



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
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GEOGRAPHY

0460/13

Paper 1

May/June 2011

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.

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 ON ANY BARCODES.

Write your answer to each question in the space provided. If additional space is required, you should use the lined page at the end of this booklet. The question number(s) must be clearly shown.

Answer **three** questions.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The Insert contains Photographs A and B for Question 2, Photograph C for Question 4 and Photograph D for Question 5.

The Insert is **not** required by the Examiner.

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 **24** printed pages and **1** Insert.



QUESTION 1

- (a) Study Fig. 1, which shows birth rates and death rates in Niger (an LEDC) and Australia (an MEDC).

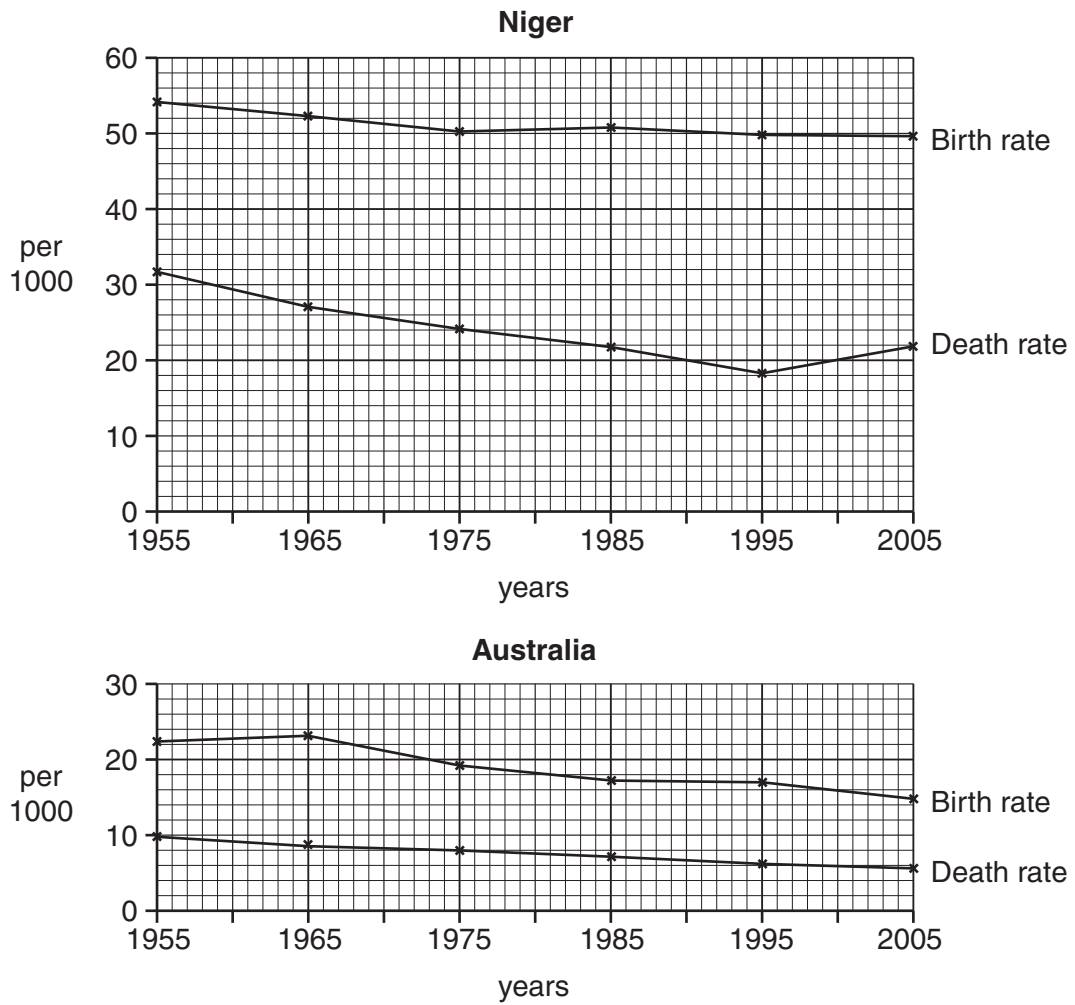


Fig. 1

- (i) What was the birth rate per 1000 in Niger in 1955?

.....[1]

- (ii) Calculate the natural population growth rate for Australia in 2005. Show your calculation.

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.....[2]

(iii) Suggest reasons why the death rate in LEDCs, such as Niger, declined rapidly between 1955 and 1995.

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.....[3]

(iv) The death rate in Niger has increased since 1995 due to HIV/AIDS. Explain what can be done by governments to reduce the spread of HIV/AIDS.

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(b) Study Fig. 2, which shows the relationship between the average number of births per woman and the percentage of girls in secondary education.

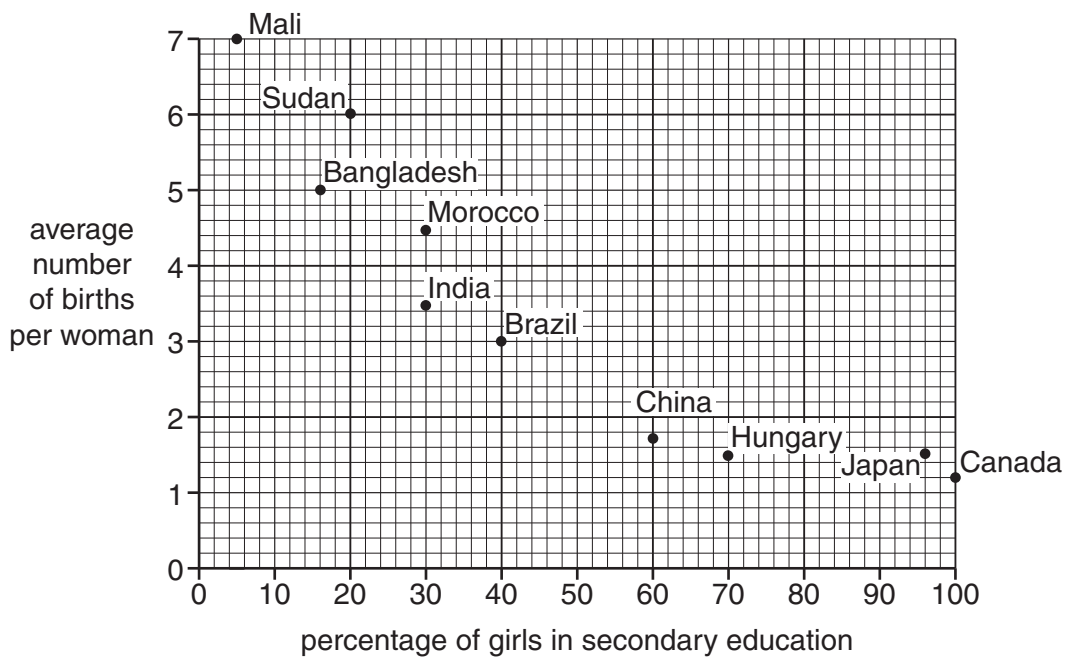


Fig. 2

(i) Describe the general relationship between the average number of births per woman and the percentage of girls in secondary education. Give data from Fig. 2 to support your answer.

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(ii) Explain the advantages of educating girls and women in LEDCs.

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QUESTION 2

- (a) Study Fig. 3, which shows the number of shops and services in different sized settlements in a rural region of France (an MEDC).

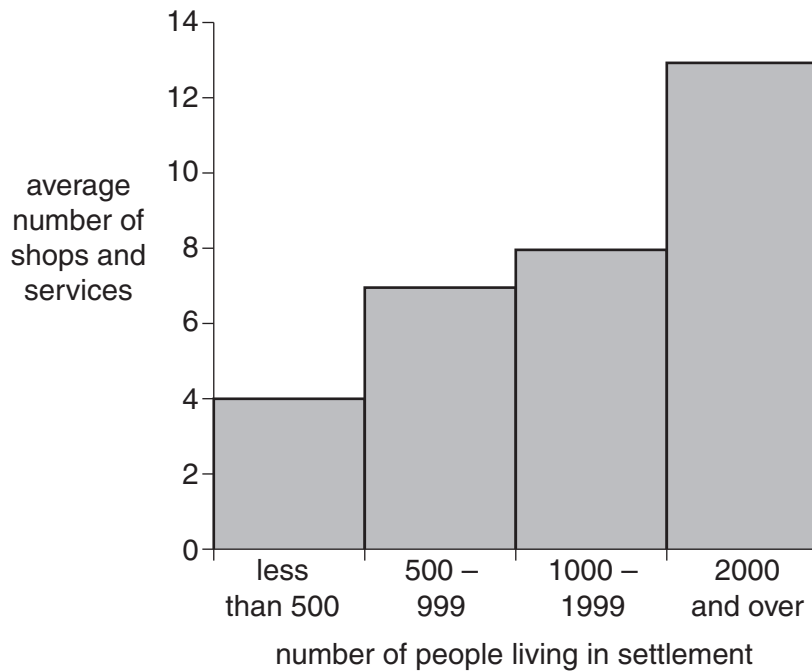


Fig. 3

- (i) Compare the average number of shops and services in settlements of less than 500 people with that in settlements where over 2000 people live.

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[1]

- (ii) Suggest **two** examples of shops or services which are likely to be found in a settlement of less than 500 people.

1
 2[2]

- (iii) Services in most rural settlements are low order services. Describe **three** characteristics of low order services.

1

 2

 3
[3]

(b) Study Photographs A and B (Insert), which show services in an urban area in Nigeria (an LEDC).

(i) Suggest reasons why the shop shown in Photograph A will have a small sphere of influence.

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(ii) Explain why services such as the one shown in Photograph B are only located in large urban areas.

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(iii) Describe the typical land uses and characteristics of the CBD of a city.

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QUESTION 3

(a) Study Fig. 4, an article about an earthquake.

Earthquake devastates Italy

L'AQUILA, Italy – A powerful earthquake shook this medieval town in central Italy, killing 308 people, leaving thousands homeless and damaging many monuments. More than 20 churches were damaged in the earthquake, including the cathedral and the Basilica of San Bernardino.

As rescue teams searched for survivors, many asked whether the deaths could have been avoided. Tremors had been felt around L'Aquila for several weeks. Giampaolo Giuliani, a physicist, said he had warned authorities that an earthquake would hit Abruzzo. Mr. Giuliani said he had come to this conclusion by measuring the amounts of radon gas released by the earth.

The 6.3 magnitude earthquake was strong enough that many felt it in Rome, 60 miles west of L'Aquila.

Experts say that many buildings in Italy are vulnerable because many of them date back hundreds of years. They have not been fitted with modern technology to make them earthquake proof.

As aftershocks rumbled through the streets of L'Aquila residents pushed carts full of their belongings they had found before fleeing their homes. Officials were setting up some 1000 tents, enough to hold 12000 people.

Fig. 4

(i) The article states that the magnitude of this earthquake was 6.3. On which scale is the magnitude of an earthquake measured?

.....[1]

(ii) Using Fig. 4 only, identify **two** different impacts of the earthquake.

1

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2

.....[2]

(iii) To what extent do you think earthquakes can be predicted?

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(iv) Explain why most earthquakes occur at plate boundaries.

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(b) Study Fig. 5, which shows an 'earthquake-proof house' designed by Indian engineers.

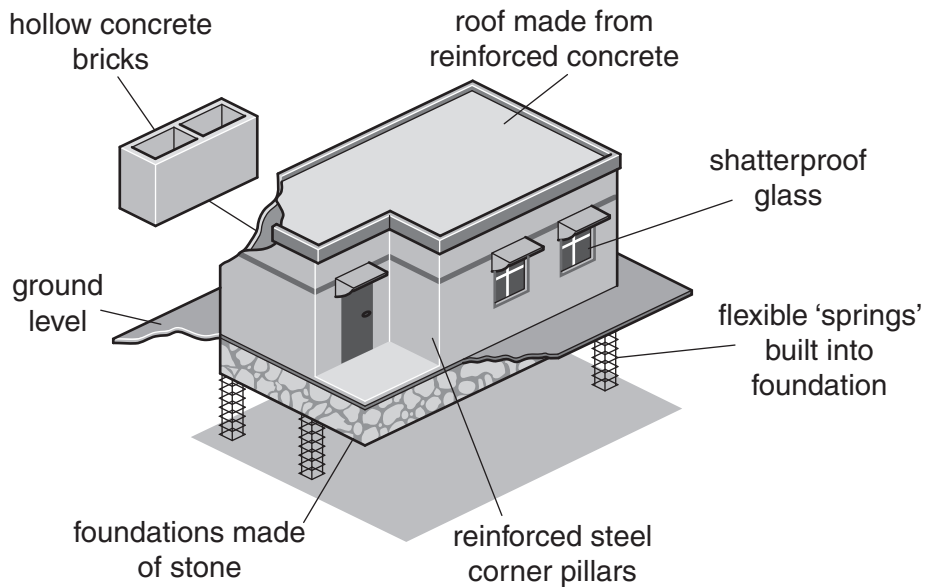


Fig. 5

(i) Explain how **three** of the features labelled in Fig. 5 would help to protect people if an earthquake occurred.

1

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.....[3]

(ii) Why do many people live in areas which are at risk from earthquakes?

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 [5]

(c) An earthquake is an example of a natural hazard. Choose an example of one of the following:

a tropical storm, a drought.

For a named area, describe the causes and effects of your chosen hazard.

Hazard chosen..... Area chosen

.....

 [7]

[Total: 25 marks]

END OF QUESTION 3

QUESTION 4

(a) Study Fig. 6, a diagram which shows how the load of a river is transported.

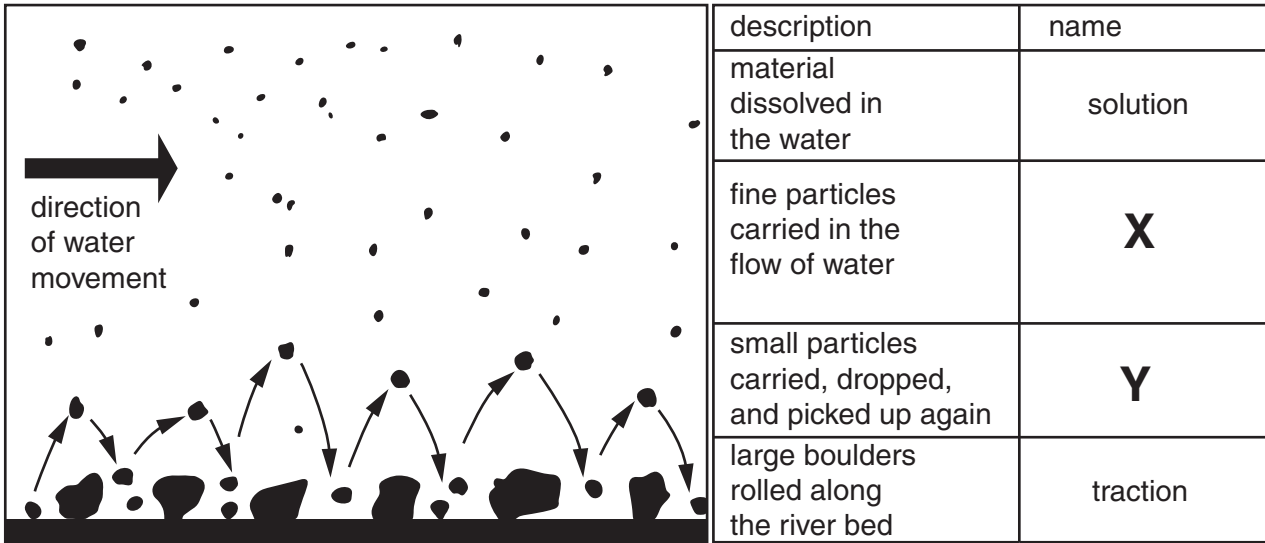


Fig. 6

(i) What is meant by the *load* of a river?

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[1]

(ii) Name the **two** methods of transporting the load which are labelled **X** and **Y** on Fig. 6.

X.....

Y.....[2]

(iii) State **three** ways in which the load being carried by a river will change after a heavy rainstorm.

1

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2

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3

.....[3]

(iv) State the location of **two** areas along a river's course where deposition occurs. Explain why deposition occurs in each of these areas.

Area 1

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Area 2

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..... [4]

(b) Study Photograph C (Insert) which shows a waterfall.

(i) Describe the natural features of the waterfall shown in Photograph C.

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(ii) Suggest how the waterfall in Photograph C was formed. You may draw a labelled diagram.

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QUESTION 5

- (a) Study Fig. 7, a newspaper article about water shortages in the state of Maharashtra, in India (an LEDC).

OVER 1000 VILLAGES DEPEND ON TANKERS

OVER 1000 villages in the state have to depend on tankers for their water supply as their wells have dried up.

The number of villages depending on tankers has nearly doubled since last May when 670 villages depended on tankers for water. Nearly 1143 villages now depend on government and private water tankers.

The worst-affected part of the state is Marathwada where 584 villages draw water from tankers. The situation is likely to worsen in Marathwada — a drought-prone region — considering the rainy season is still about a month away.

According to rainwater harvesting consultant Ajit Gokhale, low ground water levels are not the only reason for the increasing use of water tankers.

“The heat and evaporation rate have increased. So, even if people do take measures to conserve water, the situation is not improving,” said Gokhale.

Of the 1071 tankers supplying the villages, only 407 are government tankers while the rest are private. Some villages get their water supply from rivers and streams but these are polluted.

Fig. 7

- (i) Name the part of the state of Maharashtra where over 500 villages depend on tankers for their water supply.

.....[1]

- (ii) State **two** other ways by which villages in Maharashtra obtain their water.

1

2[2]

- (iii) How do the following cause water supply problems:

A Drought,

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B Increased evaporation,

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C River pollution?

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.....[3]

(iv) Suggest methods which could be used to reduce water shortages.

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(b) Study Photograph D (Insert), which shows part of the water treatment works at Yola in Nigeria (an LEDC), along with Fig. 8, a flow diagram.

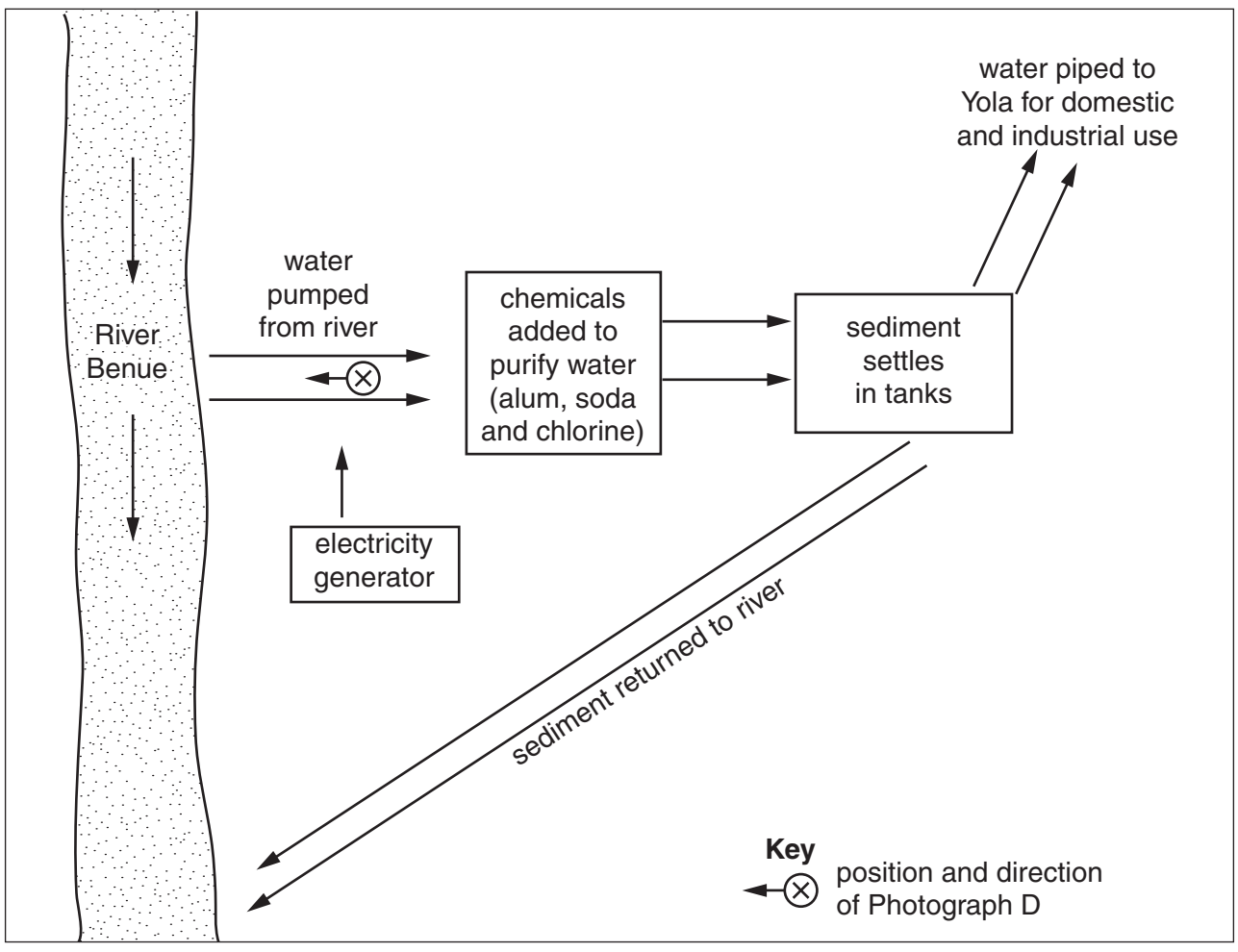


Fig. 8

(i) Describe how the water from the River Benue is processed at Yola water treatment works.

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(ii) Explain the benefits to local people of the water treatment works.

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(c) Water may be polluted by human activities. For a named example which you have studied, describe the causes and effects of pollution of a river, lake or sea area.

Example chosen

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[7]

[Total: 25 marks]

END OF QUESTION 5

QUESTION 6

(a) Study Fig. 9, which shows information about South Korea, a newly industrialised country (NIC) in South East Asia.

	1975	2009
Total population	36 million	48 million
Urban population	48%	81%
GDP per person	US\$ 820	US\$ 27 600
Adult literacy	91%	98%
Access to safe water	62%	93%
Infant mortality	37 per 1000	4.3 per 1000
Main industries	Textiles Machinery Agriculture	Electronics Telecommunications equipment Vehicles Computers Steel Ships Chemicals

Fig. 9

(i) By how much did the total population of South Korea increase between 1975 and 2009?

.....[1]

(ii) Identify **one** example of each of the following.

A A manufacturing industry which was important in South Korea in 1975.

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B A high technology industry which was important in South Korea in 2009.

.....[2]

(iii) Using only information from Fig. 9, state **three** different pieces of evidence which show that development has occurred in South Korea between 1975 and 2009.

- 1
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- 2
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- 3
-[3]

(iv) Explain why many large companies have located high technology industries in NICs, such as South Korea.

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-[4]

