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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

9987506745

ENVIRONMENTAL MANAGEMENT **0680/01**

Paper 1 **October/November 2008**

1 hour 30 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.

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.

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2	
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Total	

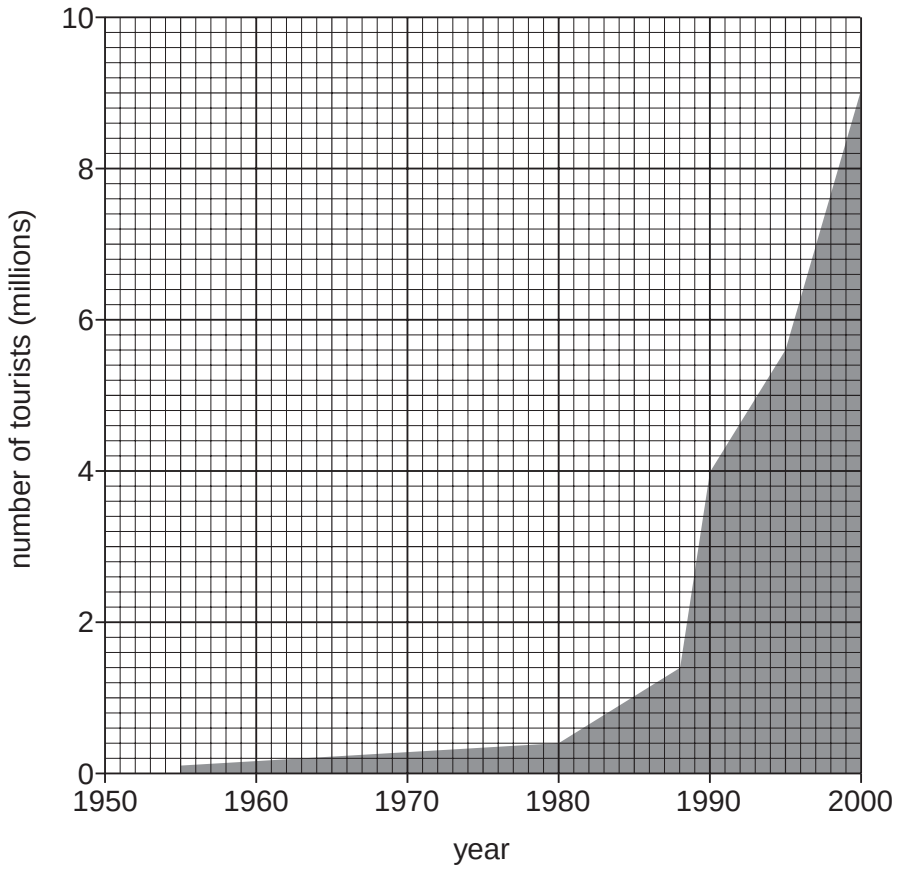
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1 Look at the graph below which shows the number of tourists watching whales between 1950–2000.

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(a) (i) How many tourists whale watched in 1980?

.....[1]

(ii) How many more did so in 2000?

.....[1]

(b) Whale watching might be thought of as an example of ecotourism, defined as:

"responsible travel to natural areas which conserves the environment and improves the welfare of the local people".

Explain **one** way in which whale watching fits this definition and **one** way in which it does not.

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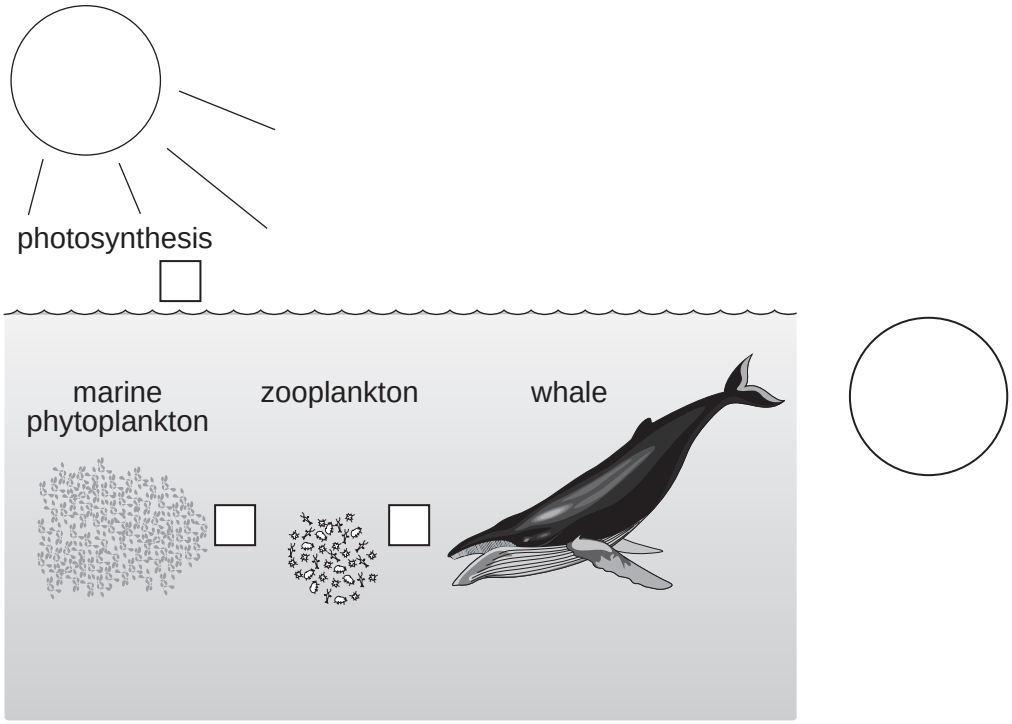
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(c) Look at the diagram below which shows a food chain in the sea.

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(i) Draw arrows in the three small boxes in the diagram above to show the direction of energy flow. [1]

(ii) In the large circle on the right of the diagram draw or name an organism that could be the next link in this chain. [1]

(iii) For this chain name:

1. the producer .....
2. a consumer .....
3. the source of all the energy ..... [3]

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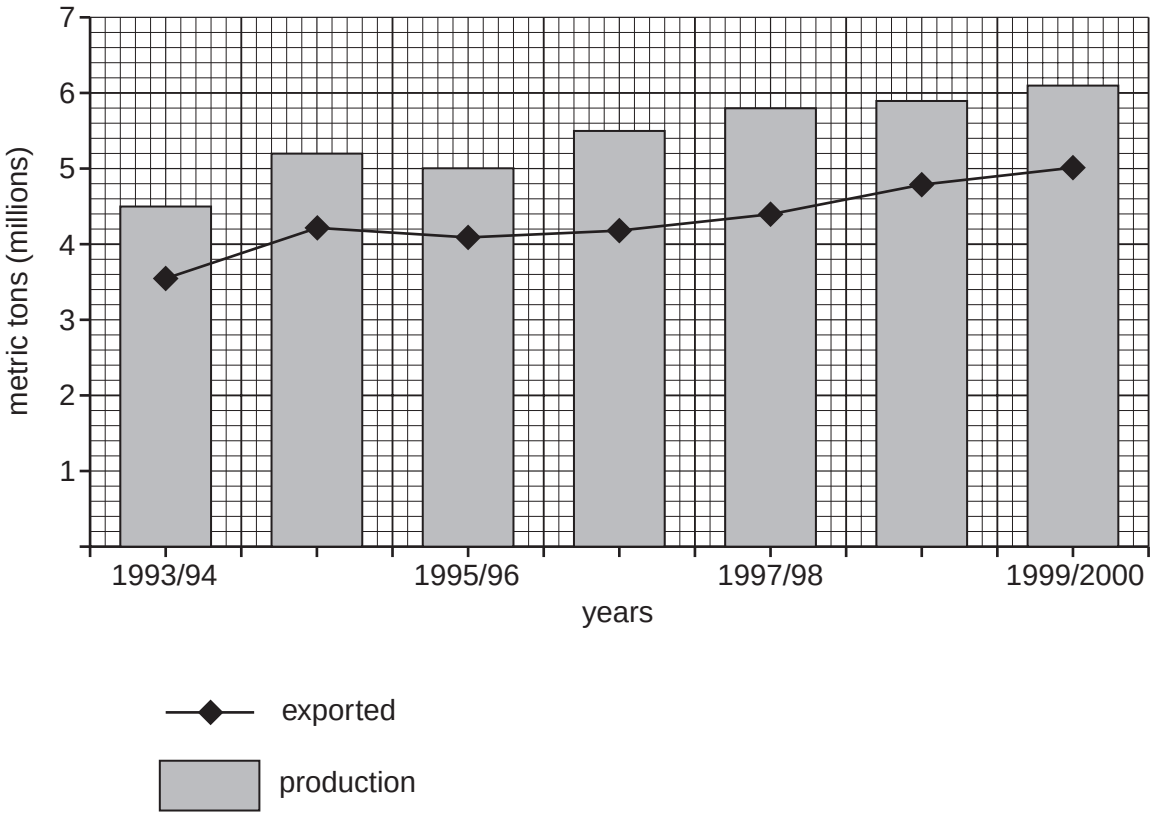
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2 The graph shows the growth of sugar production and export in Australia over 9 years.

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(a) (i) Describe the changes in the export of sugar from 1993/94 until 1999/2000.

.....

.....

..... [2]

(ii) How much of the 1995/96 crop did Australia keep for its own use? Show your working.

[2]

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(b) Look at the photograph below, which shows a sugar plantation in Queensland, Australia.

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(i) The cane fields were cleared from the rainforest which still surrounds them. State the effects that the removal of this forest might have had on the environment in this area.

.....

.....

.....

.....

.....[3]

(ii) In Australia sugar cane is burnt before harvesting. This gets rid of dangerous snakes and also the dry parts of the plant which contain little sugar.
When the sugar farmer was asked the question:

'Doesn't cane burning harm the environment by releasing carbon dioxide (a 'greenhouse gas') into the atmosphere?'

the farmer said no.

What reasons could the farmer give to support this answer?

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.....

.....[3]

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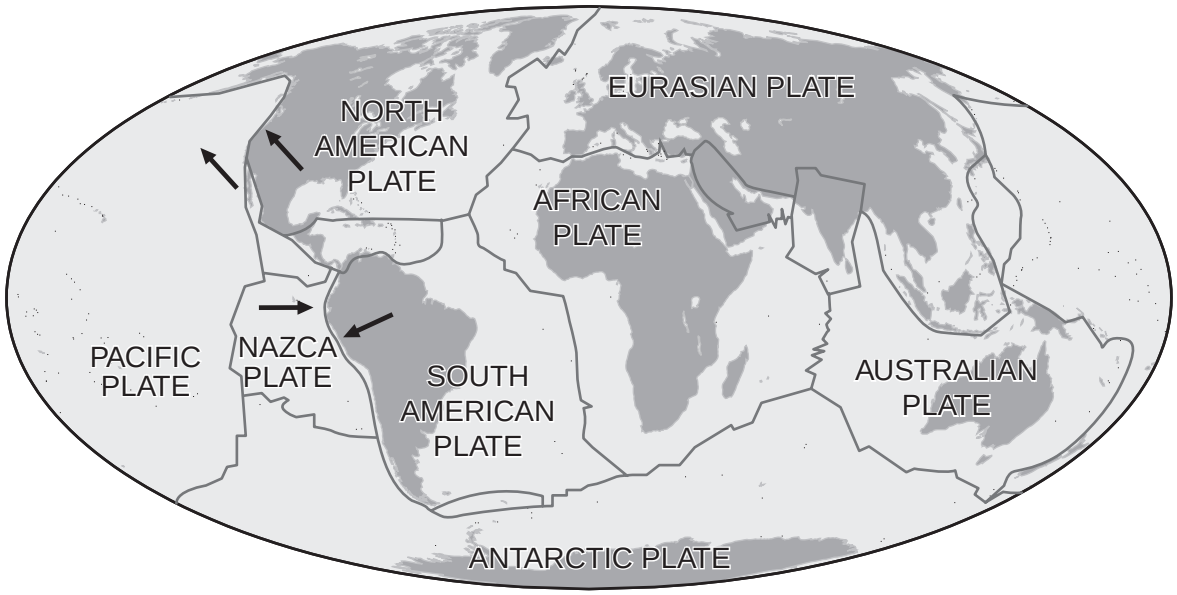
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3 Look at the map below showing some of the tectonic plates of the Earth's crust:

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(a) (i) Look at the arrows showing direction of movement along the Nazca Plate and the South American plate. Name **one** major landscape feature which might form here.

.....[1]

(ii) Name the type of plate boundary and describe what is happening here.

.....

.....

.....

.....[3]

(iii) Look at the arrows along the boundary between the Pacific Plate and the North American plate. Why are earthquakes common here?

.....[1]

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(b) Read the following passage about two earthquakes which occurred in December 2003.

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'The earthquake, that killed more than 50,000 people in Iran was part of a normal pattern', the US Geological Survey office said yesterday. A large part of the city of Bam was flattened.

"This is just the norm of earthquake activity," a seismologist said.

"We would need several more large earthquakes to consider this unusual."

On the Richter scale, the 6.8 magnitude earthquake in Bam was about the same size as the California earthquake, on December 22, that killed two people and toppled a clock tower.'

(i) Using the information in the passage complete the following table comparing these two earthquakes:

	California	Bam
date		
magnitude		
number of people killed		
damage to buildings		

[2]

(ii) Suggest why the two earthquakes resulted in such large differences between two similar events.

.....

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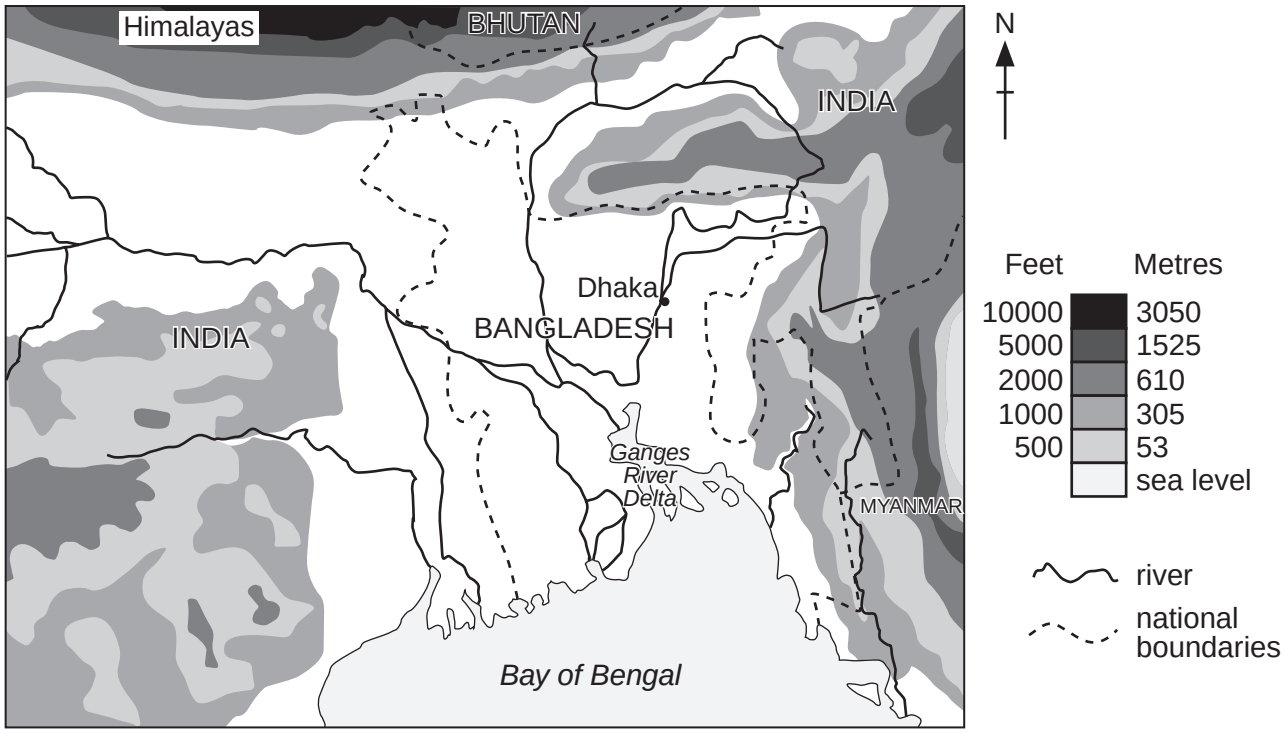
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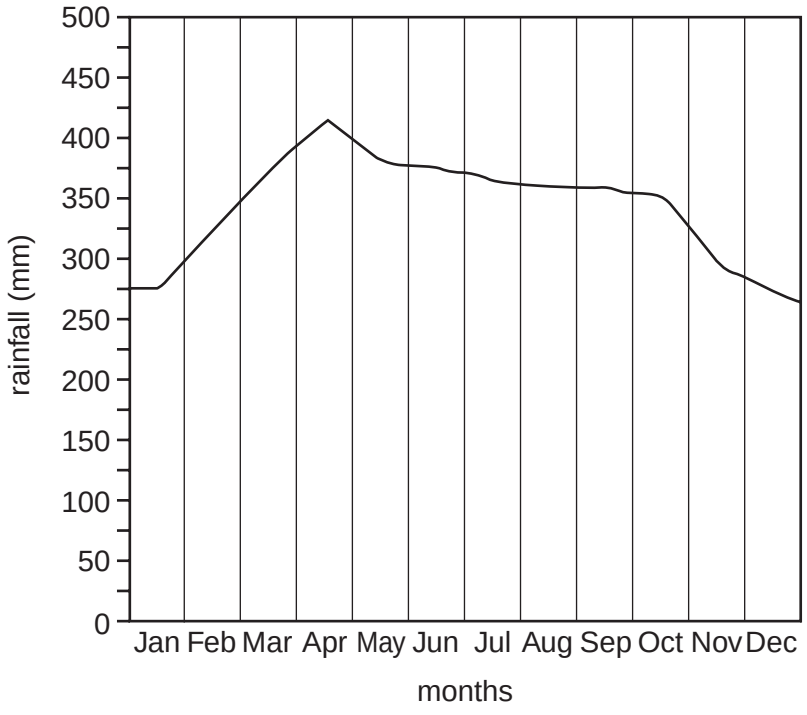
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4 Look at the map and rainfall graph below for Bangladesh:

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(a) (i) State **three** reasons why flooding is frequent in Bangladesh.

.....

.....

.....

..... [3]

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(ii) In the Himalayas deforestation has been carried out. How does this make flooding in Bangladesh more likely?

.....

.....

.....

.....[3]

(b) There are different solutions for problems of flooding. One involves major engineering projects.

(i) Suggest **two** examples of engineering projects which might be undertaken to reduce flooding.

.....

.....

.....

.....[2]

(ii) Describe how people can reduce the effects of flooding.

.....

.....

.....

.....[2]

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5 **(a)** The techniques used in intensive farming have a number of advantages and disadvantages. Complete the following table about intensive crop farming.

	Advantage	**Disadvantage**
chemical fertilisers	increase productivity	
pesticides		damage wildlife by getting into food chain or depriving predator species of food
machinery	makes farming more efficient and increases yields	
monocultures	increase crop production	

[4]

(b) **(i)** Some people say that genetic engineering will bring a second Green Revolution. The first Green Revolution involved selective breeding.
What are the differences between selective breeding and genetic engineering?

.....

.....

.....[2]

(ii) State **two** benefits gained from growing genetically engineered crops.

.....

.....

.....[2]

(iii) Give reasons why some people object to the use of genetically engineered crops.

.....

.....

.....[2]

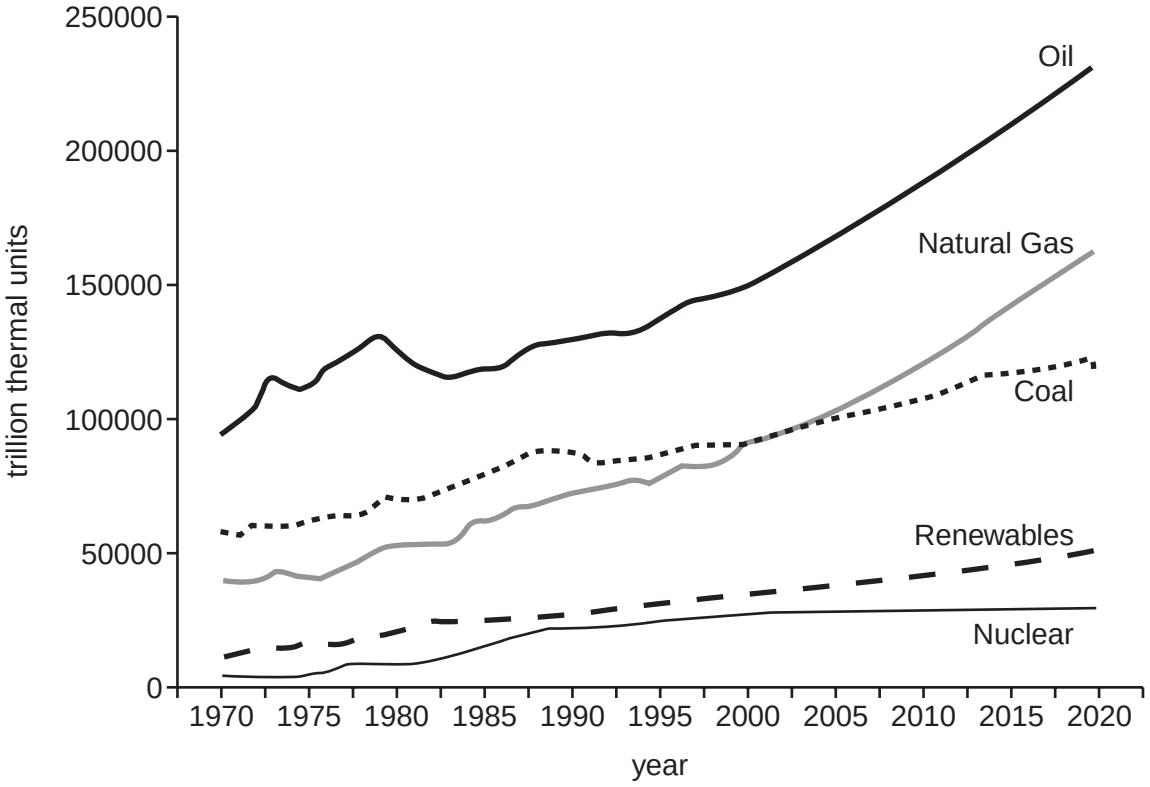
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6 Look at the graph which shows how the different types of energy used by people have changed and are projected to change:

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(a) (i) Which energy sources shown are fossil fuels?

.....[1]

(ii) Which energy source is not expected to increase in use from 2000?

.....[1]

(iii) Which of the other energy sources will increase the least amount?

.....[1]

(iv) Name **two** kinds of renewable energy.

.....

.....[2]

(b) (i) The extraction of minerals from the earth, like coal, often does great damage to the land, which can then be reclaimed. Describe methods by which such land is reclaimed.

.....

.....

.....

.....[2]

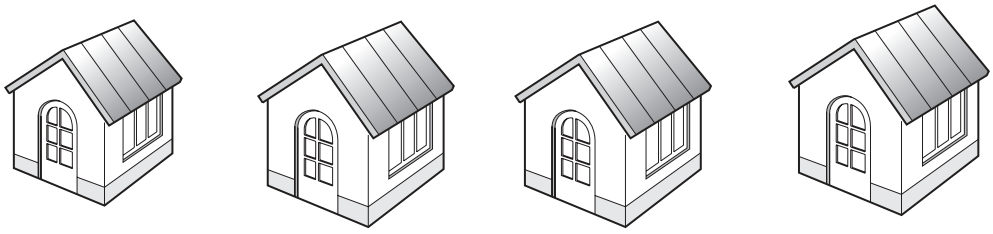
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(ii) Some methods for energy conservation in houses in cold climates are shown in diagrams A–D.
Which house will be the most energy efficient? Explain your answer.



A	B	C	D
Roof and walls insulated	Double glazing, no roof or wall insulation	Single glazing, no roof or wall insulation	Roof insulated

House .....

.....

.....

..... [3]

[Total: 10]

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