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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

7137236496

GEOGRAPHY **0460/13**

Paper 1 **October/November 2012**

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional Materials: Calculator
Protractor

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.

The Insert contains Photographs A, B and C for Question 2, Photograph D for Question 3 and Photographs E, F and G for Question 6.
The Insert is **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

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	
Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
Total	

This document consists of **26** printed pages, **2** blank pages and **1** Insert.

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QUESTION 1

For Examiner's Use

(a) Study Fig. 1, which shows information about the population of four countries.

Country	Area (sq km)	Population	Population density (per sq km)	Birth rate (per 1000)	Death rate (per 1000)	Natural population growth rate (per 1000)
Bangladesh	143 998	156 050 883	1084	24.7	9.2	
Pakistan	796 095	174 578 558	219	25.9	7.2	18.7
Australia	7 741 220	21 262 641	2.7	12.5	6.7	5.8
Italy	301 340	58 126 212	193	8.2	10.7	–2.5

Fig. 1

(i) Which of the countries listed in Fig. 1 is most densely populated?

..... [1]

(ii) Calculate the natural population growth of Bangladesh. You must show how you worked out your answer.

..... per 1000 people [2]

(iii) Suggest **three** reasons why the birth rate is higher in Pakistan (an LEDC) than Australia (an MEDC).

1 .....

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2 .....

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..... [3]

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(iv) Bangladesh is overpopulated. Describe **four** problems which may be caused by overpopulation.

For Examiner's Use

1 .....

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2 .....

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.....[4]

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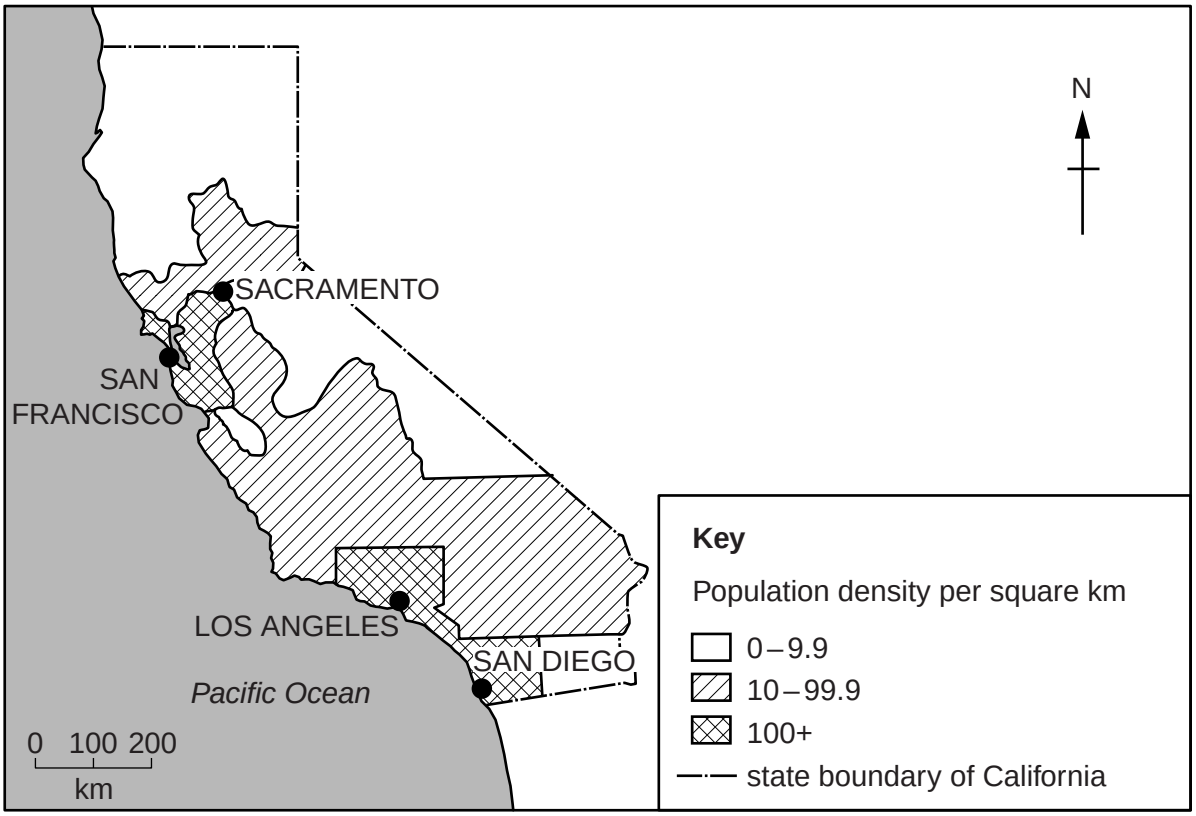
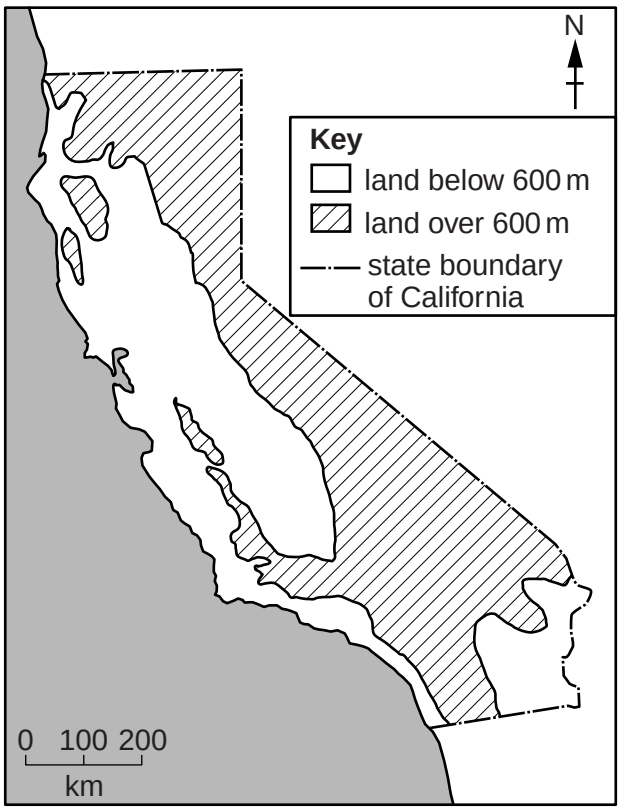
(b) Study Fig. 2, which shows information about California, in the USA.

For Examiner's Use

California: Population density



California: Relief



California: Precipitation per year

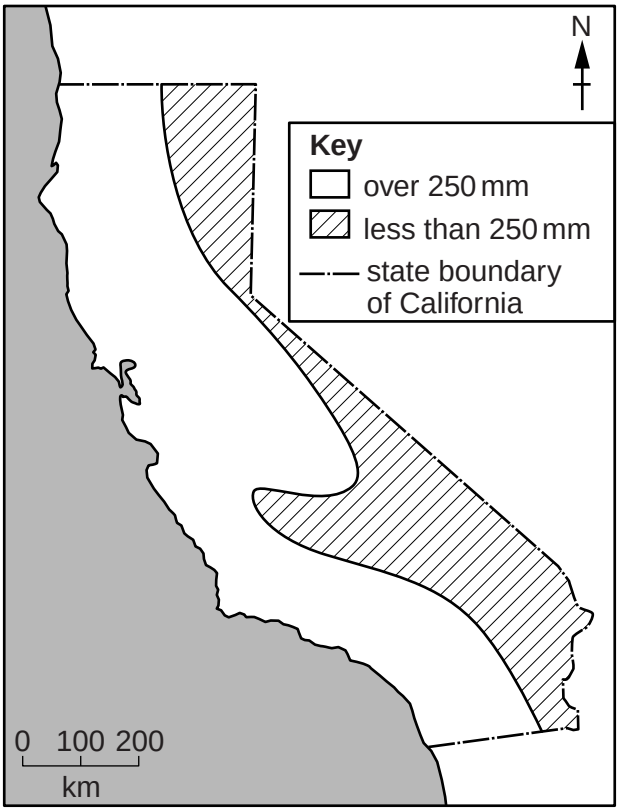


Fig. 2

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For Examiner's Use

(i) Describe the location of the areas with a high population density (over 100 people per square kilometre) in California.

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.....[3]

(ii) Using the information in Fig. 2 **only**, explain the location of areas of high population density within California.

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(c) For an example of international migration which you have studied, name the countries between which people moved. Refer both to pull and to push factors to explain the reasons for the migration between your chosen countries.

For Examiner's Use

Countries between which people moved – from ..... to .....

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[Total: 25 marks]

END OF QUESTION 1

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QUESTION 2

For Examiner's Use

(a) Study Photographs A, B and C (Insert), which show three methods of reducing traffic problems in urban areas.

(i) Traffic can cause congestion in the CBD of many urban areas. What is meant by the initials CBD?

C..... B..... D..... [1]

(ii) Which one of Photographs A, B or C, was taken in the CBD?
Give **one** piece of evidence to justify your choice.

Photograph .....

Evidence .....

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.....[2]

(iii) Describe how each of the three methods shown in Photographs A, B and C reduces traffic in the CBD.

Photograph A .....

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Photograph B .....

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Photograph C .....

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.....[3]

(iv) Explain why it is important to reduce problems of traffic congestion in urban areas.

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(b) Study Fig. 3, which shows the city of Hereford, in the UK.

For Examiner's Use

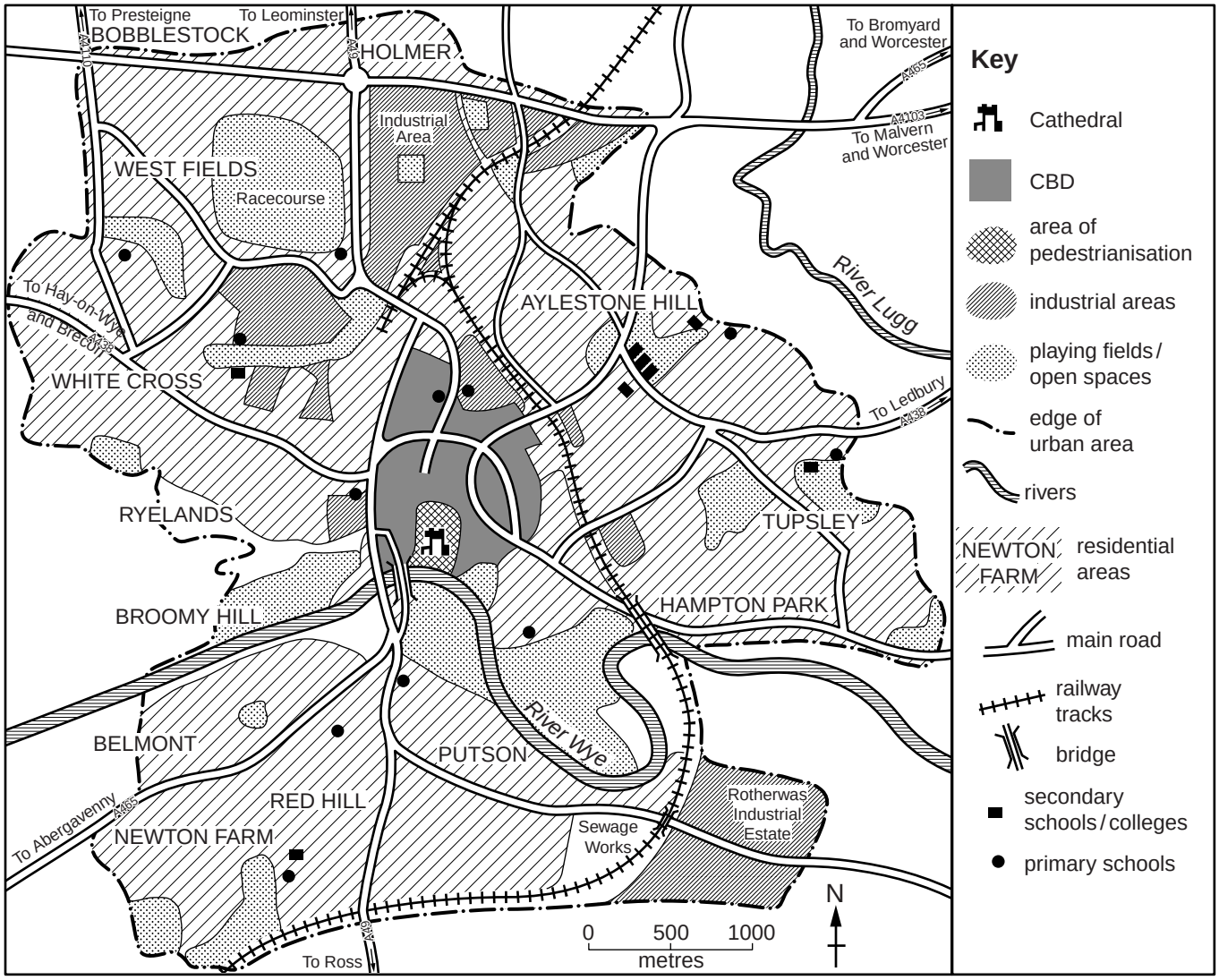

Fig. 3

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For Examiner's Use

(i) Suggest **three** reasons why traffic congestion is likely in the CBD of Hereford.

1 .....

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2 .....

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3 .....

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..... [3]

(ii) The planning department of Hereford City Council wants to reduce traffic congestion in the CBD. The following options are being considered:

1 Restrict the type of vehicle allowed into the CBD;
2 Improve public transport throughout the city;
3 Build a ring road around the city.

Which option would you advise them to choose?
Explain why you chose your option and why you rejected the other options.

Option .....

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(c) In many urban areas there are places where people are living in poor quality housing.

For Examiner's Use

Name an urban area which you have studied where people are living in poor quality housing. Describe the attempts which have been made to solve this problem.

Name of urban area .....

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[Total: 25 marks]

END OF QUESTION 2

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QUESTION 3

For Examiner's Use

(a) Study Fig. 4, a graph which shows information about river velocity and river processes.

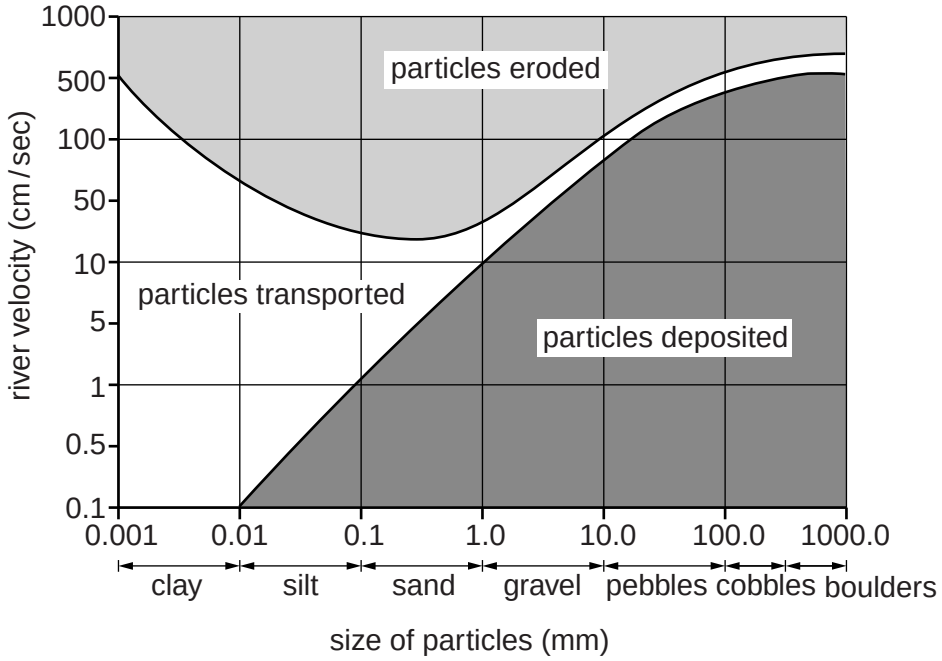

Fig. 4

(i) What is meant by a river's *velocity*?

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.....[1]

(ii) Which river process will occur when:

- the river bed is sand and the velocity is 100 centimetres per second;

  .....

- the river bed is gravel and the velocity is 1 centimetre per second?

  ..... [2]

(iii) Name **three** processes by which a river is likely to carry out erosion.

1 .....

2 .....

3 ..... [3]

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For Examiner's Use

(iv) Explain how a river's load is transported by saltation, solution, suspension and traction.

Saltation .....

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Solution .....

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Suspension .....

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Traction .....

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.....[4]

(b) Study Photograph D (Insert) which shows a river meander.

(i) Describe the features of this meander.

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.....[3]

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(ii) Explain how river processes have created this landform.

For Examiner's Use

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(c) For a named area which you have studied, describe the **impacts** of river flooding.

Name of area .....

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[Total: 25 marks]

END OF QUESTION 3

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QUESTION 4

For Examiner's Use

(a) Study Figs 5A and 5B, which show information about deforestation in tropical countries.

Causes of deforestation in Amazonia

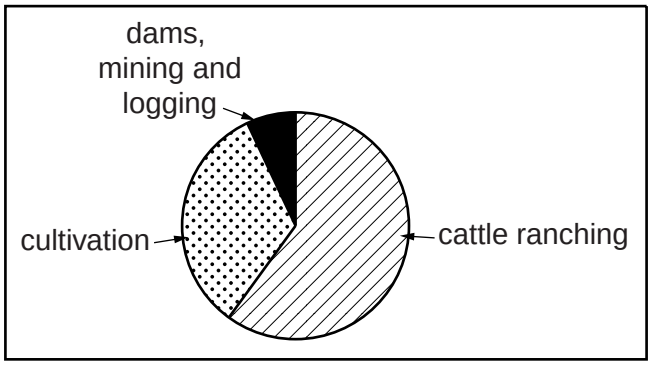

Fig. 5A

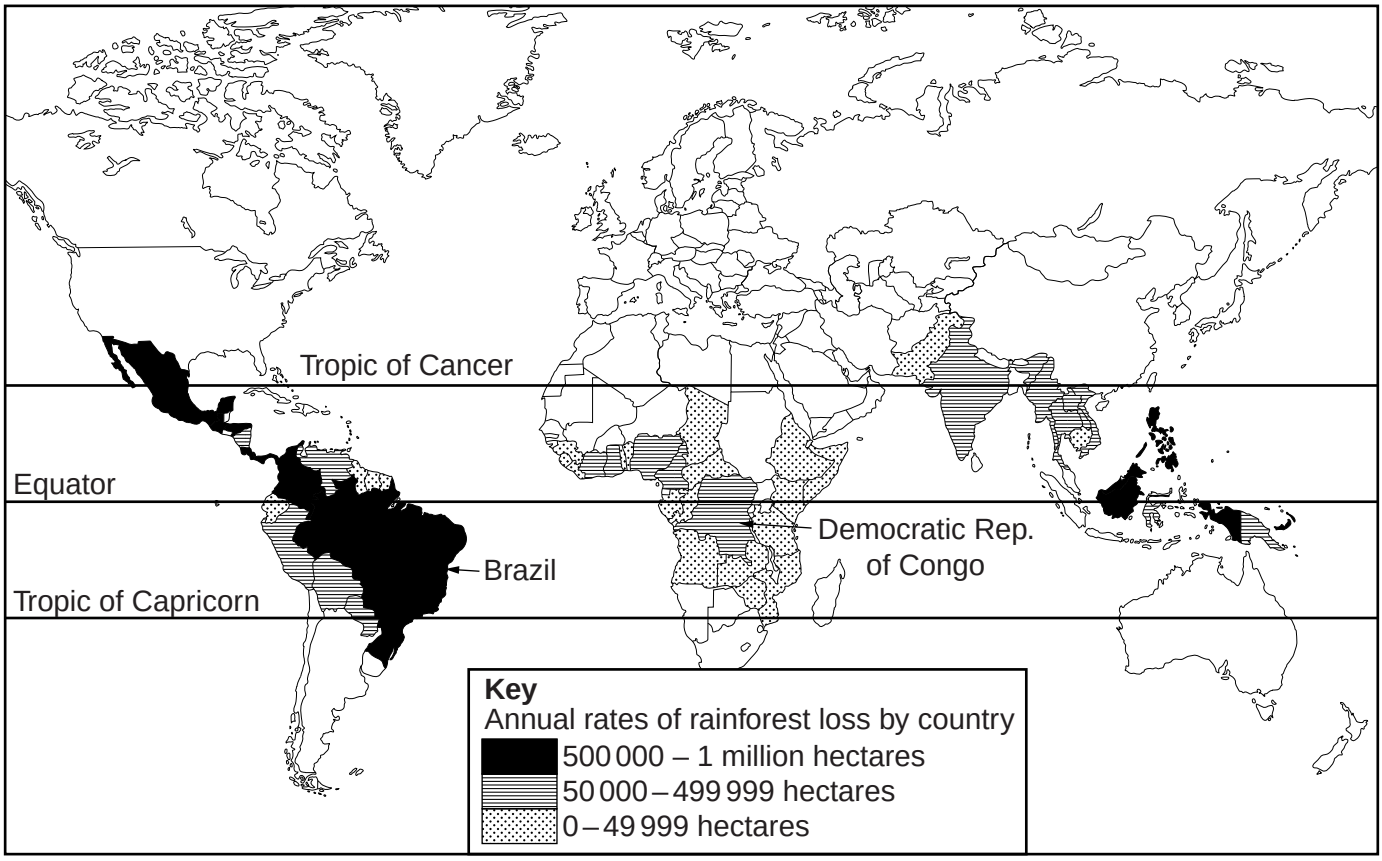

Fig. 5B

(i) Use Fig. 5A to estimate the percentage of deforestation caused by cattle ranching in Amazonia.

.....% [1]

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(ii) Use Fig. 5B to identify the annual rate of rainforest loss in Brazil and Democratic Republic of Congo. For each country you should underline the correct answer.

For Examiner's Use

- Brazil

0 – 49 999 hectares 50 000 – 499 999 hectares 500 000 – 1 million hectares

- Democratic Republic of Congo

0 – 49 999 hectares 50 000 – 499 999 hectares 500 000 – 1 million hectares [2]

(iii) Give **three** reasons why it is difficult for LEDCs to reduce the rate of deforestation.

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..... [3]

(iv) Explain how tropical rainforests could be used sustainably.

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(b) Study Fig. 6, information about the impacts of deforestation.

For Examiner's Use

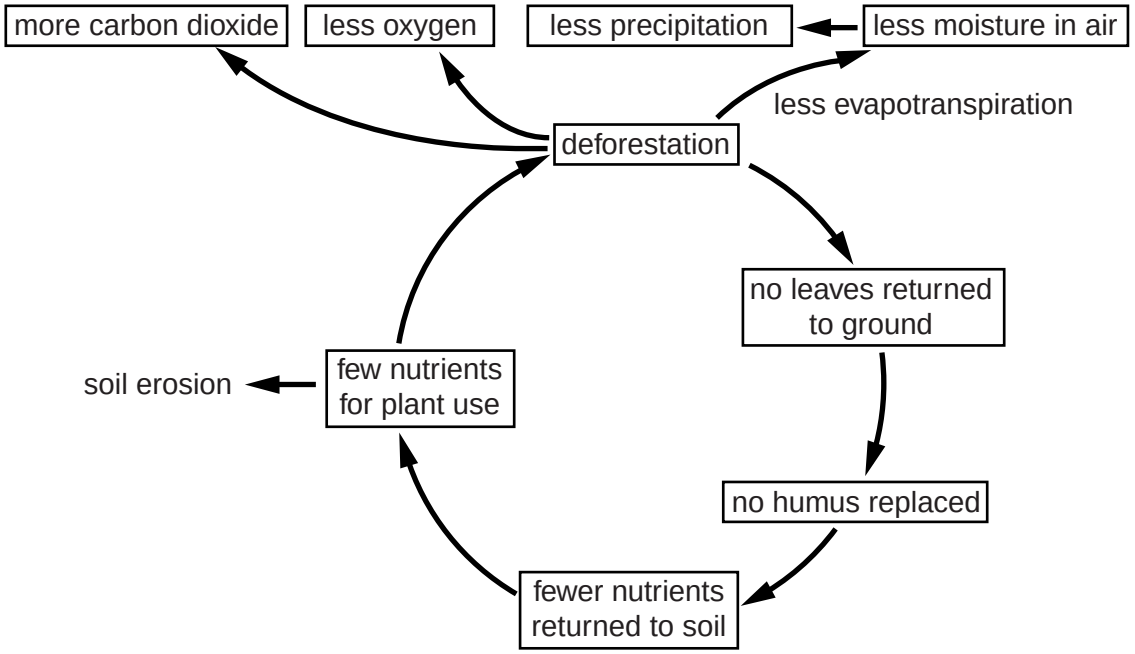

Fig. 6

(i) Using Fig. 6 identify **three** impacts of deforestation on the atmosphere.

1 .....

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(ii) Explain how deforestation may lead to flooding of local rivers.

For Examiner's Use

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(c) For a named area of tropical rainforest which you have studied, describe and explain the main features of its **climate**.

Name of area of rainforest .....

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[Total: 25 marks]

END OF QUESTION 4

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QUESTION 5

For Examiner's Use

(a) Study Fig. 7, which shows information about industry in Japan.

Most of Japan's industry is located close to the coast. The 'Pacific Belt' between Tokyo and Fukuoka contains 70% of Japan's manufacturing industry. As a result, the main industrial areas are becoming increasingly crowded. This results in a series of problems for the people who live there.

The Japanese government tried to develop industries in other areas. Heavy industry, such as engineering and the making of steel and chemicals, was not suitable as many of the raw materials were imported and the finished products exported. Also the interior of Japan is mountainous.

'The Pacific Belt' contains:

- 65% of Japan's population;
- 70% of manufacturing output;
- 50% of public companies headquarters;
- 85% of foreign financial institutions;
- Three high speed rail lines.

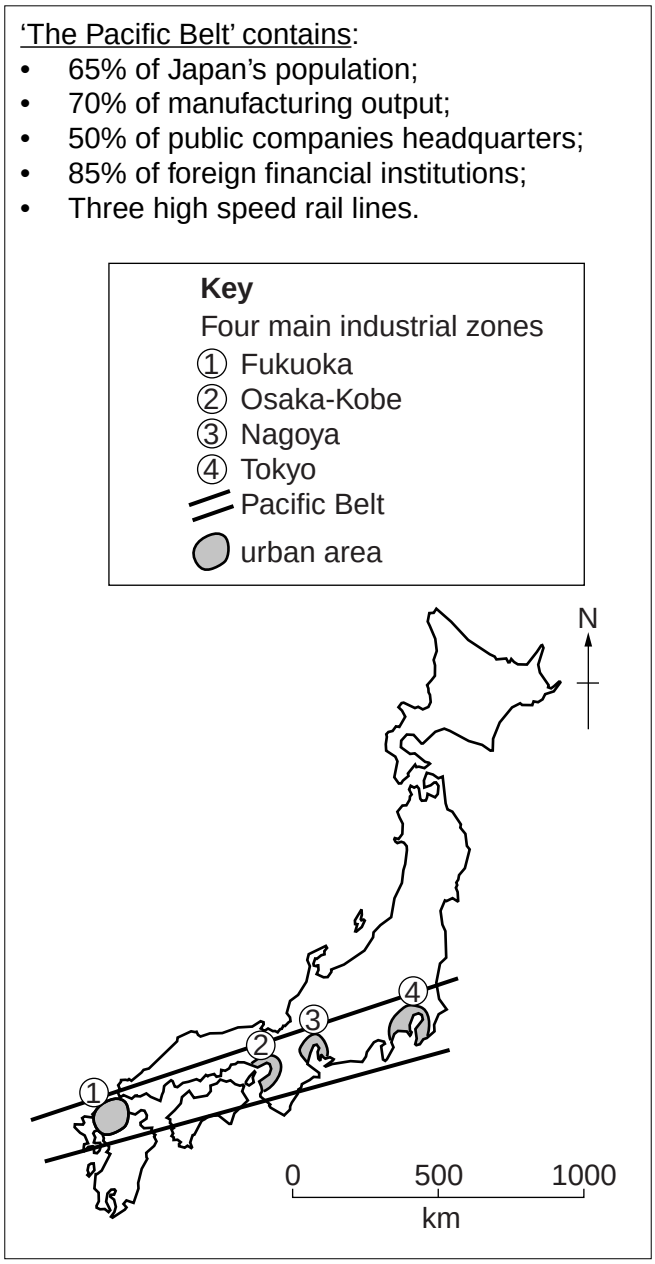

Fig. 7

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(i) Name an industrial zone in the 'Pacific Belt' of Japan.

For Examiner's Use

..... [1]

(ii) Give **two** pieces of evidence from Fig. 7 which suggest that the 'Pacific Belt' is important for Japan's economy.

1 .....

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(iii) Using Fig. 7 only, explain why most of Japan's industry is located in the 'Pacific Belt'.

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(iv) Suggest likely problems for Japan of having most of its industries situated close together.

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(b) Study Fig. 8, information about the Technopolis Programme in Japan.

For Examiner's Use

Technopolis programme

- The 'Technopolis' idea of creating jobs in high technology industries in order to promote regional growth was announced in 1980
- An area chosen as a 'Technopolis' was an area which attracted high-technology industries

Requirements for a Technopolis

- Area of up to 130 000 hectares
- Good industrial sites
- Near to a city with a population of at least 150 000
- Existing university
- Good high-speed transport links

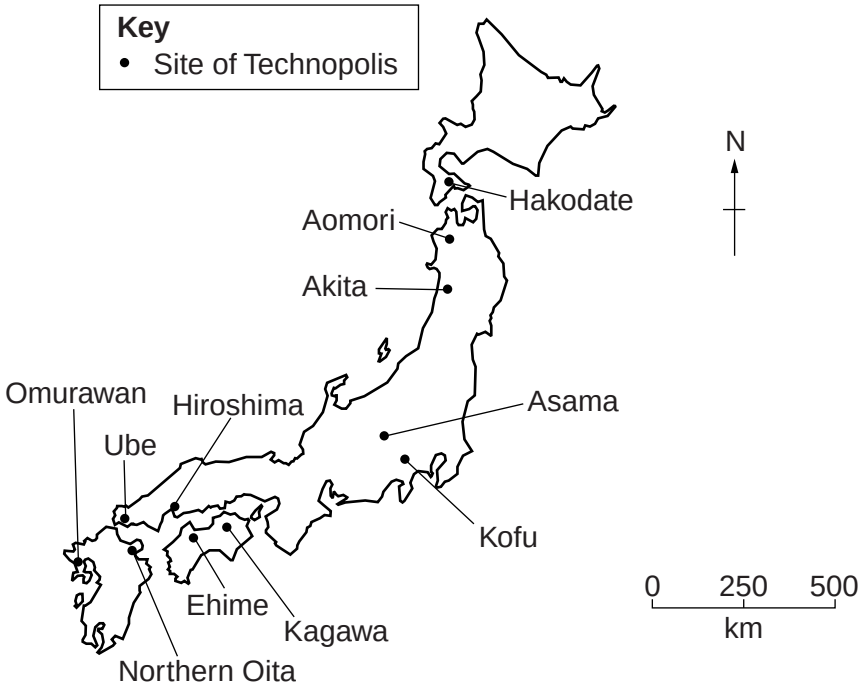

Fig. 8

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For Examiner's Use

(i) Suggest why areas chosen as Technopolis sites needed to be:

- near a city with a population of at least 150 000 people;

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- near a university;

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- in an area with good transport links.

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(ii) Suggest advantages for cities like Hakodate of being chosen as a Technopolis site.

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(c) Explain the causes of global warming. You should include a labelled diagram.

For Examiner's Use

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[Total: 25 marks]

END OF QUESTION 5

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QUESTION 6

For Examiner's Use

(a) Study Fig. 9, which shows information about the Gross Domestic Product (GDP) per person and the percentage of people employed in the primary sector in selected countries.
GDP is a measure of a country's wealth.

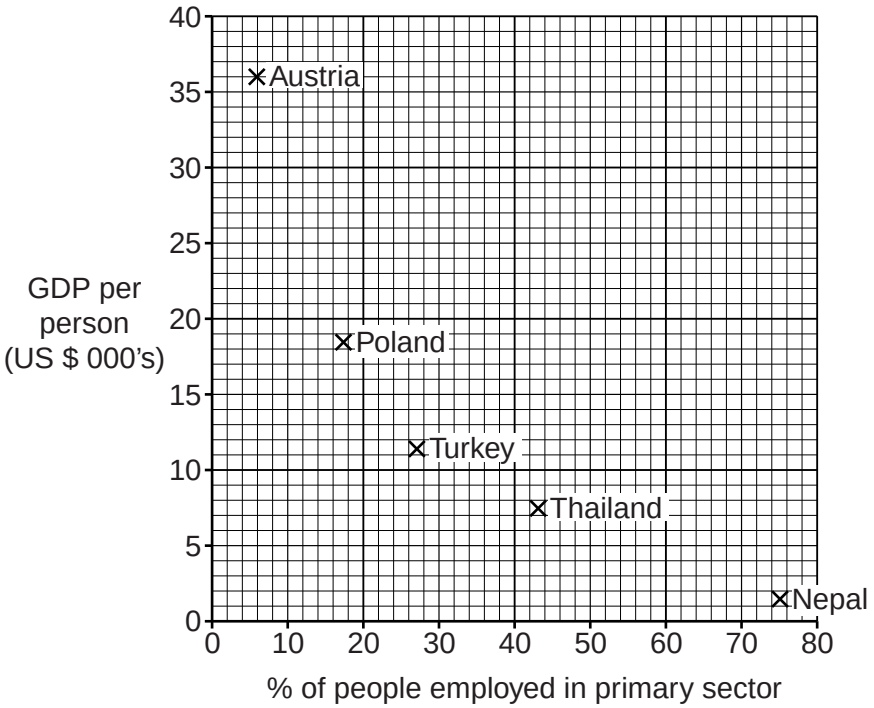

Fig. 9

(i) Give an example of a job in the primary sector.

..... [1]

(ii) Use information from Fig. 9 to show that there is a negative relationship between GDP per person and the percentage of people employed in the primary sector. You should use data in your answer.

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..... [2]

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For Examiner's Use

(iii) Explain why countries with a low GDP per person have a high percentage of people employed in the **primary** sector.

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.....[3]

(iv) Explain why some countries have a large percentage of their population working in the **tertiary** sector.

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.....[4]

(b) Study Photographs E, F and G (Insert), which show an area where tourism has developed in Swaziland (an LEDC in Africa).

(i) Using Photographs E, F and G **only**, identify **three** attractions of Swaziland for tourism.

1 .....

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2 .....

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3 .....

.....[3]

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(ii) Explain how the infrastructure of a country changes as tourism develops.

For Examiner's Use

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(c) For a named area which you have studied, describe the impacts of tourism on the natural environment.

Name of area .....

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[Total: 25 marks]

END OF QUESTION 6

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Additional Page

For Examiner's Use

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