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0460/12

May/June 2012

1 hour 45 minutes

Additional Materials: Ruler

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 1, Photographs D and E for Question 2, and Photographs F and G for Question 3.

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 **28** printed pages and **1** Insert.

QUESTION 1

For
Examiner's
Use

- 1 (a) Study Fig. 1, which shows information about the population density in India (an LEDC).

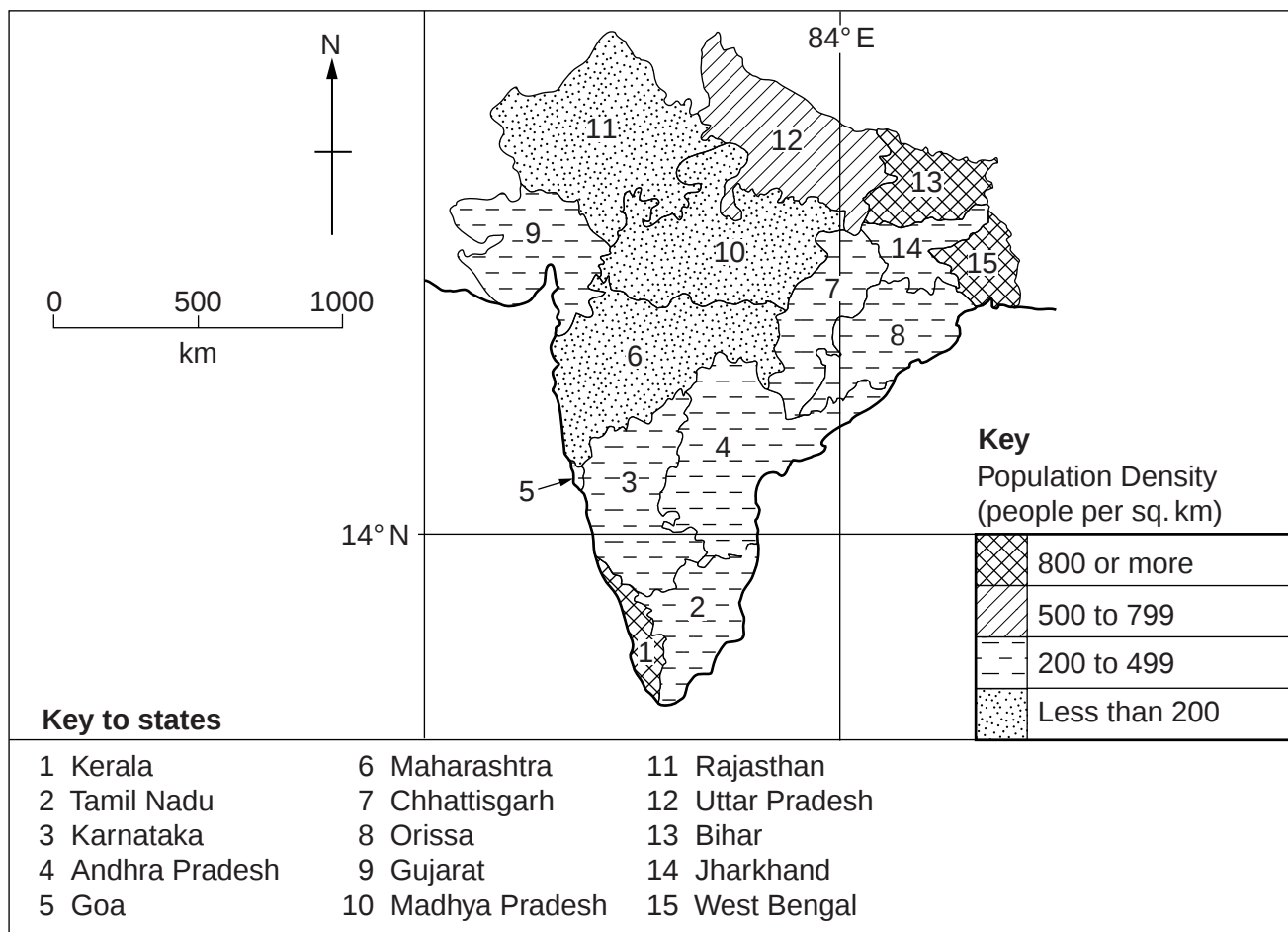


Fig. 1

- (i) Identify a state in India with a population density of 800 people or more per square kilometre.

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[1]

- (ii) The Indian state of Karnataka has a population of 52.73 million (52 730 000) and an area of 191 976 square kilometres. Calculate its population density. Show your calculations.

[2]

- (iii) List the **three** states in India which have the lowest population density.
Describe one similarity in the location of all three of these states.

1

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Similarity in location

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- (iv) Many parts of India are densely populated. Give reasons why both agricultural areas and industrial areas may be densely populated in an LEDC.

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- (b) Study Photographs A, B and C (Insert), which show areas with a low population density.

- (i) Give **one** reason why each of the areas shown are sparsely populated.
You should choose a different reason for each photograph.

Photograph A

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Photograph B

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Photograph C

..... [3]

- (ii) Explain why some towns may grow up in areas which otherwise have a low population density.

For
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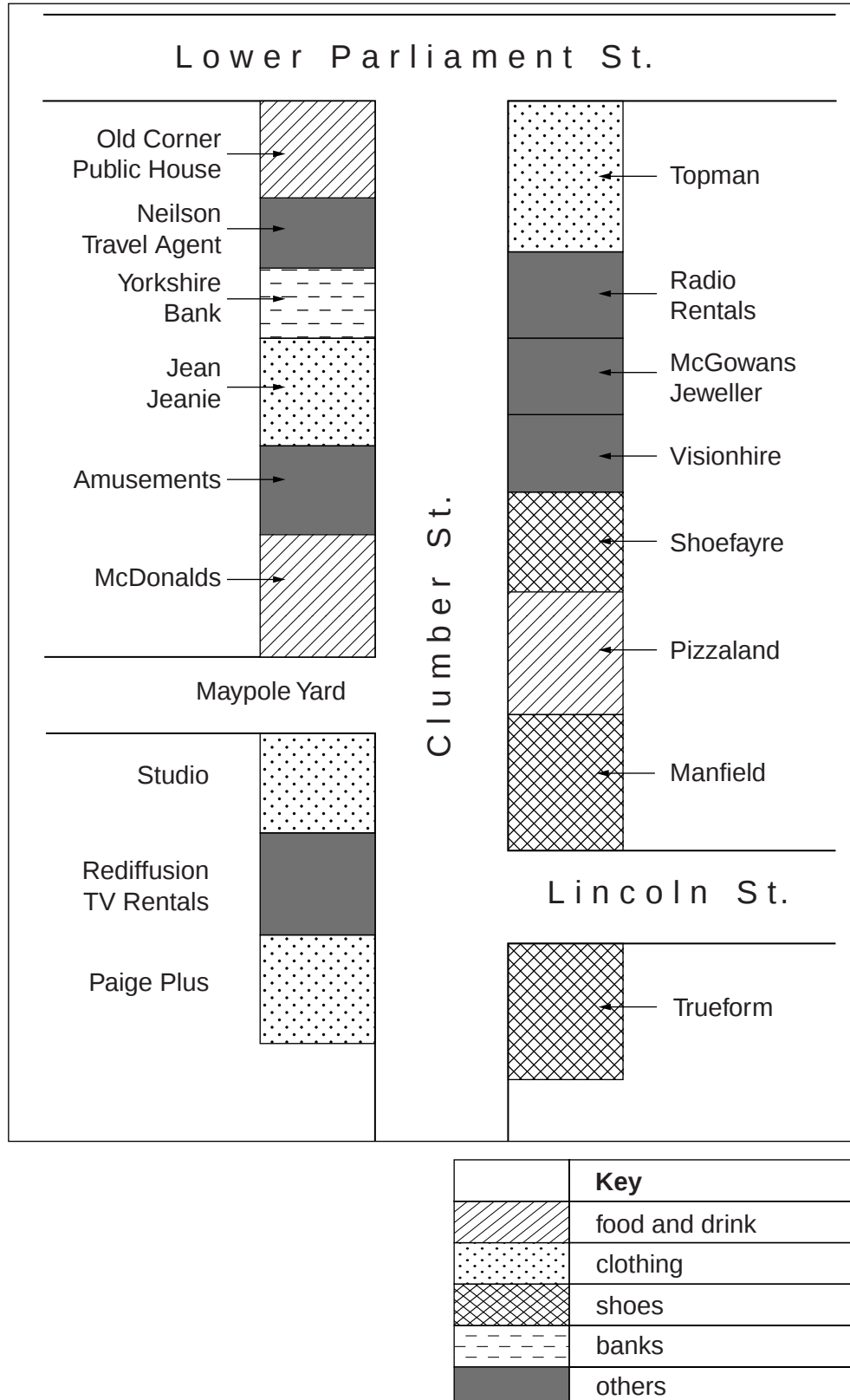
- Name of country

..... [7]

END OF QUESTION 1

QUESTION 2

- 2 (a) Study Figs 2A and 2B, plans which show part of the Central Business District (CBD) of Nottingham, a city in the UK in 1980 and 2010. Also study Photograph D (Insert).

Nottingham CBD (1980)**Fig. 2A**

Nottingham CBD (2010)

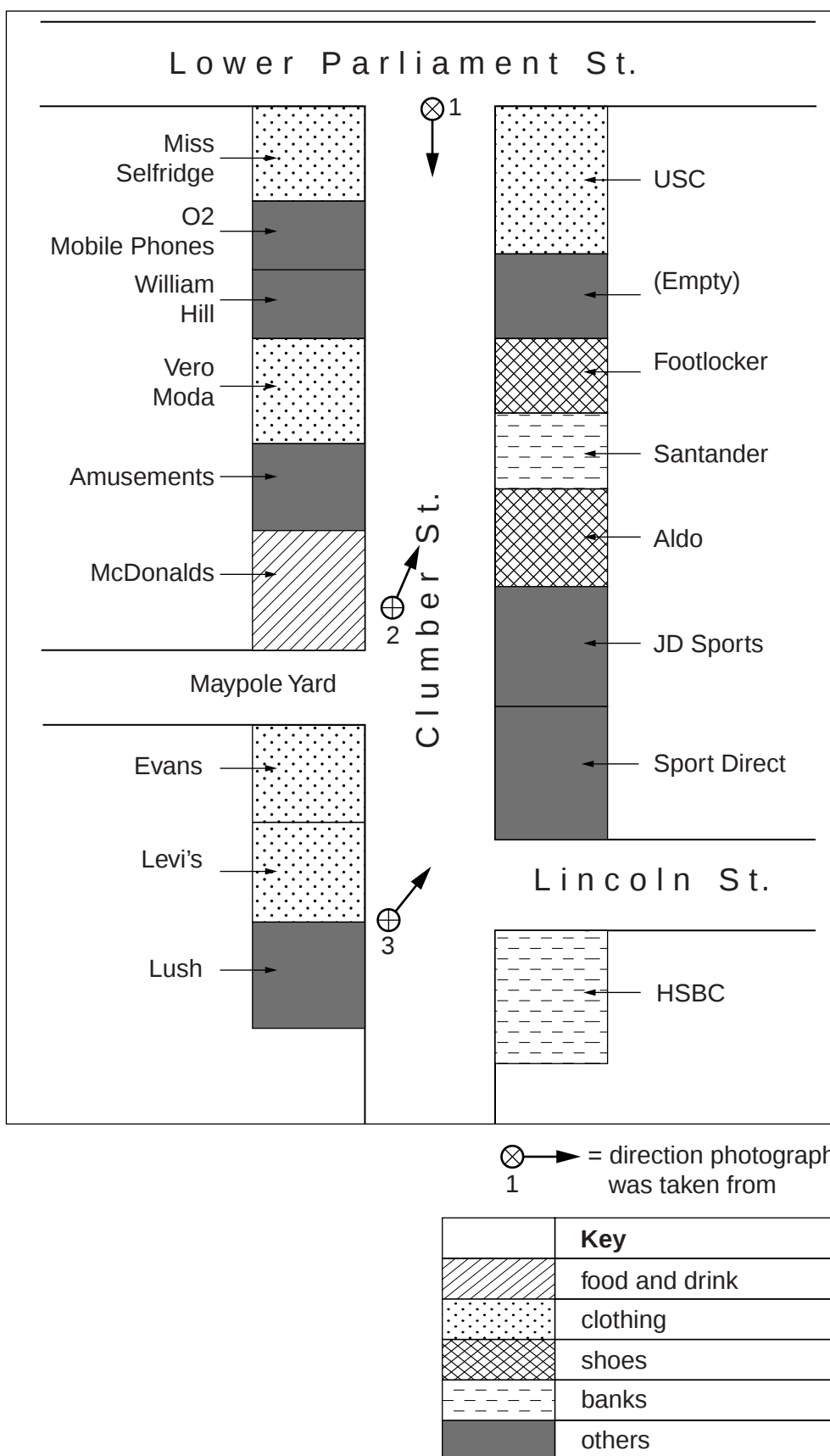
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Examiner's
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Fig. 2B

- (i) Which position on Fig. 2B is Photograph D taken from?
Circle the correct answer below.

1

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[1]

- (ii) Give an example from Fig. 2B of:

A a bank;

B a **type** of shop or service which did not
exist in 1980 but had been opened by 2010.

[2]

- (iii) Give **three** pieces of evidence from Photograph D or Fig. 2B that the area is part of a CBD.

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- (iv) Explain why the CBD of a city has a large sphere of influence.

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- (b) Study Fig. 3, a map of the main transport links in Nottingham, along with Photograph E (Insert) which shows part of the tram line.

For
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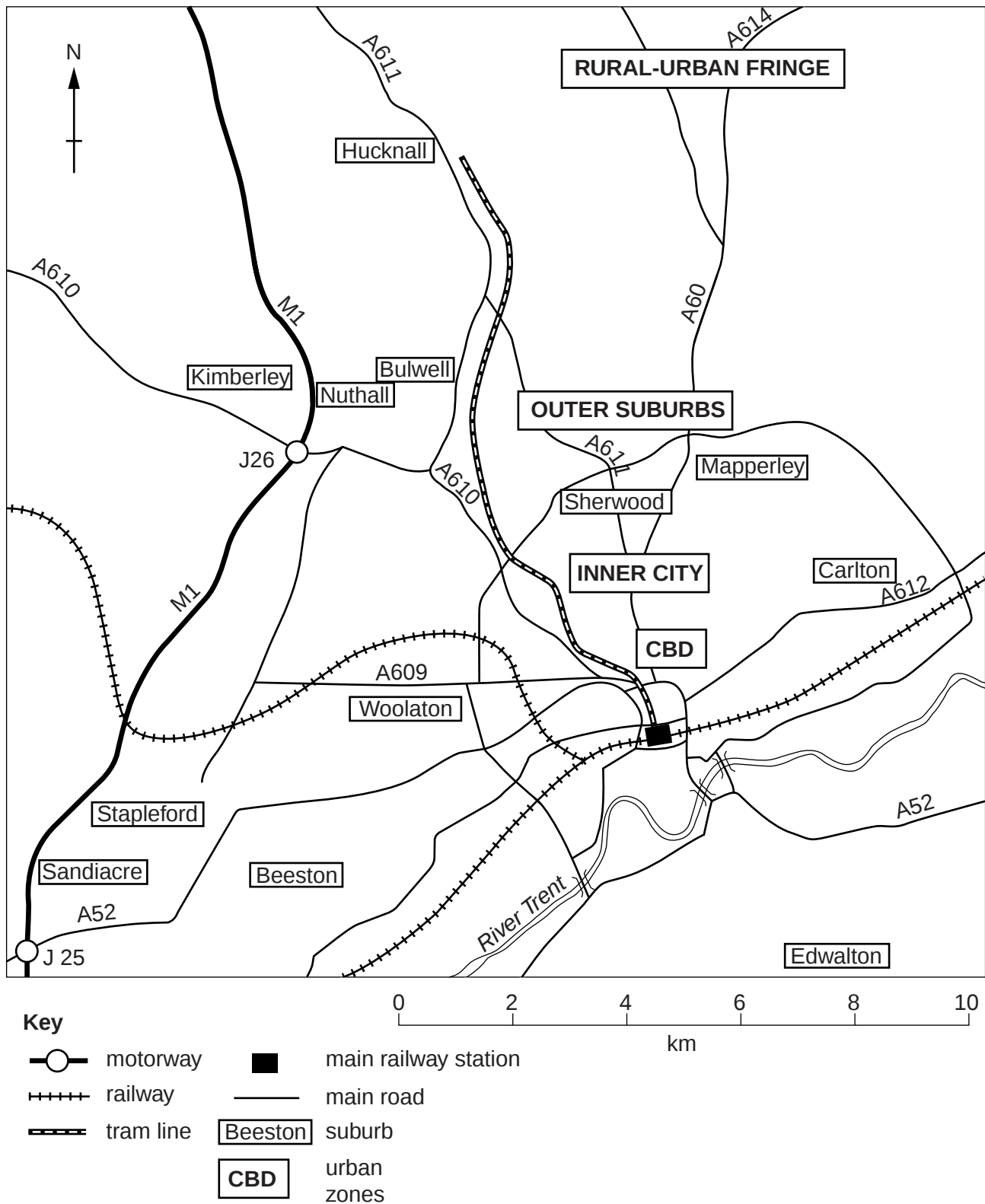


Fig. 3

(i) Describe **three** features of the route of the tram line shown on Fig. 3.

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(ii) Suggest benefits and problems of public transport systems, such as trams, for people who live in cities.

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- Name of town or city

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END OF QUESTION 2

QUESTION 3

3 (a) Study Photograph F (Insert), which shows a river valley.

(i) Describe the shape of the valley shown in Photograph F.

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..... [1]

(ii) Describe **two** features of the river shown in Photograph F.

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(iii) Suggest **three** ways in which the river shown in Photograph F could be carrying out erosion.

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(iv) Name and describe two methods by which rivers transport their load.

Method 1
Description
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Method 2
Description
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- (b) Study Photograph G (Insert), which shows rocks where biological weathering is taking place.

For
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- (i) Describe how biological weathering has occurred in the area shown.

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- (ii) Explain why biological and chemical weathering are rapid in areas which are hot and wet.

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- (c) Describe and explain the process of freeze-thaw weathering.
Include fully labelled diagrams.

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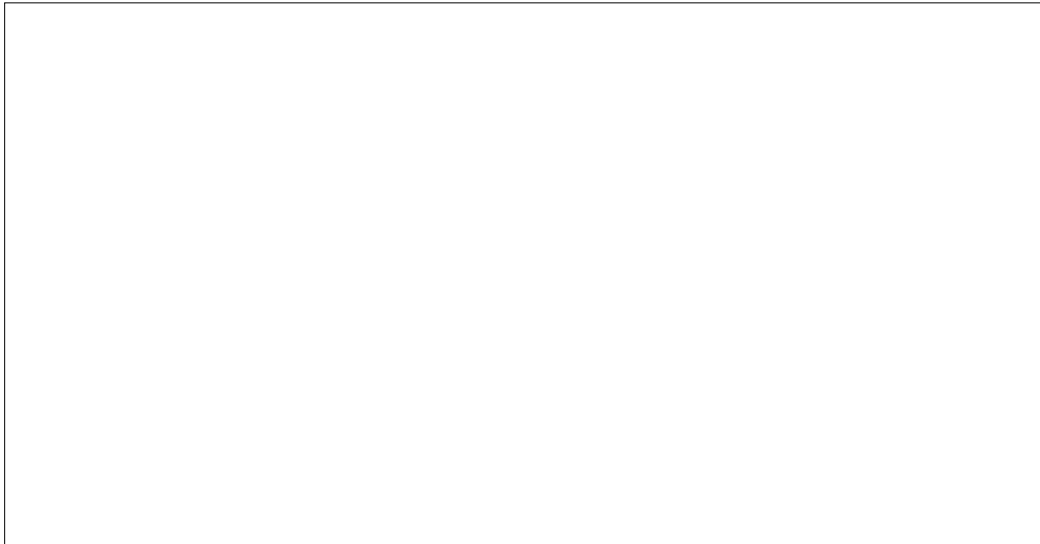
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[7]

[Total: 25 marks]

END OF QUESTION 3

QUESTION 4

4 (a) Study Fig. 4, which shows an area of tropical rainforest.

For
Examiner's
Use



Fig. 4

- (i) To what height do the tallest trees grow? metres [1]
- (ii) Identify **two** pieces of evidence of human activity in the area of tropical rainforest shown in Fig. 4.
- 1 [2]
- 2 [2]
- (iii) Describe **three** characteristics of tropical rainforest vegetation.
- 1 [3]
- 2 [3]
- 3 [3]

- (iv) Explain how the vegetation has adapted to the tropical rainforest climate.

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- (b) Study Fig. 5, a flow diagram showing processes which take place in a tropical rainforest.

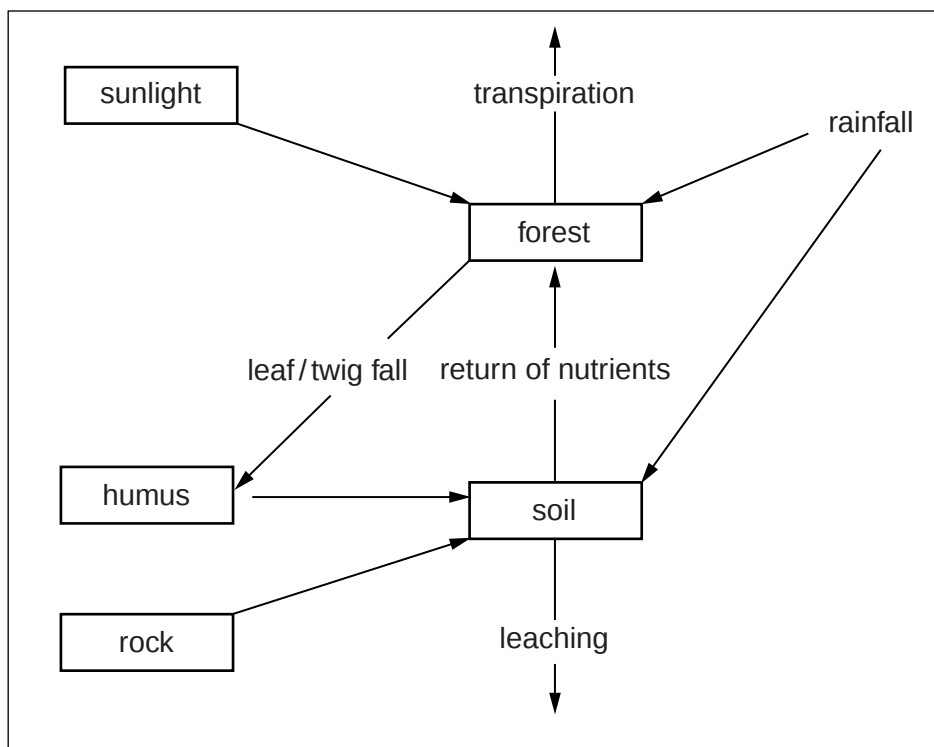


Fig. 5

- (i) Explain how nutrients are cycled in a tropical rainforest ecosystem.

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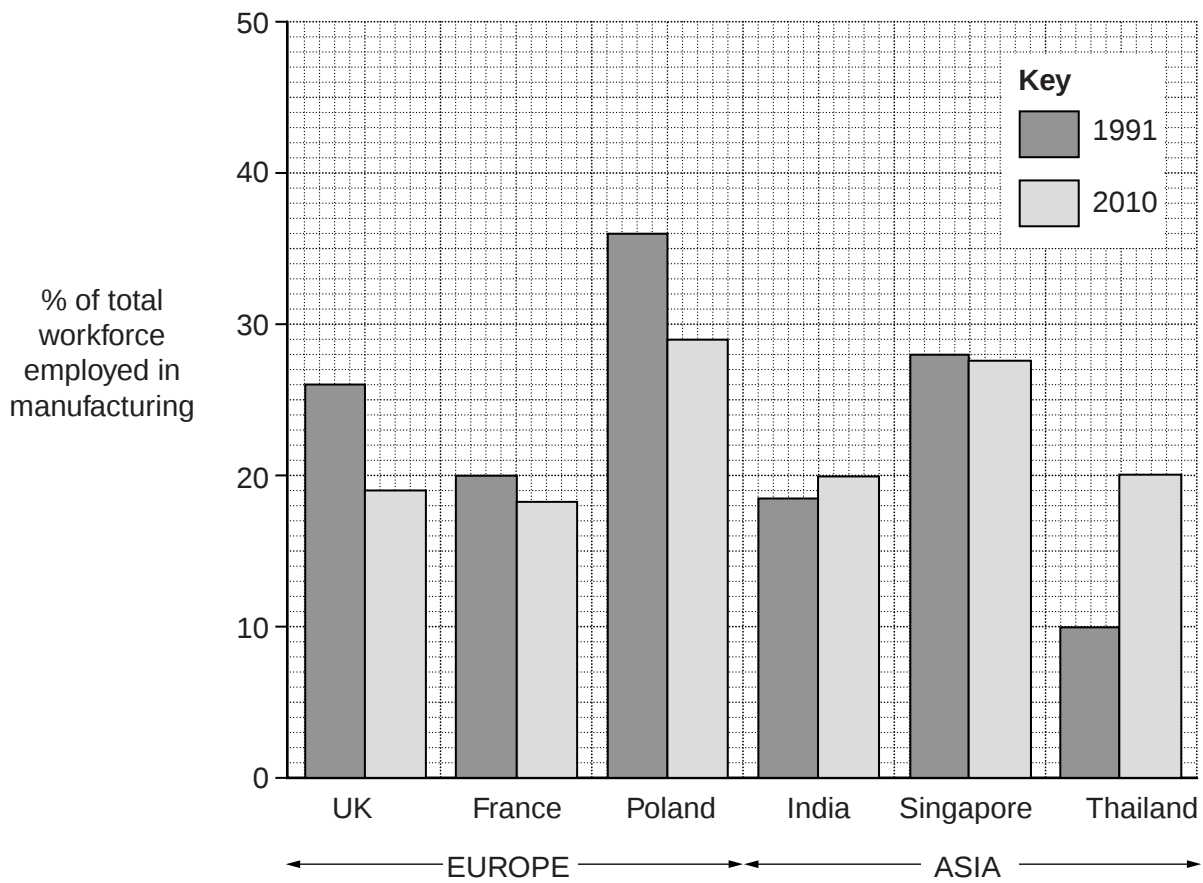
- Area of tropical rainforest

..... [7

END OF QUESTION 4

QUESTION 5

- 5 (a) Study Fig. 6, which shows information about employment in manufacturing industry in selected countries in Europe and Asia in 1991 and 2010.

**Fig. 6**

- (i) What was the percentage of the total workforce employed in manufacturing industry in the UK in 1991?% [1]
- (ii) Using Fig. 6, identify:
- A** the country with the highest percentage of the workforce employed in manufacturing industry in 1991;
- B** the country where the percentage of the workforce employed in manufacturing industry changed by the smallest amount between 1991 and 2010. [2]

- (iii) Compare the changes which have taken place in employment in manufacturing industry between 1991 and 2010 in Europe and Asia. Suggest reasons for these changes.

For
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- (b) Study Figs 7A, 7B and 7C, which show information about Nigeria.

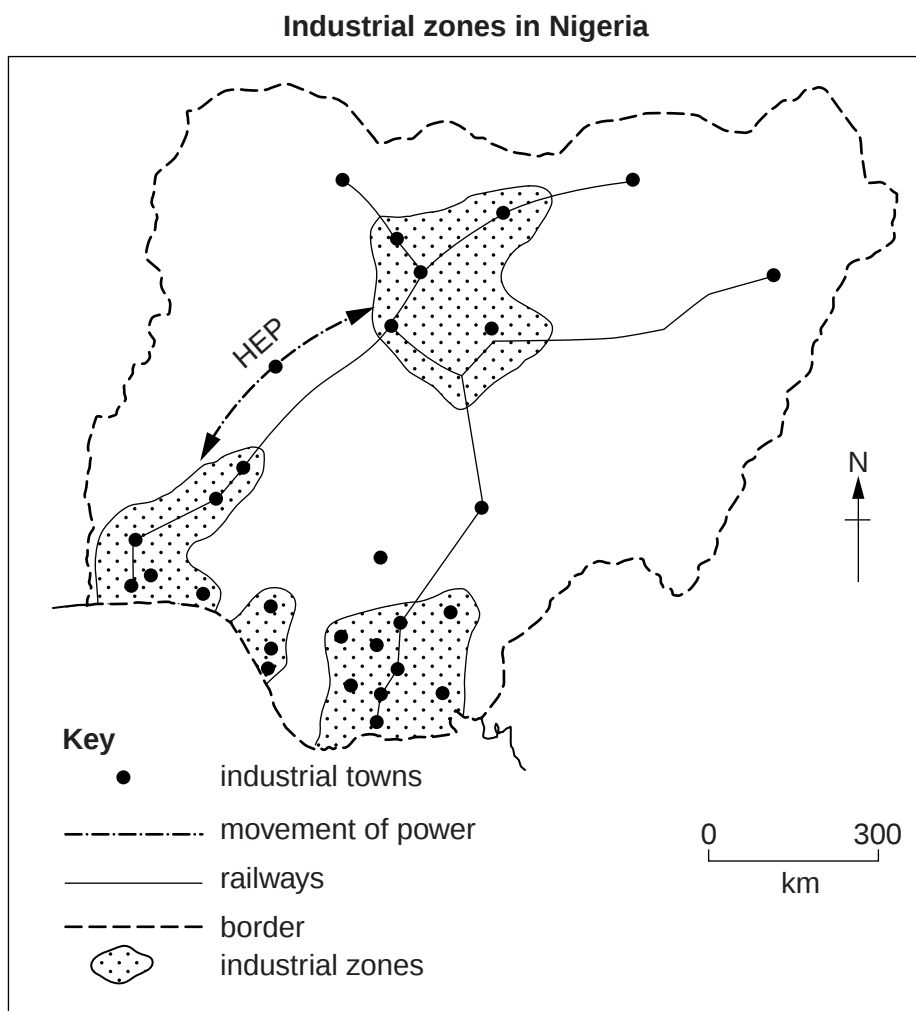


Fig. 7A

Population distribution and urban population in Nigeria

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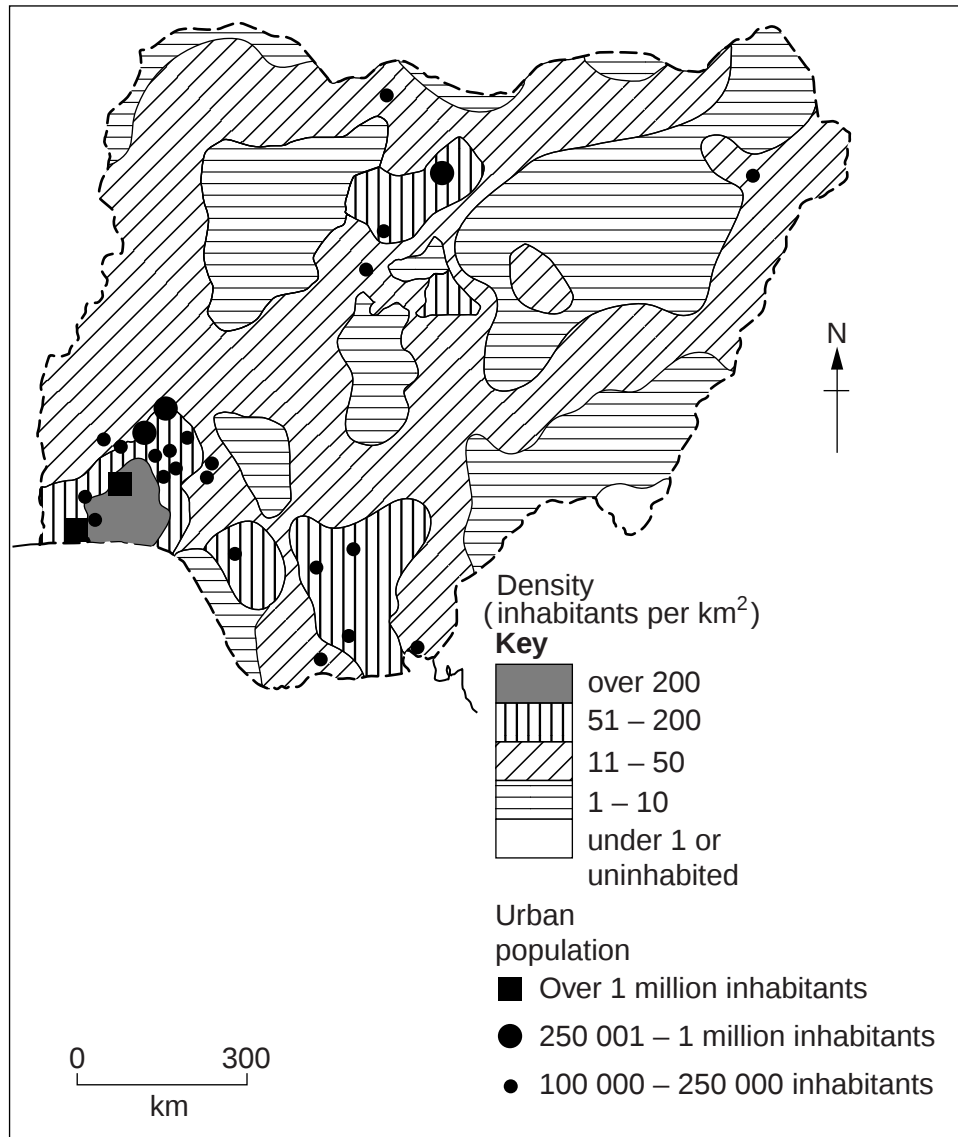


Fig. 7B

Road network in Nigeria

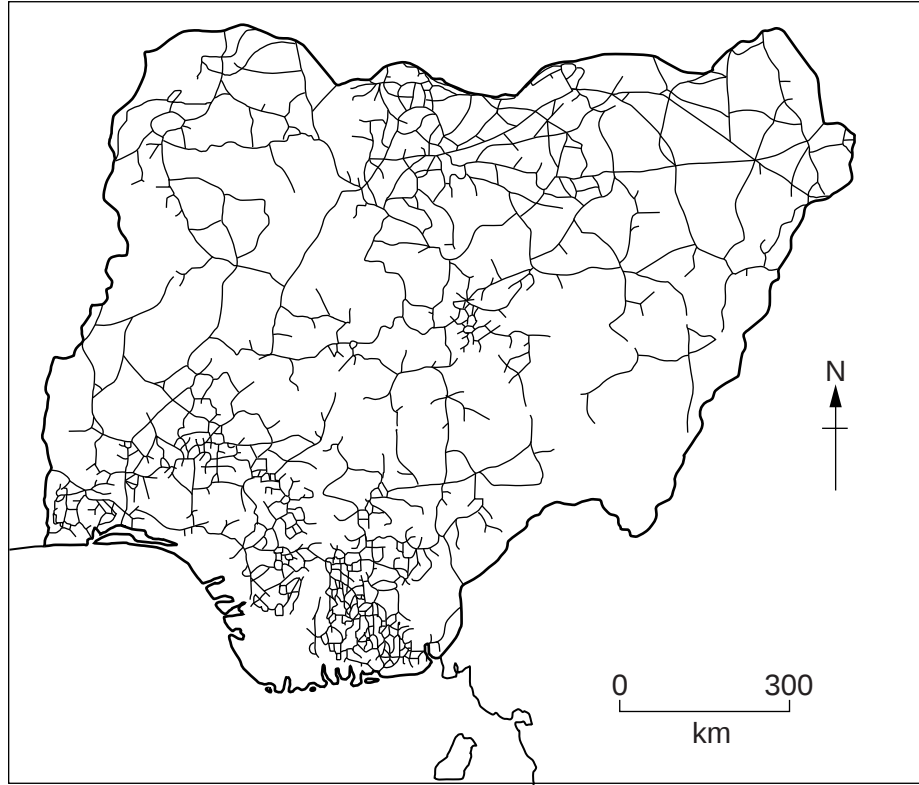


Fig. 7C

- (i) Use Fig. 7A to describe the distribution of industrial zones in Nigeria.

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- (ii) Using Figs 7B and 7C **only**, suggest reasons for the distribution of the industrial zones in Nigeria which are shown in Fig. 7A.

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- (iii) Describe the advantages and disadvantages for **people** of living in industrial zones.

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- Name of area

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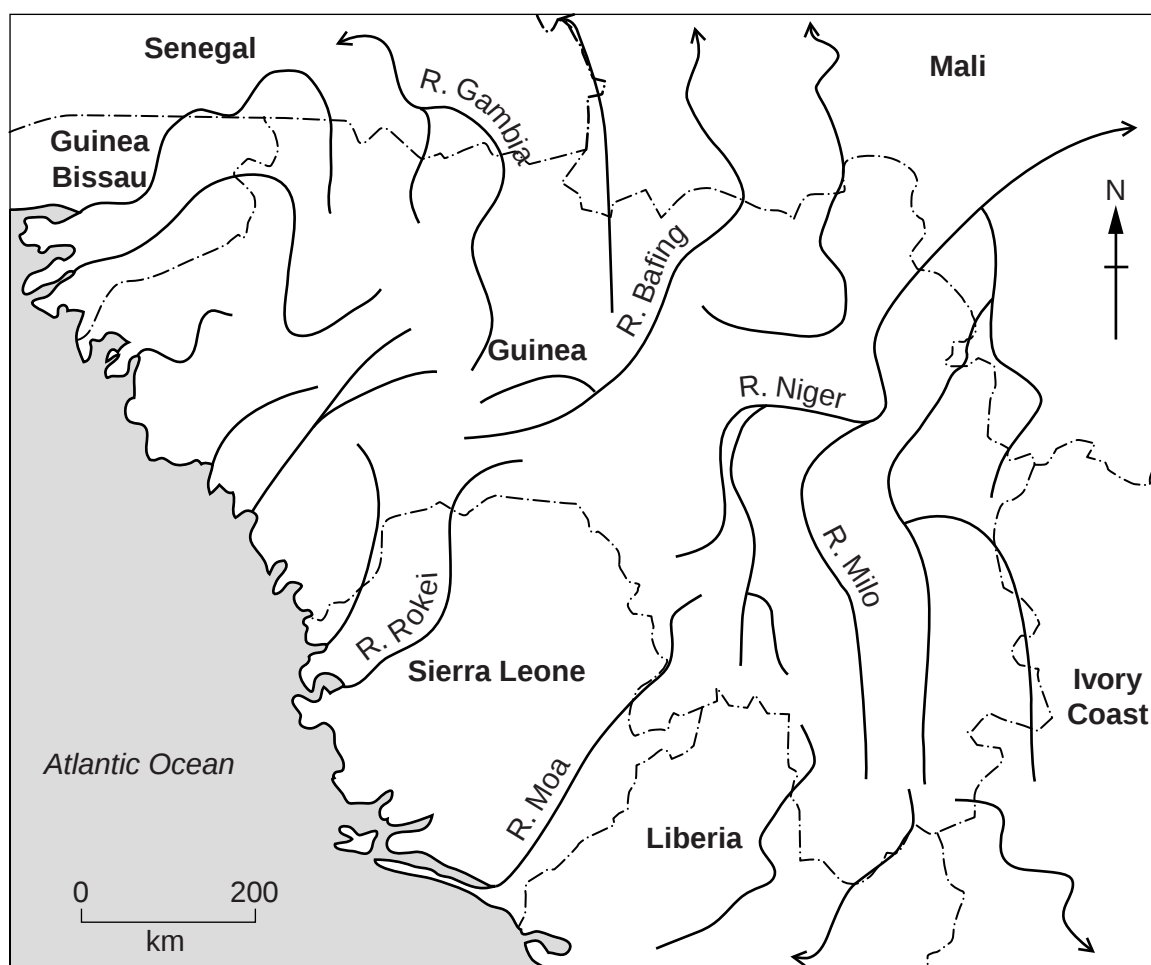
[Total: 25 marks]

END OF QUESTION 5

QUESTION 6

- 6 (a) Study Fig. 8, which shows information about rivers in Guinea, an LEDC in West Africa. Much of the water used in Guinea is obtained from the rivers shown on Fig. 8.

For
Examiner's
Use



Key

- international boundary
 ← river

Fig. 8

- (i) Name a river which has its source in Guinea but flows to the sea through Sierra Leone.

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[1]

- (ii) Suggest **two** reasons why conflicts may occur when a river flows through more than one country.

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[2]

- (iii) Explain how improving the water supply in LEDCs, such as Guinea, is likely to improve the quality of life.

For
Examiner's
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- (b) Study Figs 9A and 9B, which show information about the River Ebro in Spain (an MEDC in Europe).

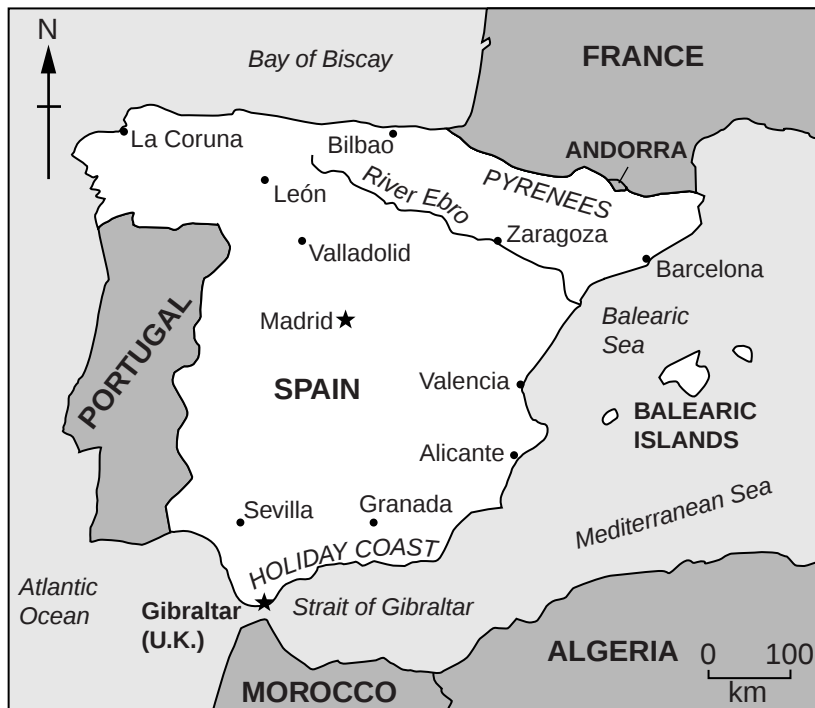


Fig. 9A

EBRO RIVER PROJECT TO SOLVE SOUTHERN SPAIN'S WATER PROBLEMS

In the late 1990s plans were drawn up to transfer large amounts of water each year from the Ebro River basin in Spain's rainy north to its dry south. The Ebro Transfer, a network of dams and pipes, would send water to Granada and the southern holiday coast.

Fig. 9B

- (i) Explain why the Ebro River Project was planned.

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- (ii) Describe other methods which can be used to supply more water to areas which need it.

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- (iii) Explain how water can be used in a sustainable way.

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- Name of area or country

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END OF QUESTION 6

Additional Page

If you used the following lines to complete the answer(s) to any question(s), the question number(s) must be clearly shown.

For
Examiner's
Use

This image shows a full page of a worksheet designed for handwriting practice. It features 20 evenly spaced, horizontal dashed lines across the entire width of the page. The background is plain white, providing a clear guide for letter height and placement. There are no margins, text, or other markings present.

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