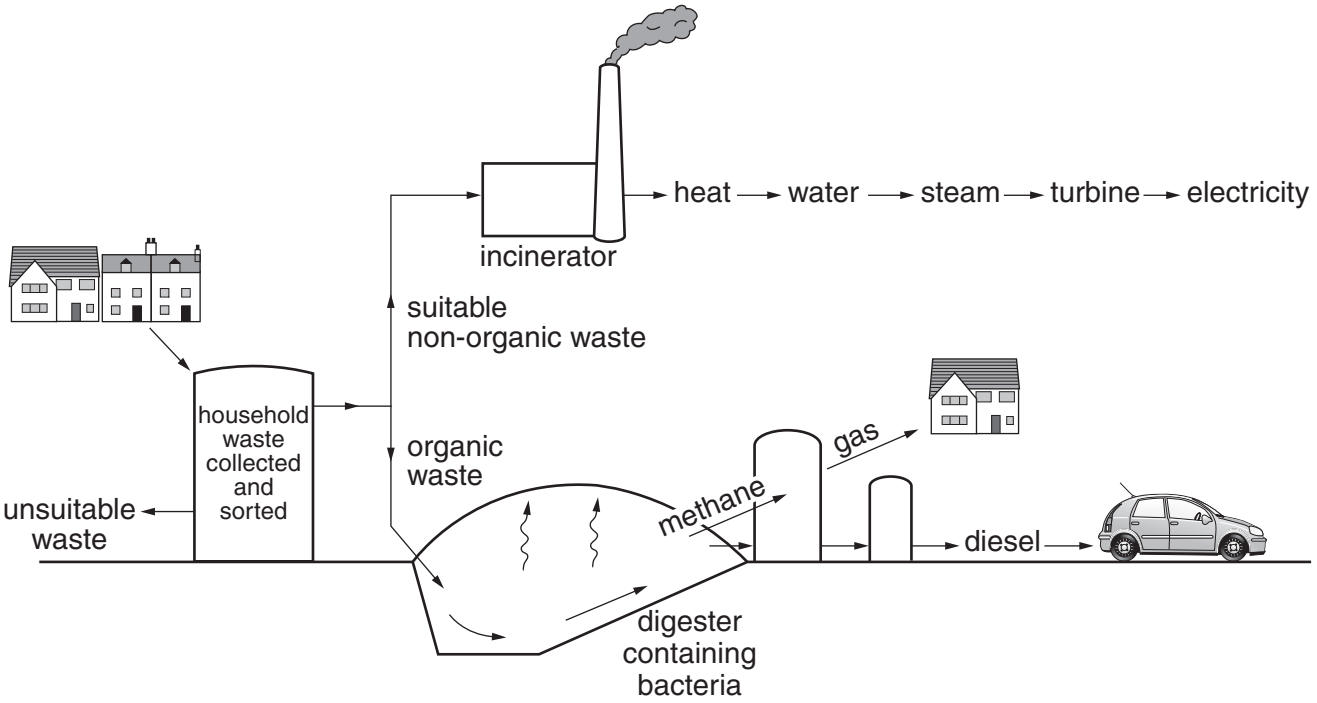
For Examiner's Use

Section A

1 **(a)** Look at the diagram which shows methods of producing energy from household waste.



Circle the word listed below which describes the type of energy source shown in the lower part of the diagram.

biomass geothermal hydro solar wind [1]

(b) Why is the organic waste separated from the other waste?

..... [1]

(c) Describe what happens in the digester.

.....

..... [2]

(d) Suggest why some household waste is unsuitable for use in the incinerator.

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..... [3]

(e) What are the advantages of using household waste in these ways?

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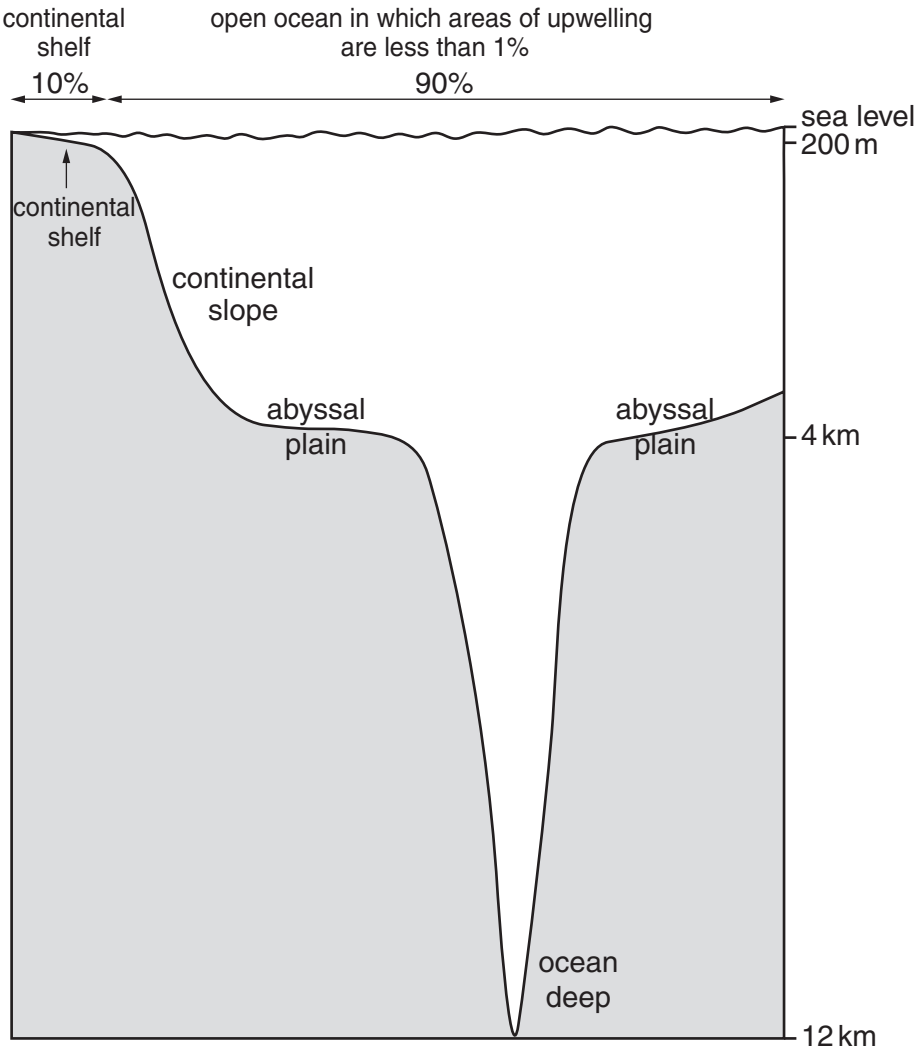
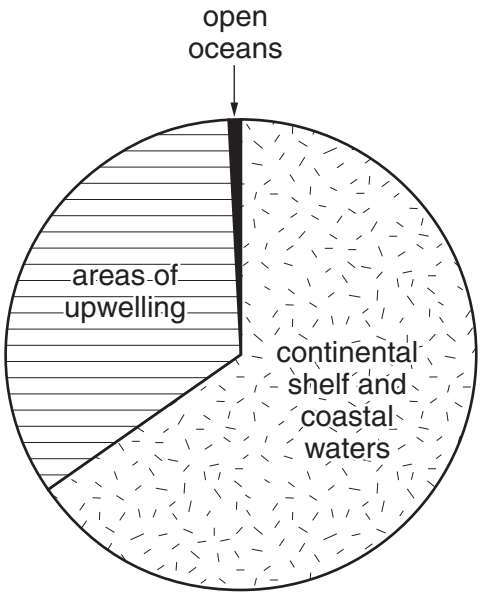
..... [3]

[Total: 10]

For Examiner's Use

2 **(a)** Look at the diagram of ocean zones and the pie chart showing the potential fish harvest from three zones.





potential fish production

(i) What percentage of the potential fish production from the oceans is expected to come from the continental shelf and coastal waters?

..... % [1]

(ii) Use both diagrams to comment on the potential fish production from the open ocean.

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..... [2]

(b) **(i)** Why are fish important in the human diet in some parts of the world?

..... [1]

(ii) Describe other valuable resources which oceans can provide.

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..... [3]

(c) Suggest why a full exploitation of the resources of the open oceans is unlikely.

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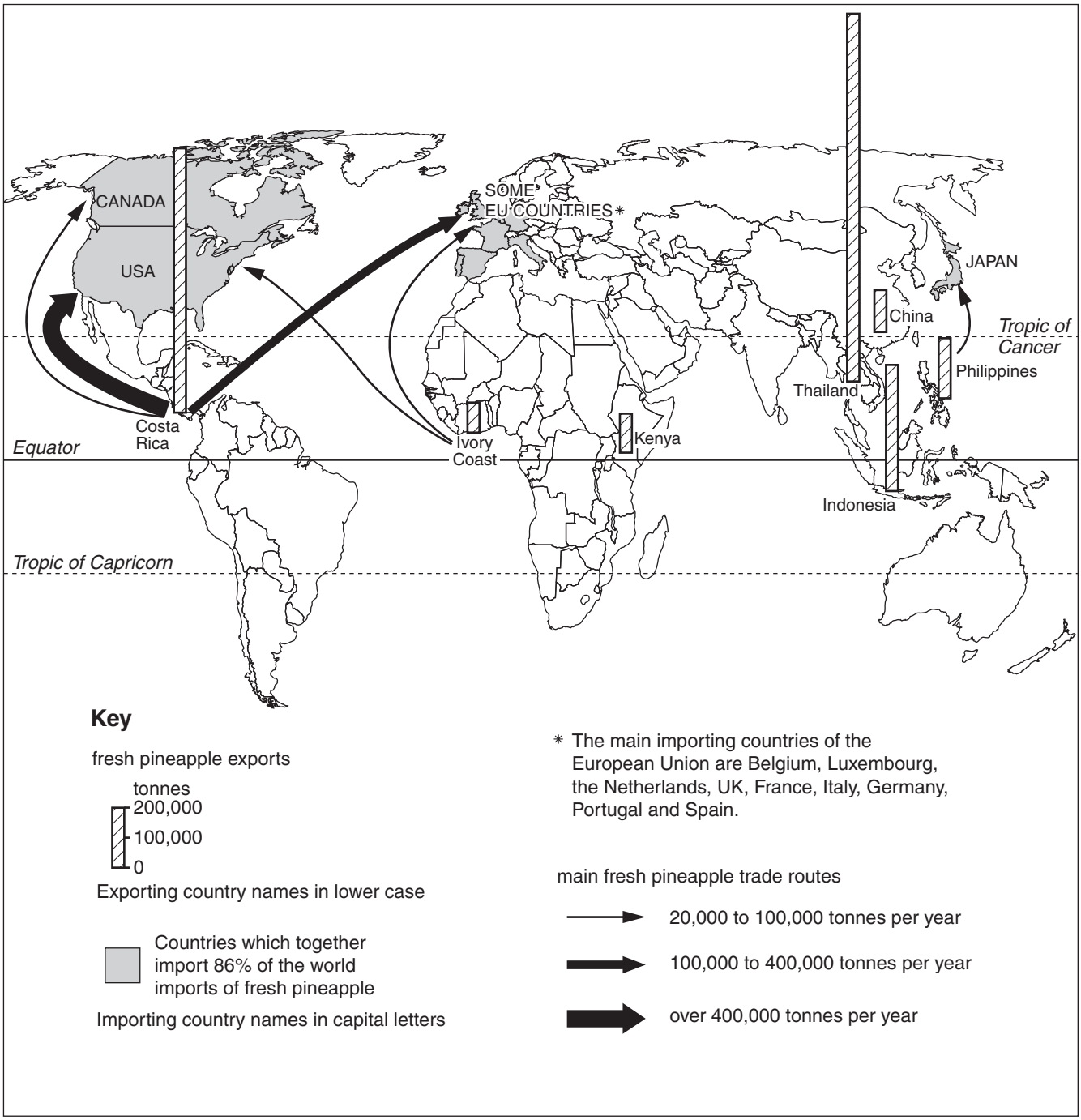
..... [3]

[Total: 10]

For Examiner's Use

3 **(a)** Look at the map, which gives information for a recent year about the world's main exporting and importing countries of fresh pineapple, together with the main trade routes of fresh pineapple.



(i) Name the country which exports the most fresh pineapple and state the amount it exports.

country …….....…….. amount …….....…….. tonnes [1]

(ii) Name **one** continent with large imports of fresh pineapples.

..... [1]

(iii) State one similarity in the direction of the sea trade routes shown.

..... [1]

(iv) Suggest why some countries export more fresh pineapples than others.

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..... [3]

(b) Pineapples are often grown on plantations. Describe how commercial farming, such as plantation farming, is organised to produce large amounts of a cash crop for export.

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..... [4]

[Total: 10]

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4 **(a)** Look at the photograph showing vegetation growing on the edge of a clearing in a tropical rainforest.

(i) Describe the features of the vegetation in the photograph.

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.....[3]

(ii) Explain how the leaves and stems are adapted to the climate in which tropical rainforest grows.

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..... [4]

(b) Some areas of tropical rainforest have been made into National Parks. Is this method of conservation likely to have any benefits for local people? Explain your views.

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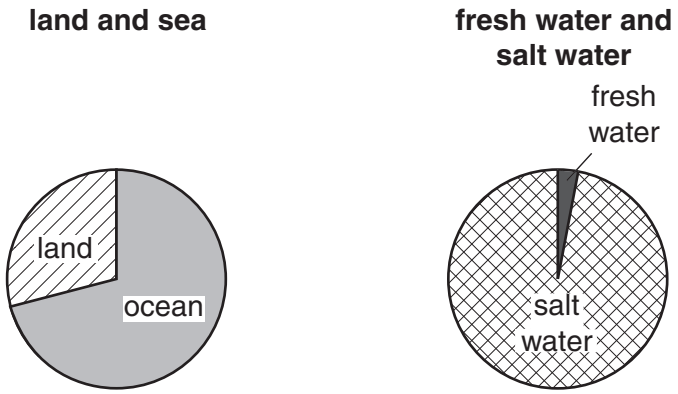
..... [3]

[Total: 10]

Section B

5 **(a)** Look at the pie graphs showing the distribution of water on the Earth's surface.



Describe the evidence from the pie graphs for each of statements **A** and **B**.

A There is a lot more water than land on the Earth's surface.

.....

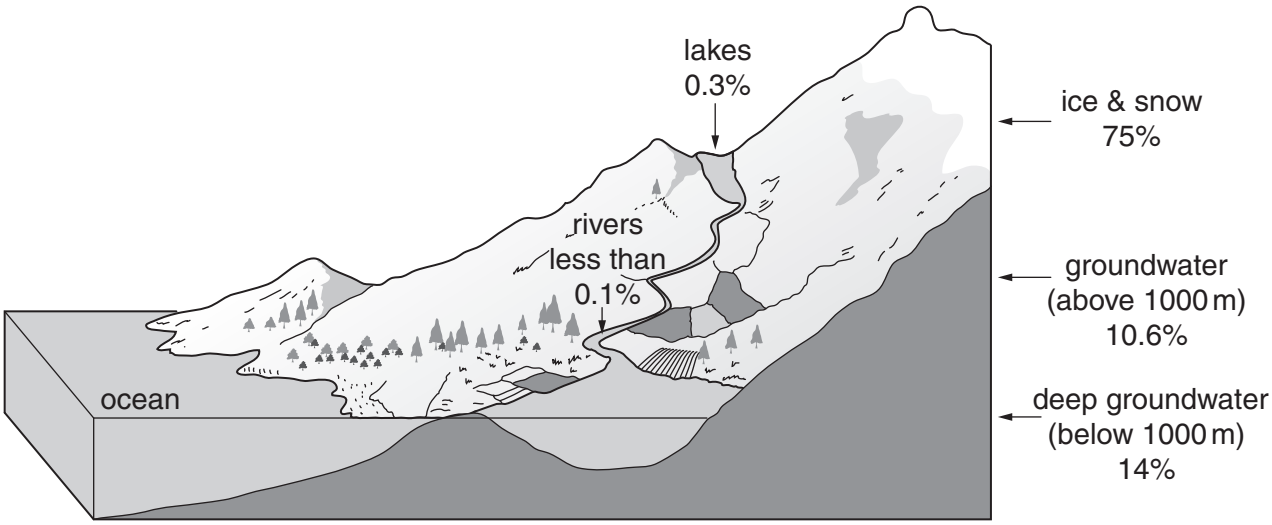
.....

B The amount of water available for human use is very small.

.....

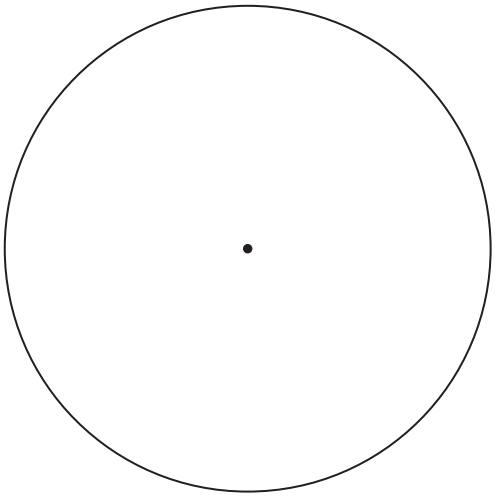
.....[2]

(b) The diagram gives information about fresh water stores on the Earth's surface.



(i) Show the percentages for ice and snow, total groundwater, and lakes and rivers on a pie graph.

fresh water stores on the Earth's surface



[3]

(ii) Explain more fully why the amount of water available for human use is so small.

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.....[3]

(iii) How can people obtain their water supply from groundwater stores? Describe **one** method.

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.....[2]

(iv) State two advantages of using groundwater stores for water supply.

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.....[2]

(c) In many countries large dams have been built to increase natural stores in rivers and lakes.

(i) Name or state the location of an example of a large dam.

.....[1]

(ii) Describe its advantages and explain why it was built.

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.....[4]

(iii) Why are decisions to build large dams often controversial? Describe some of the economic, social and environmental factors which help to explain why some people object to the building of large dams.

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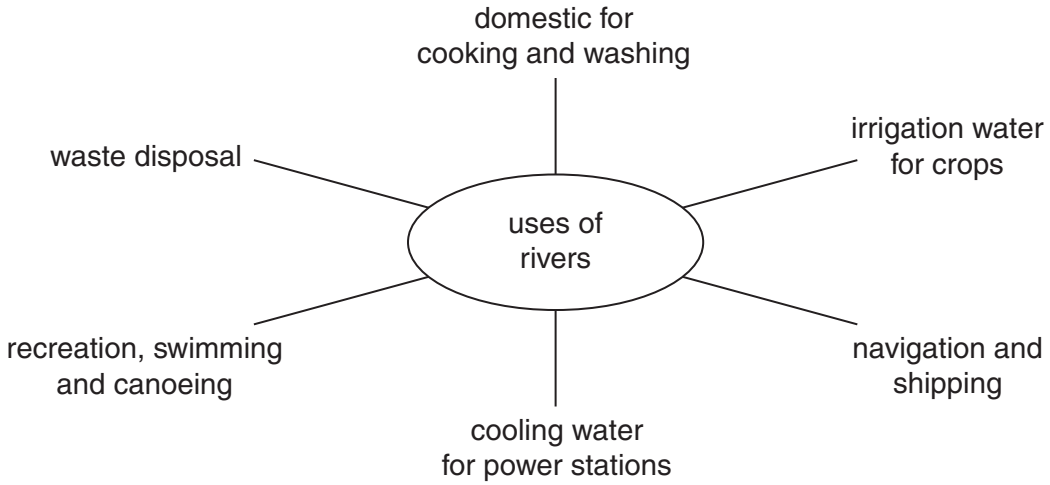
For Examiner's Use

(d) Look at the spider diagram showing some uses of rivers.



(i) Which two uses are most likely to lead to pollution of river water? Explain why.

Use 1 .....

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Use 2 .....

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.....[4]

(ii) Conflicts of interest can arise between people using rivers for different purposes. Giving examples, explain some of these conflicts of interest.

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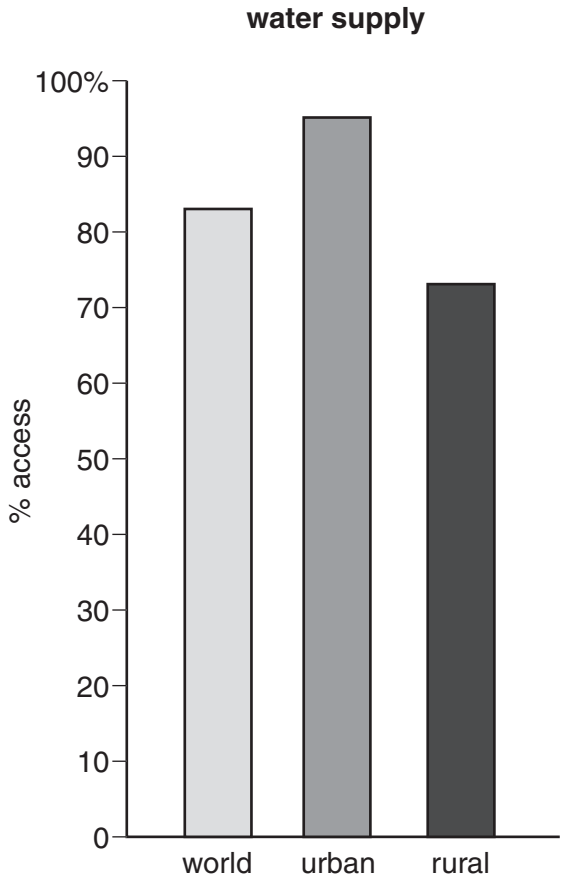
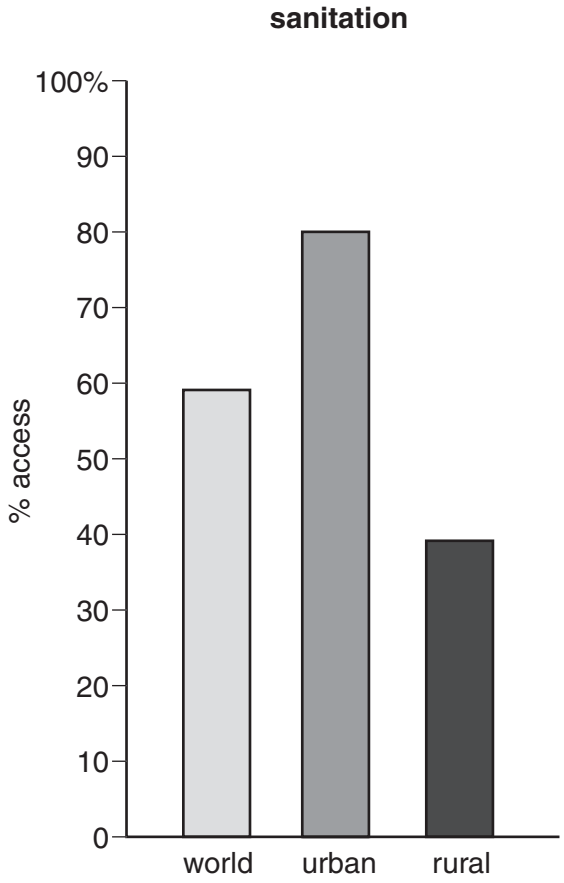
.....[3]

(e) Look at the graphs showing access to water supply and sanitation.





Use values from the graphs to describe how they show that access to sanitation is

(i) less widely available than for water supply;

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.....[2]

(ii) particularly poor in rural areas.

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.....[2]

(iii) Give reasons why access to water supply and sanitation is much poorer in rural than in urban areas.

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.....[3]

(f) **Costs from lack of safe water supply and sanitation**

1.6 million children a year die from diarrhoea	economic loss of the time taken in fetching water every day

Explain why

(i) children are most at risk from water-related diseases;

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(ii) economic costs result from people having to walk long distances to fetch water.

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.....[4]

[Total: 40]

6 **(a)** **(i)** Complete the table of birth and death rates and population change for selected countries from Europe and Asia.

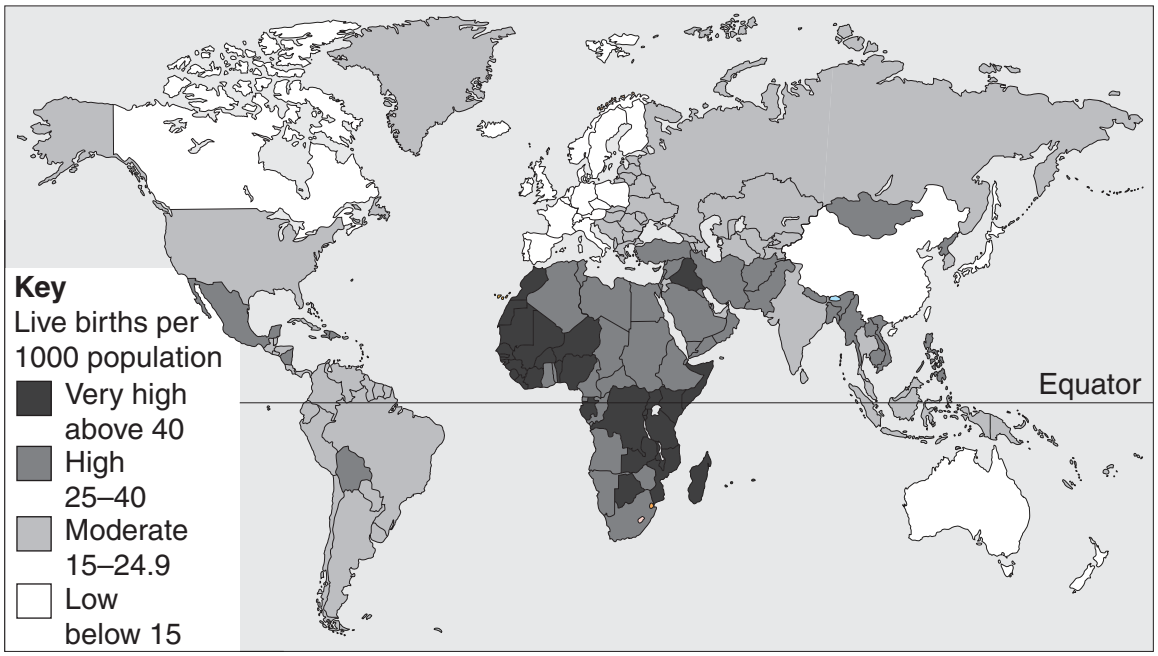
Country	Birth rate per 1000	Death rate per 1000	Population change per 1000
UK	11.0	10.2	+0.8
Germany	8.7	10.7	
China	14.5	7.1	
India	23.8	8.3	
Saudi Arabia	31.5	3.7	+27.8

[3]

(ii) How is Germany different from the other countries in the table?

.....[1]

(b) **World distribution of birth rates**



(i) Name the continent with the largest number of countries with very high birth rates above 40 per 1000.

.....[1]

(ii) In which continent are there the most countries with birth rates below 15 per 1000?

.....[1]

(iii) Describe the distribution of countries with high and very high birth rates above 25 per 1000.

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.....[3]

(iv) Give reasons why some countries have very low birth rates, below 15 per 1000.

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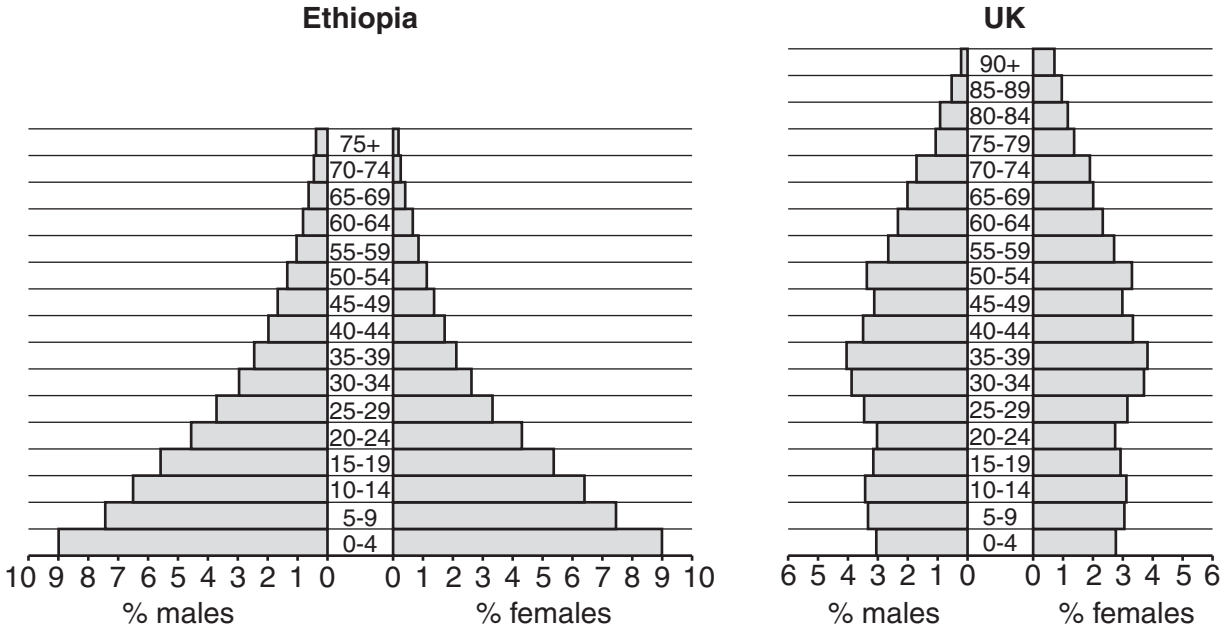
.....[4]

(c) Look at the pyramids showing population structure for Ethiopia and the UK.



(i) On each pyramid, shade in the age group with the highest total percentage of population. [1]

(ii) What is the approximate total percentage of population in Ethiopia below the age of 15?

.....[1]

(iii) What is the approximate total percentage of population aged 65 and above in the UK? Circle one answer.

6.5 9.5 12 16 [1]

(iv) State two differences in shape between the population pyramids for Ethiopia and the UK.

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.....[2]

(v) The UK has an ageing population. State the evidence for this from its population pyramid.

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.....[2]

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(vi) Some countries like Ethiopia have a young population; others like the UK have an ageing population. Their population problems are different.

Explain how and why their problems are different.

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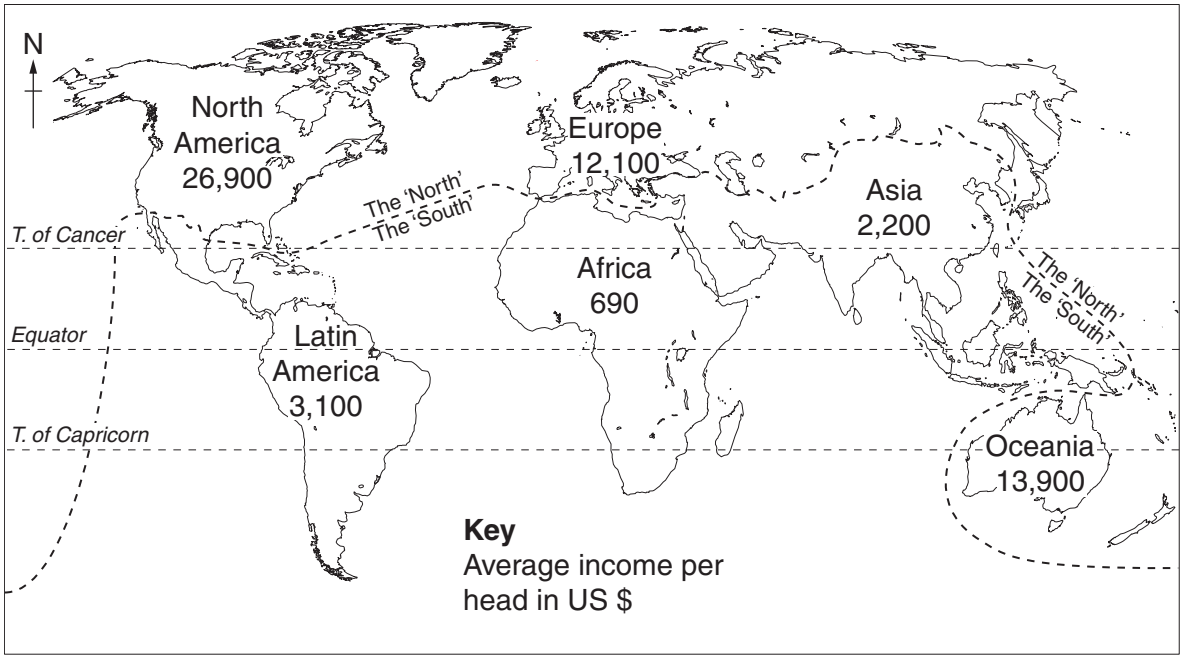
For Examiner's Use

(d) Look at the world map which shows the course of the dividing line between the rich North and poor South.



(i) Rank the six continents by income per head from highest to lowest. State whether each continent is mainly developed or developing.

Continent	Developed or Developing
1	.....
2	.....
3	.....
4	.....
5	.....
6	..... [2]

(ii) Why does the North-South dividing line not continue running west to east all the way across the world?

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.....[1]

(iii) How well does the line split the world between a rich North and a poor South? Answer as fully as you can describing where the fit is good and not so good.

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(iv) Look back to the map showing the world distribution of birth rates in part **(b)**. How well would the North-South dividing line separate countries with high and low birth rates?

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.....[2]

(e) Two strategies for reducing the wealth gap between rich and poor countries:

- Improved trade such as Fair Trade
- Non-governmental aid organisations (NGOs) from rich countries.

(i) How is Fair Trade different from other trade?

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.....[2]

(ii) Explain some of the advantages and disadvantages of aid for helping poor countries and reducing the wealth gap between them and rich countries.

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(iii) In your view, which of the two strategies is better for reducing the wealth gap between rich and poor countries in the long term? Explain your choice.

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.....[2]

[Total: 40]

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