



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
NUMBER

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ENVIRONMENTAL MANAGEMENT

0680/13

Paper 1

May/June 2014

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 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.

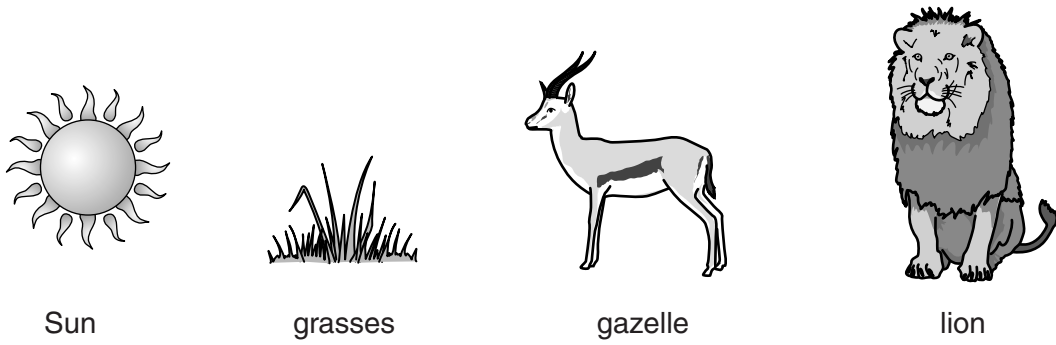
You may lose marks if you do not show your working or if you do not use appropriate units.

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 **14** printed pages and **2** blank pages.

1 (a) Look at the diagram below.



- (i) Draw arrows on the diagram to show the direction of energy flow. [1]
- (ii) Complete the table below using words from the list. Each word may be used once, more than once or not at all.

consumer
energy flow
producer
community

animal	niche
gazelle in the savanna
grasses in the savanna
lion in the savanna

[2]

(iii) Explain why all the energy in the gazelle is **not** passed to the lion.

.....
[1]

(b) Read the information in the box below.

The Waza National Park, Cameroon, Africa

The Waza National Park is one of the most popular and rich wildlife sanctuaries in Cameroon. In 1979 it was declared a world biosphere reserve because of its biodiversity. The park is open for public visits from 15 November to 15 June.

More than 30 wild mammal species and 379 bird species have been identified in this area of savanna. March and April are the best months to see a wide range of animals including elephants, hippos, giraffes, lions and monkeys.

There is no tourist accommodation available in the park. There are camp sites close to the entrance and tourist lodges in the village of Waza just north of the National Park. Vehicles that enter the park must have a guide.

- (i) State which country the Waza National Park is in.
.....[1]

- (ii) Using the information in the box and your own knowledge, describe what animals and plants a visitor would see in the Waza National Park.
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.....
.....[2]

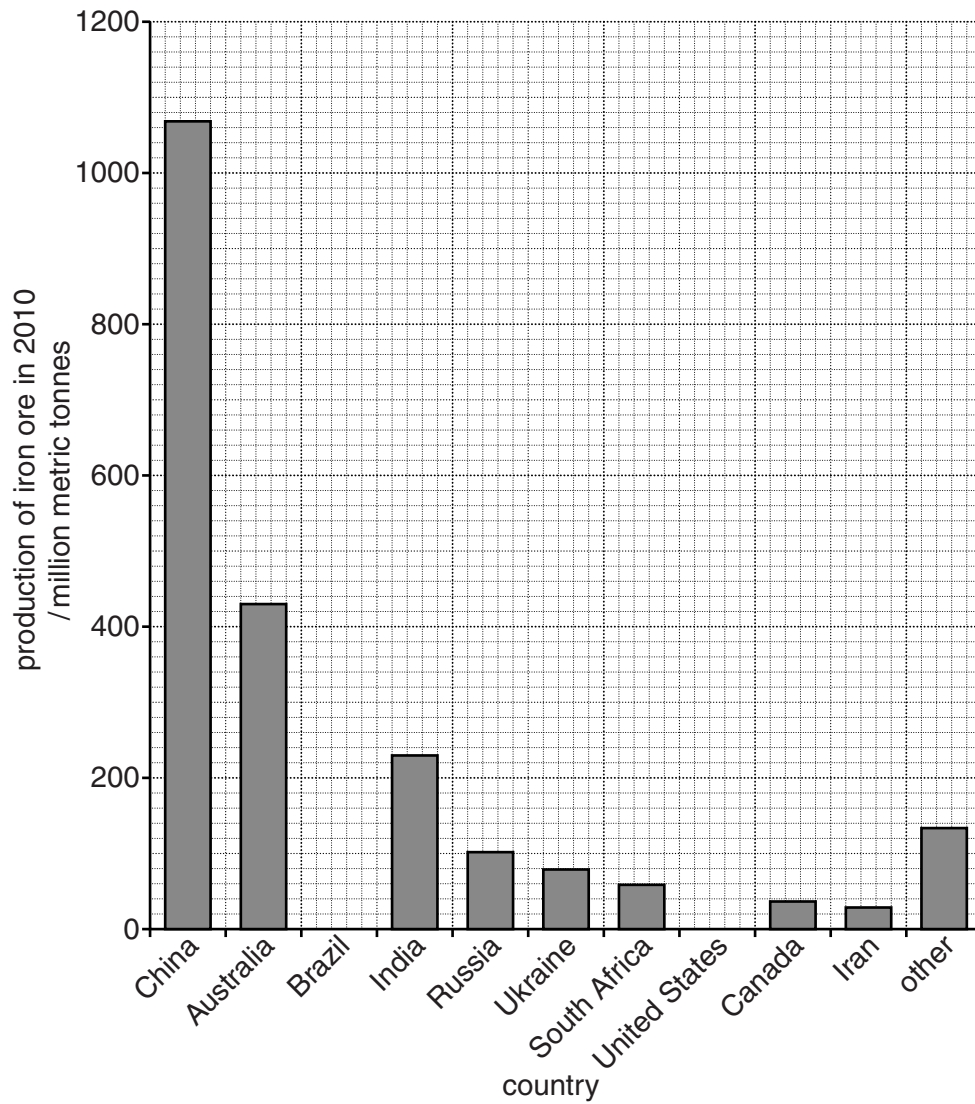
- (iii) How might local people benefit from a biosphere reserve?
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.....
.....
.....
.....[3]

2 The table below shows world iron ore production in 2010, with the top ten countries named.

	production of iron ore in 2010 /million tonnes
China	1070
Australia	433
Brazil	370
India	230
Russia	101
Ukraine	78
South Africa	59
United States	50
Canada	37
Iran	28
other countries	136
total	2592

(a) (i) Complete the graph below using figures from the table.

[2]



(ii) State which country produces the greatest amount of iron ore.

.....[1]

(iii) Calculate what percentage of the total world production of iron ore Australia produces.

Space for working.

..... % [1]

(iv) In 2011 the life expectancy of known iron ore reserves in Australia was estimated to be seventy years. State what this means.

.....
.....[1]

(b) (i) Most iron ore is mined using opencast methods. Describe the impact of an opencast mine on a rural environment.

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.....[4]

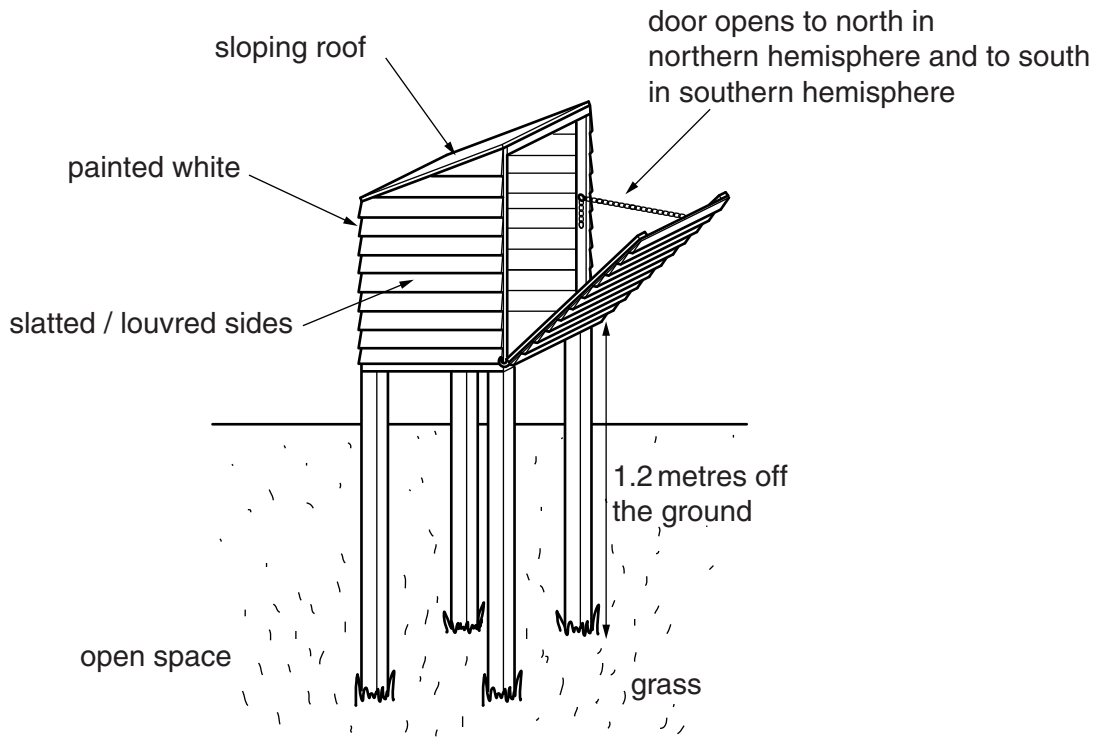
(ii) Suggest **one** reason why some local people might be in favour of an opencast mine.

.....
.....[1]

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TURN OVER FOR QUESTION 3

3 Study the diagram below of a Stevenson Screen found at many weather stations.



(a) (i) One purpose of the Stevenson Screen is to allow a thermometer to measure air temperature. Explain **three** features of the Stevenson Screen which ensure that a thermometer correctly measures air temperature.

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.....[3]

(ii) Identify the weather elements the thermometers kept in the Stevenson Screen measure each day.

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.....[2]

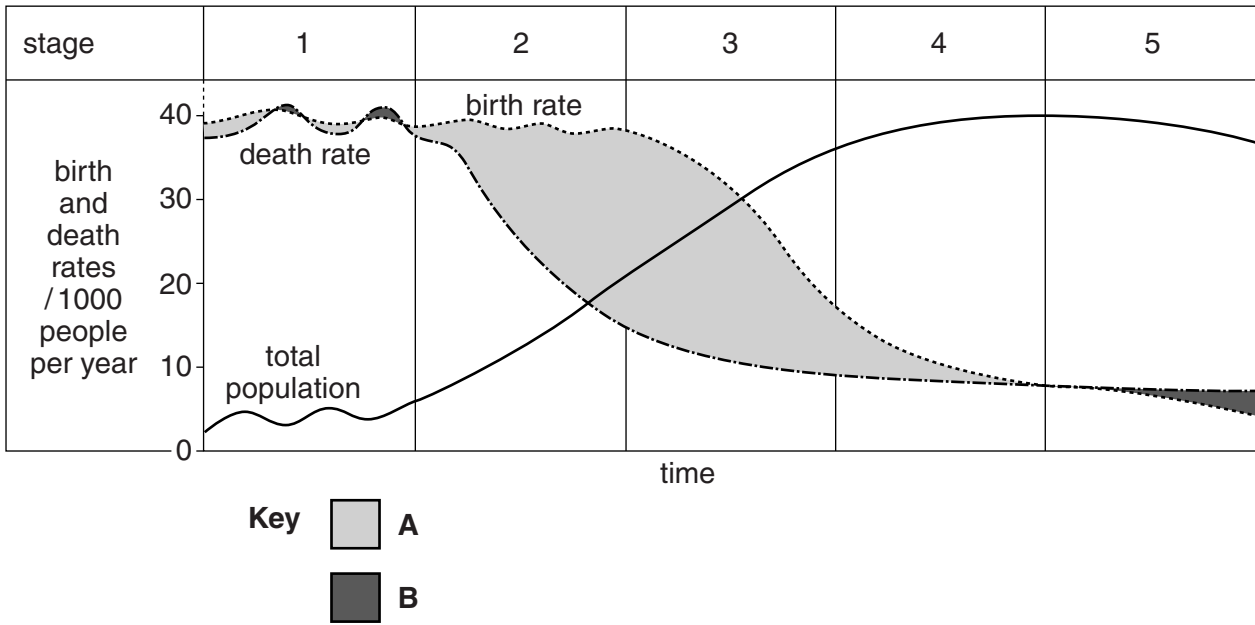
(iii) State what a barometer measures.

.....[1]

(b) Acid rain is precipitation that contains pollutants. Describe **two** strategies for reducing acid rain.

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.....[4]

4 Study the diagram below of the model of demographic transition.



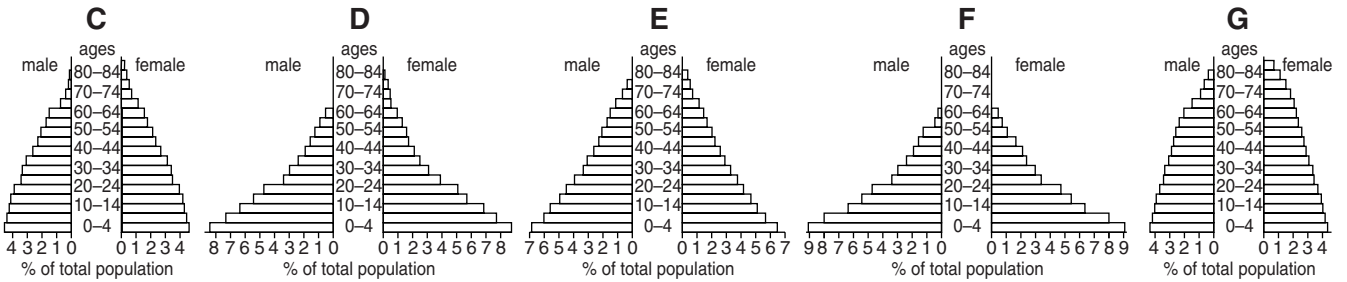
(a) (i) Describe what the areas shaded **A** and **B** show.

A

B [2]

(ii) The five population pyramids, **C** to **G** below, show the stages of the demographic transition model.

Identify which pyramid matches each stage of the model.



stage 1

stage 2

stage 3

stage 4

stage 5

[3]

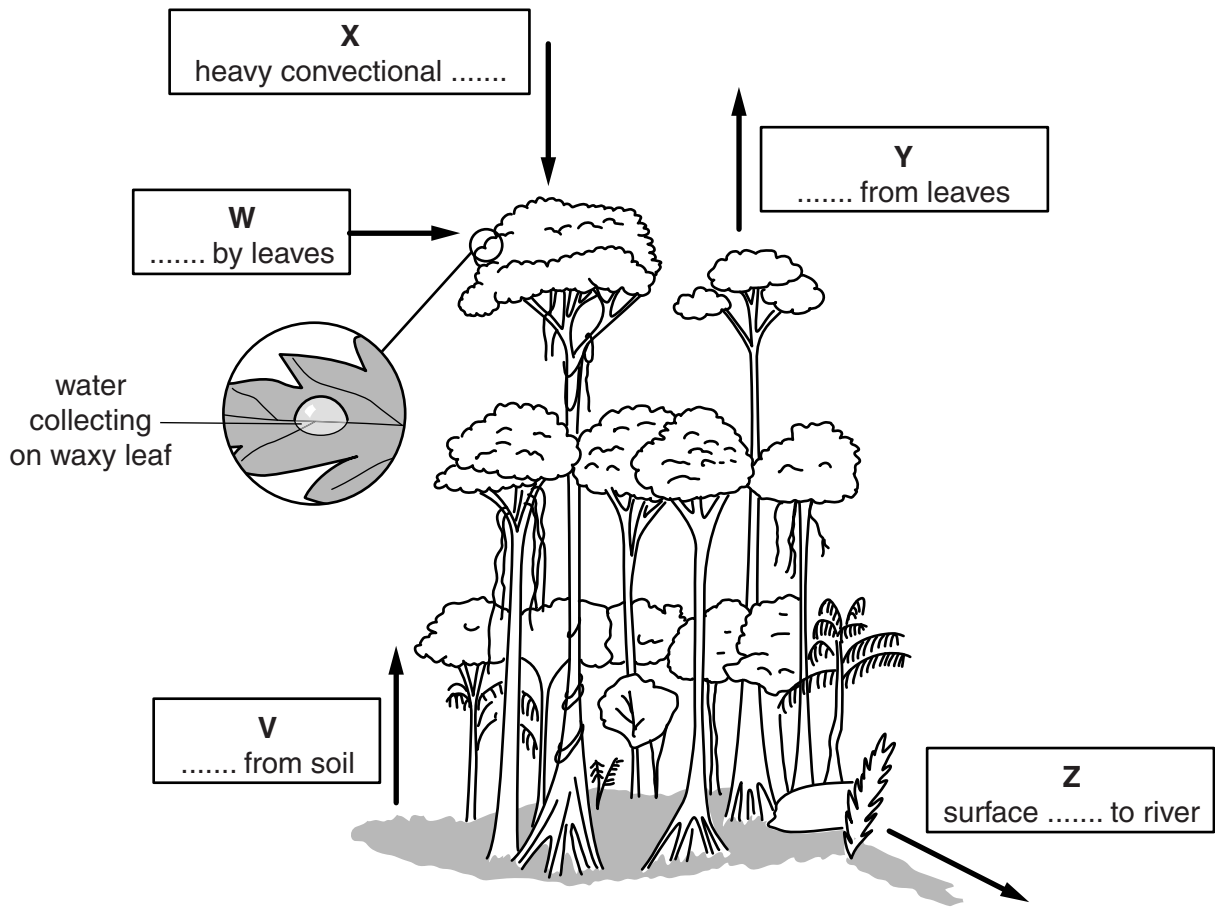
(iii) Suggest **two** limitations of the demographic transition model.

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.....[2]

(b) The governments in some countries have policies to reduce birth rates. Describe **three** strategies for managing population growth.

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.....[3]

5 The diagram below shows the water cycle in a tropical rainforest ecosystem.



(a) (i) In the spaces below, write down the words missing from each box.

- V
- W
- X
- Y
- Z

[3]

(ii) The trees are cut down and removed from the tropical rainforest ecosystem.

Explain how this would affect the processes at **W** and **Z**.

W

.....

.....

Z

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..... [4]

(b) Human activities can cause changes in water quality. Suggest **three** ways water in rivers and lakes can be polluted.

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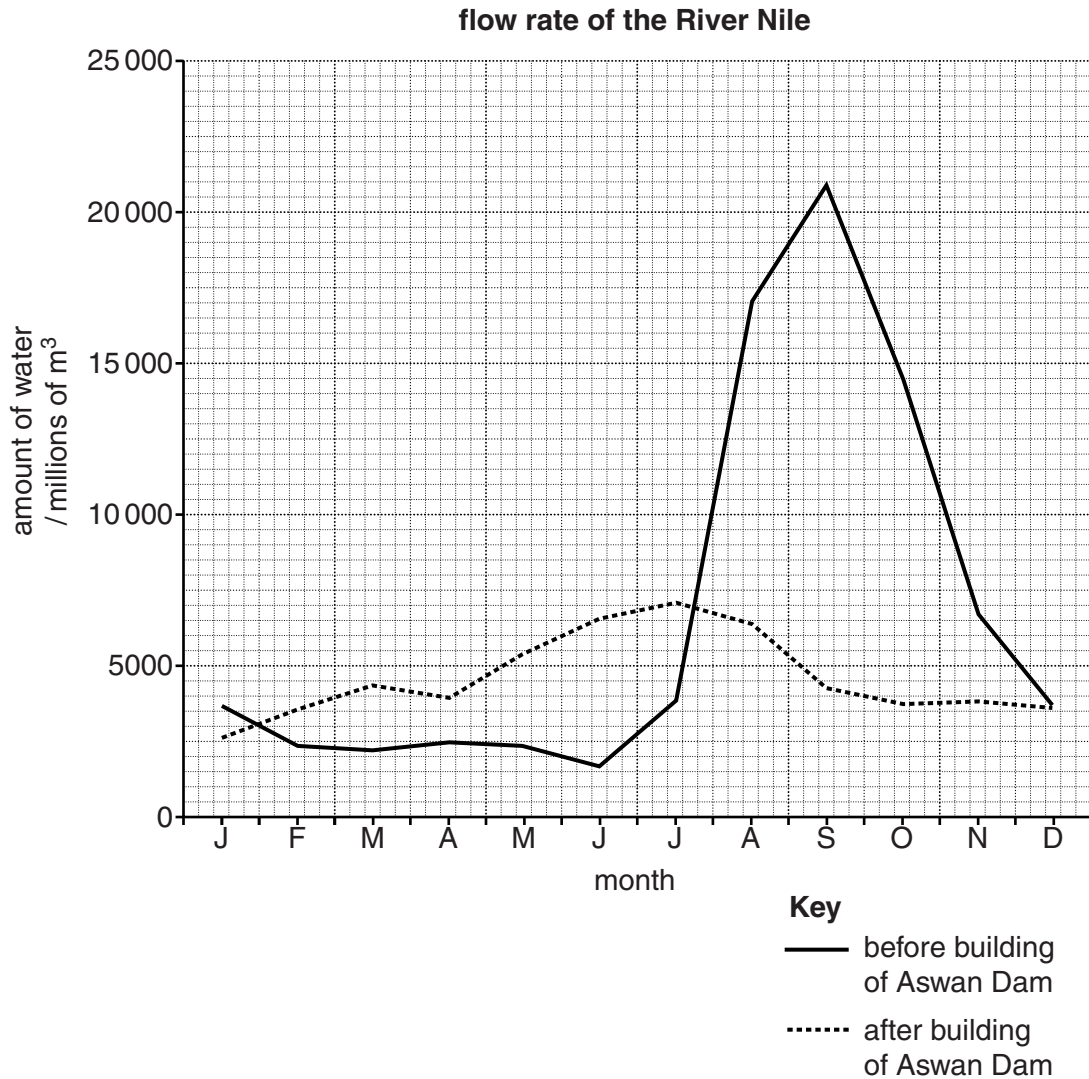
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..... [3]

- 6 Study the graph below of the amount of water flowing in the river Nile before and after the building of the Aswan High Dam. The measurements were taken below the dam, between the site of the dam and the sea.



- (a) (i) State the **three** months when the river Nile used to flood below the dam, before it was built.

.....[1]

- (ii) Explain why farmers near the river Nile, below the dam, needed to buy more fertiliser after the dam was built.

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.....

.....[2]

(b) (i) The Aswan High Dam provides electricity. State the name given to electricity generated from fast flowing water.

.....[1]

(ii) Explain why electricity generated from fast flowing water is a renewable and sustainable energy resource.

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.....[2]

(iii) Suggest environmental problems of building large dams in developing countries.

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.....[4]

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Copyright Acknowledgements:

Question 2 © http://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/mcs-2012-feore.pdf.

Question 6 © Alan Doherty & Malcolm McDonald; *River Basin Management*; Hodder and Stoughton Ltd; 1992.

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