DRAFT SPECIMEN MATERIAL

GCSE
GEOGRAPHY

Paper 2 Challenges in the human environment

Specimen 2015 Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
- a pencil
- a ruler.

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the bottom of this page.
- Answer **all** questions in Section A and Section B.
- Answer Question 3 and **one** other question in Section C.
- You must answer the questions on the spaces provided. Do **not** write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The total number of marks available for this paper is 88.
- Spelling, punctuation, grammar and specialist terminology will be assessed in Question 01.8.

Advice
For the multiple-choice questions, completely fill in the circle alongside the appropriate answer(s).

CORRECT METHOD ● WRONG METHODS

If you want to change your answer you must cross out your original answer as shown.

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

Please write clearly, in block capitals, to allow character computer recognition.

Centre number ☐☐☐☐☐ Candidate number ☐☐☐☐

Surname

Forename(s)

Candidate signature _____

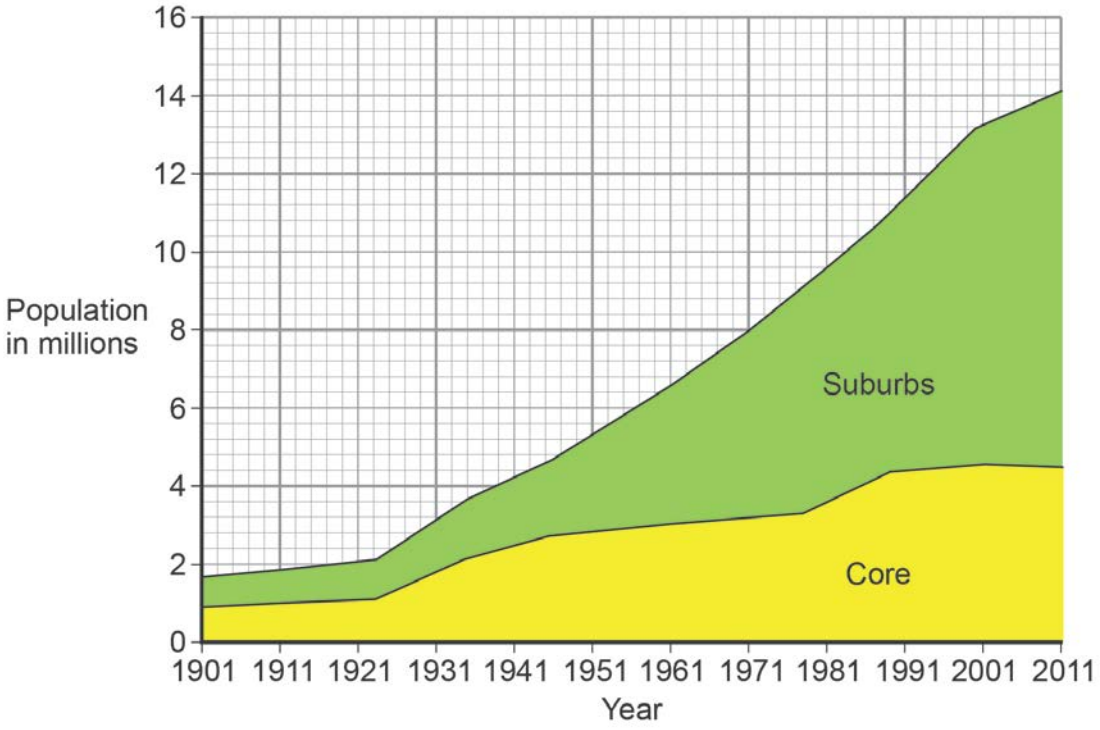
Section A Urban issues and challenges

Answer **all** questions in this section.

Question 1 Urban issues and challenges

Study **Figure 1**, a graph showing the population of Kolkata from 1901 to 2011. Kolkata is a city in India.

Figure 1



The core is the central part of the city, including the Central Business District (CBD). The suburbs are residential areas on the outskirts of the city.

0 1 . 1 Using **Figure 1**, which **two** of the following statements are true? Shade **two** circles only.

A The population of the core grew fastest between 1991 and 2011. ⬭

B The population of the suburbs grew more rapidly than the core between 1931 and 2011. ⬭

C The population of the suburbs was approximately 2 million in 1931. ⬭

D The total population of Kolkata, including its suburbs, was just over 14 million in 2011. ⬭

E The total population of Kolkata, including its suburbs, was over 10 times greater in 2011 than in 1901. ⬭

[2 marks]

0 1 . 2 Suggest how the following factors have led to population growth in Kolkata.

[2 marks]

1 Natural increase:

_____

_____

2 Migration:

_____

_____

Question 1 continues on the next page.

Study **Figure 2**, a photograph showing part of a squatter settlement on the edge of Kolkata.

Figure 2

0 1 . 3 Suggest **two** problems of living in this part of Kolkata.

Use evidence from **Figure 2**.

[2 marks]

Problem 1: _____

_____

Problem 2: _____

_____

0 1 . 4 Describe how urban areas provide opportunities for people.

Use a case study of a city in a lower income country (LIC) or a newly emerging economy (NEE).

[6 marks]

Question 1 continues on the next page

Study **Figure 3**, a 1:50 000 map of Dundee, a city in Scotland.

Figure 3

0 1 . 5 Which grid square shows part of the rural–urban fringe of Dundee? Shade **one** circle only.

A 3630 ⬭

B 3833 ⬭

C 3930 ⬭

D 3934 ⬭

[1 mark]

0 1 . 6 Describe the effects of urban sprawl on people and the environment.

Use **Figure 3** and a case study of a major city in the UK.

[6 marks]

Question 1 continues on the next page

0 1 . 7 Identify **two** problems caused by traffic congestion.

[2 marks]

Problem 1: _____

_____

Problem 2: _____

_____

Study **Figure 4**, photographs showing four methods of reducing traffic problems in urban areas.

Figure 4

0 1 . 8 Explain how traffic congestion is being reduced in urban areas.

Use **Figure 4** and an example you have studied.

[9 marks]
[+ 3 SPGST marks]

End of Section A

Turn over for Section B

Section B The changing economic world

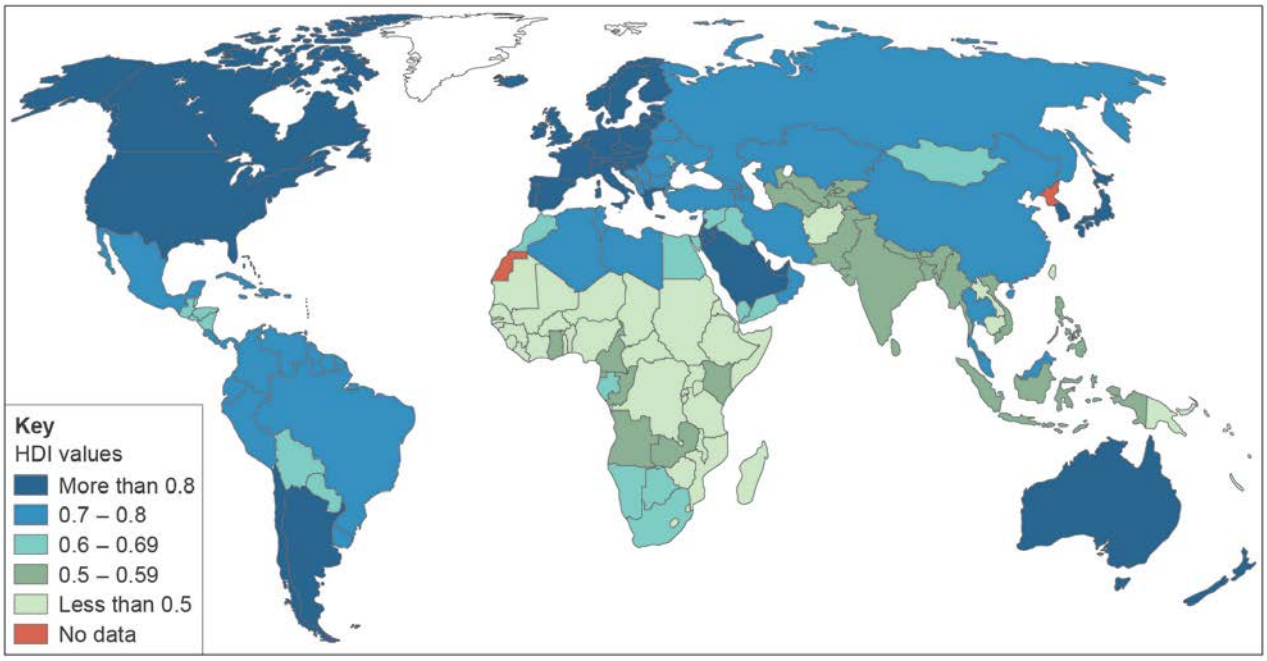
Answer **all** questions in this section.

Question 2 The changing economic world

Study **Figure 5,** a world map showing the global distribution of Human Development Index (HDI) values.

HDI combines data on life expectancy, educational levels and income, with values ranging from 0 (worst) to 1 (best).

Figure 5



0 2 . 1 Using **Figure 5**, compare HDI values in Africa and South America.

[2 marks]

0 2 . 2 Outline **one** disadvantage of using a single measure of development such as income.

[2 marks]

Study **Figure 6**, a table showing two indicators of development for some countries.

Figure 6

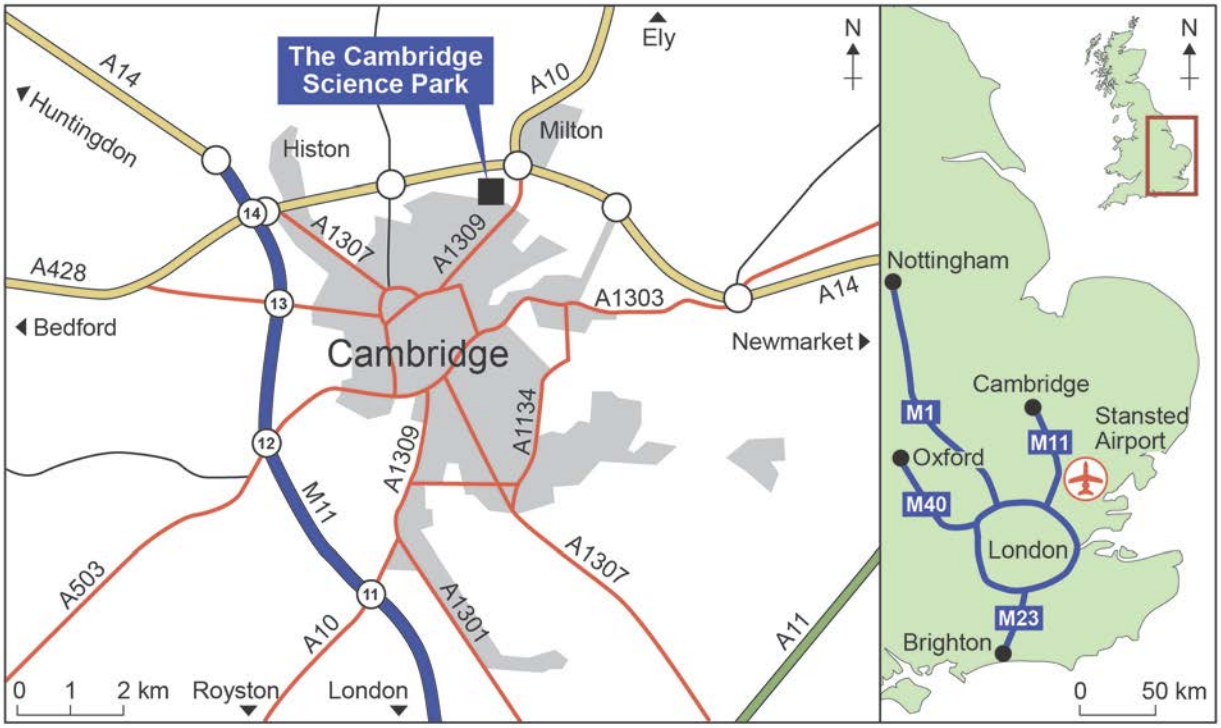
Country	Indicator of development	
	Life expectancy (years)	**Adult literacy rate (%)**
Nigeria	52	61
Russian Federation	70	99
China	75	95
India	66	63
Afghanistan	61	28
Sierra Leone	45	43
Italy	83	99
Egypt	71	74

0 2 . 3 Using **Figure 6**, explain why these two indicators are useful measures of development.
[4 marks]

Question 2 continues on the next page

Study **Figure 7**, maps showing the location of the Cambridge Science Park in the UK.

Figure 7



0 2 . 4 Using **Figure 7**, measure the direct distance between the Cambridge Science Park and junction 14 of the M11.

[1 mark]

_____ km

0 2 . 5 Using **Figure 7**, explain the advantages of this location for the Cambridge Science Park.

[4 marks]

_____

_____

_____

_____

_____

_____

_____

_____

0 2 . 6 Give **two** reasons why there has been a growth in the number of science parks in the UK.

[2 marks]

Reason 1: _____

_____

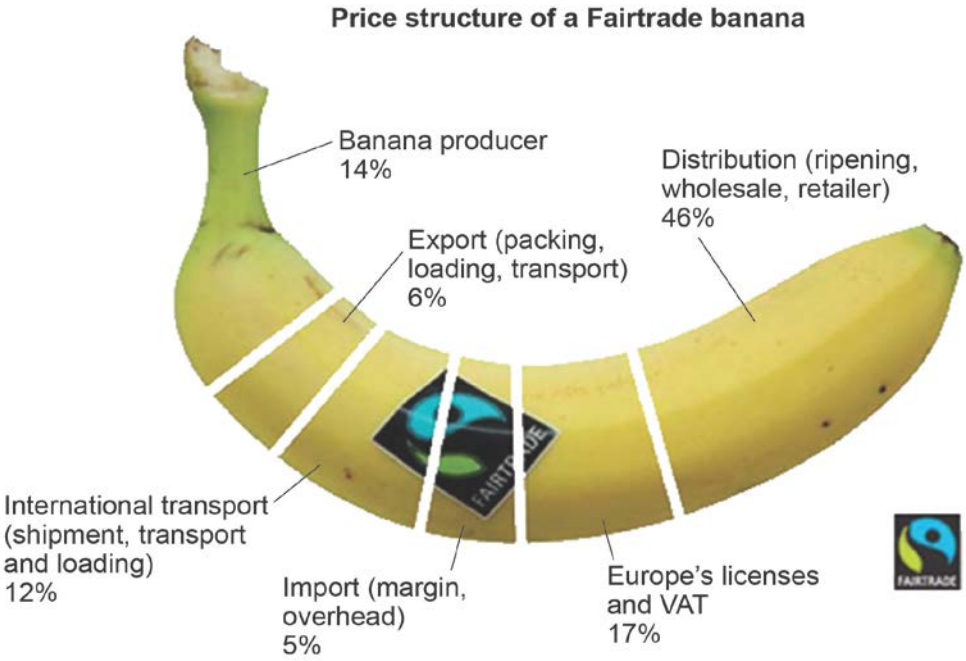
Reason 2: _____

_____

Question 2 continues on the next page

Study **Figure 8**, information about Fairtrade bananas.

Figure 8



Retail sales value of Fairtrade bananas in the UK					
Year	2000	2003	2006	2009	2012
Retail sales value (£ millions)	8.1	24.3	65.6	215.5	242.5

0 2 . 7 Using **Figure 8**:

[2 marks]

- compare the percentage of the price received by the Fairtrade banana producer with that of a non-Fairtrade banana producer

- calculate the increase in retail sales value of Fairtrade bananas between 2000 and 2012.

0 2 . 8 Outline **one** way that Fairtrade helps to deal with the problems of unequal development.

[2 marks]

0 2 . 9 Suggest **one** reason why Fairtrade schemes are not always successful.

[2 marks]

Question 2 continues on the next page

0 2 . 10 Discuss the advantages and disadvantages of transnational corporations (TNCs) for **one** lower income country (LIC) or newly emerging economy (NEE).

[9 marks]

End of Section B

Turn over for Section C

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ANSWER IN THE SPACES PROVIDED

Section C The challenge of resource management

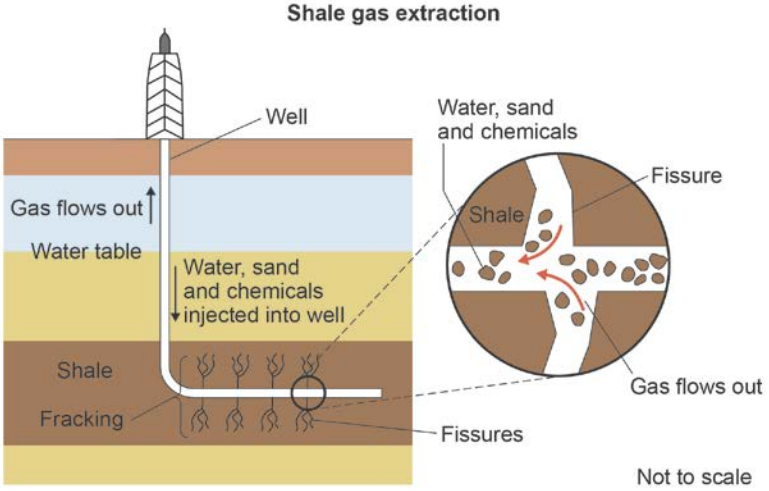
Answer Question 3 and **either** Question 4 **or** Question 5 **or** Question 6.

Question 3 The challenge of resource management

Study **Figures 9** and **10,** information about fracking for gas in the UK.

Figure 9

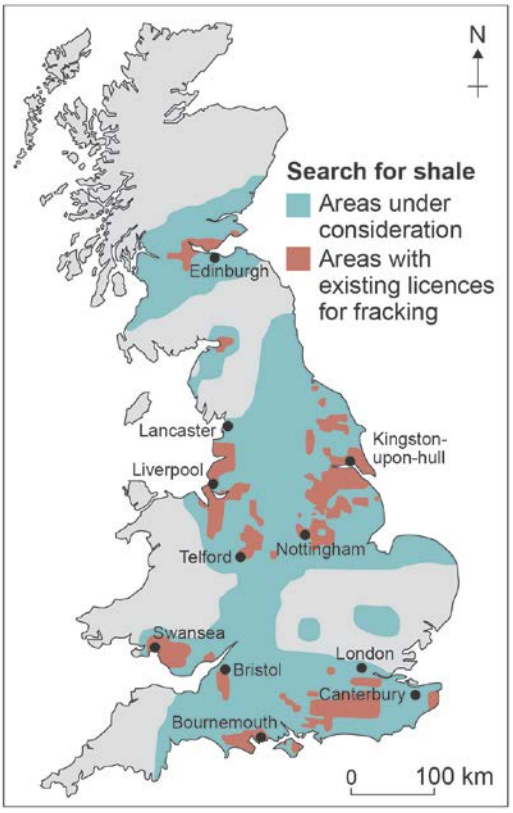
Shale gas extraction



Fracking or fracturing uses high-pressure water mixed with chemicals to shatter shale rocks and release natural gas. The gas is then piped to the surface.

Fracking uses massive amounts of water and may create environmental concerns including the possibility of contaminated groundwater, polluted drinking water, air pollution and minor earth tremors.

Figure 10



0 3 . 1 Suggest **one** reason for the development of fracking in the UK.

[1 mark]

0 3 . 2 Using **Figure 10**, describe the distribution of areas with existing licences for fracking in the UK.

[2 marks]

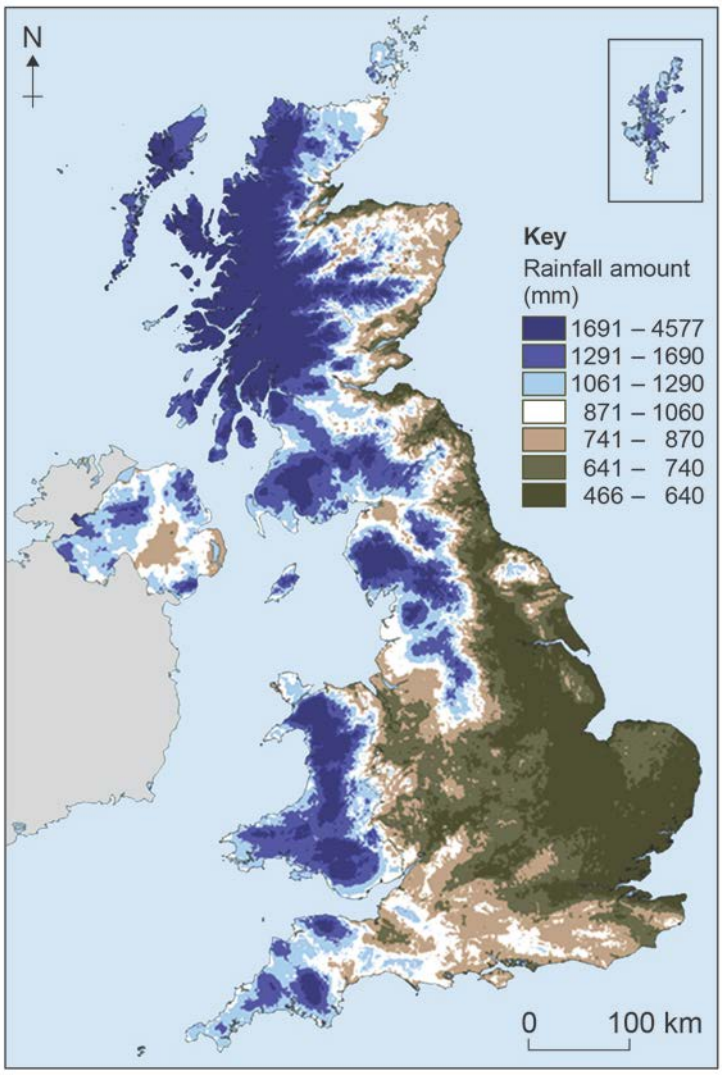
0 3 . 3 With the help of **Figures 9** and **10**, explain why the process of fracking for gas causes conflict between different groups of people.

[6 marks]

Question 3 continues on the next page

Study **Figure 11**, a map showing average annual rainfall in the UK.

Figure 11



0 3 . 4 Using **Figure 11**, which **two** of the following statements are true? Shade **two** circles only.

A Annual rainfall is high (over 1060 mm) across the whole of Wales and south west England. ⬭

B Annual rainfall tends to increase from north west to south east across the UK. ⬭

C Large parts of eastern England have annual rainfall below 640 mm. ⬭

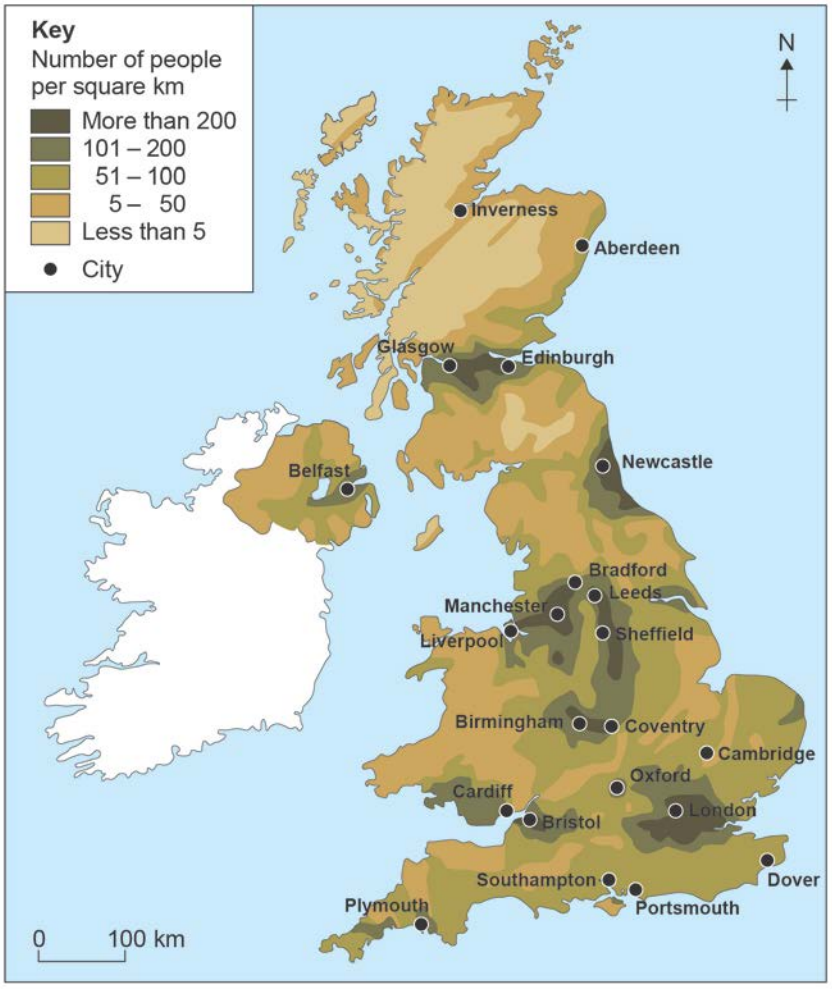
D The driest part of the UK is along the south coast of England. ⬭

E The largest area with high annual rainfall (over 1290 mm) is in north and west Scotland. ⬭

[2 marks]

Study **Figure 12**, a map showing population density in the UK.

Figure 12



0 3 . 5 Using **Figures 11** and **12**, explain why water is transferred from one part of the UK to another.

[3 marks]

Answer **either** Question 4 **or** Question 5 **or** Question 6.

Shade the circle below to indicate which optional question you will answer.

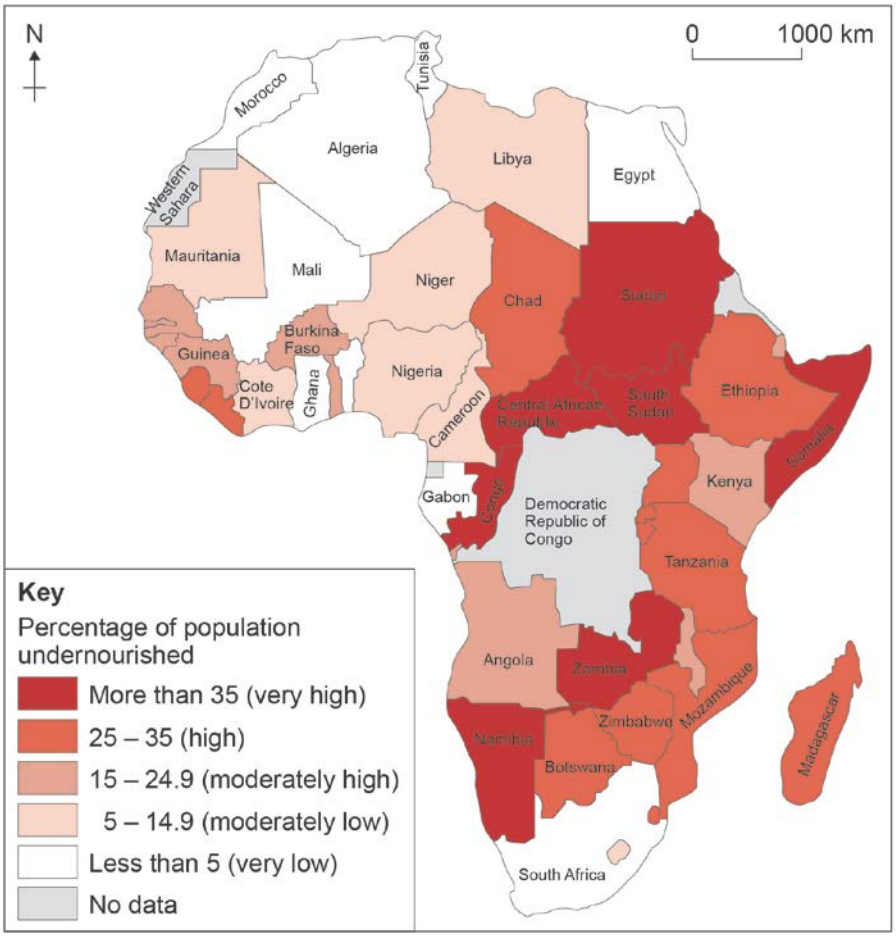
Question 0 4 ⬭ Question 0 5 ⬭ Question 0 6 ⬭

CORRECT METHOD ⬬ WRONG METHODS

Question 4 Food resources

Study **Figure 13**, a map showing the percentage of population that was undernourished in Africa in 2014.

Figure 13



0 4 . 1 What percentage of the population in Chad was undernourished in 2014? Shade **one** circle only.

A 5–14.9% ⬭

B 15–24.9% ⬭

C 25–35% ⬭

D More than 35% ⬭

[1 mark]

0 4 . 2 Using **Figure 13**, describe the distribution of countries in Africa where there are high and very high levels of undernourishment.

[2 marks]

0 4 . 3 Give **two** causes of food insecurity.

[2 marks]

Cause 1:

Cause 2:

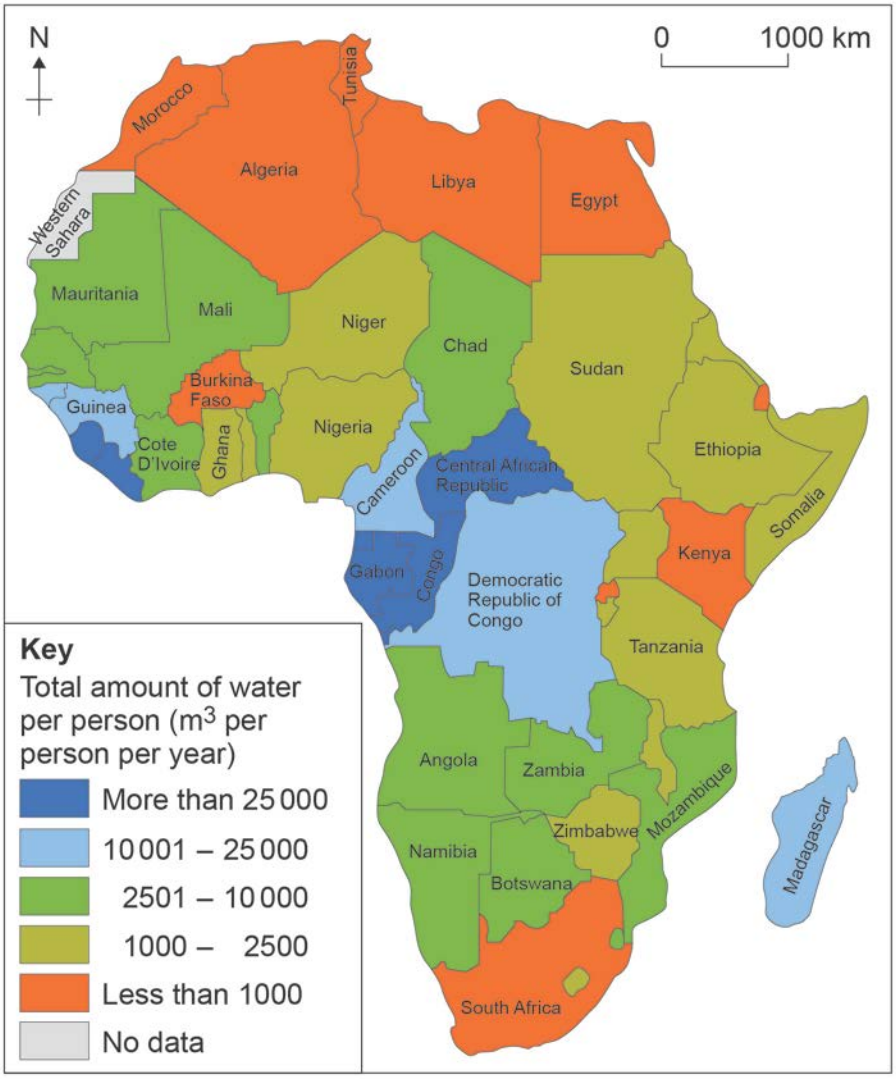
0 4 . 4 Explain how food security can be improved.

[6 marks]

Question 5 Water resources

Study **Figure 14**, a map showing the total amount of water available per person in Africa in 2010.

Figure 14



0 5 . 1 What was the total amount of water per person in Ethiopia in 2010? Shade **one** circle only.

A Less than 1000 cubic metres per person per year ⬭

B 1000–2500 cubic metres per person per year ⬭

C 2501–10 000 cubic metres per person per year ⬭

D 10 001–25 000 cubic metres per person per year ⬭

[1 mark]

0 5 . 2 Using **Figure 14**, describe the distribution of countries in Africa where there was less than 1000 cubic metres of water per person per year in 2010.

[2 marks]

0 5 . 3 Give **two** causes of water insecurity.

[2 marks]

Cause 1:

Cause 2:

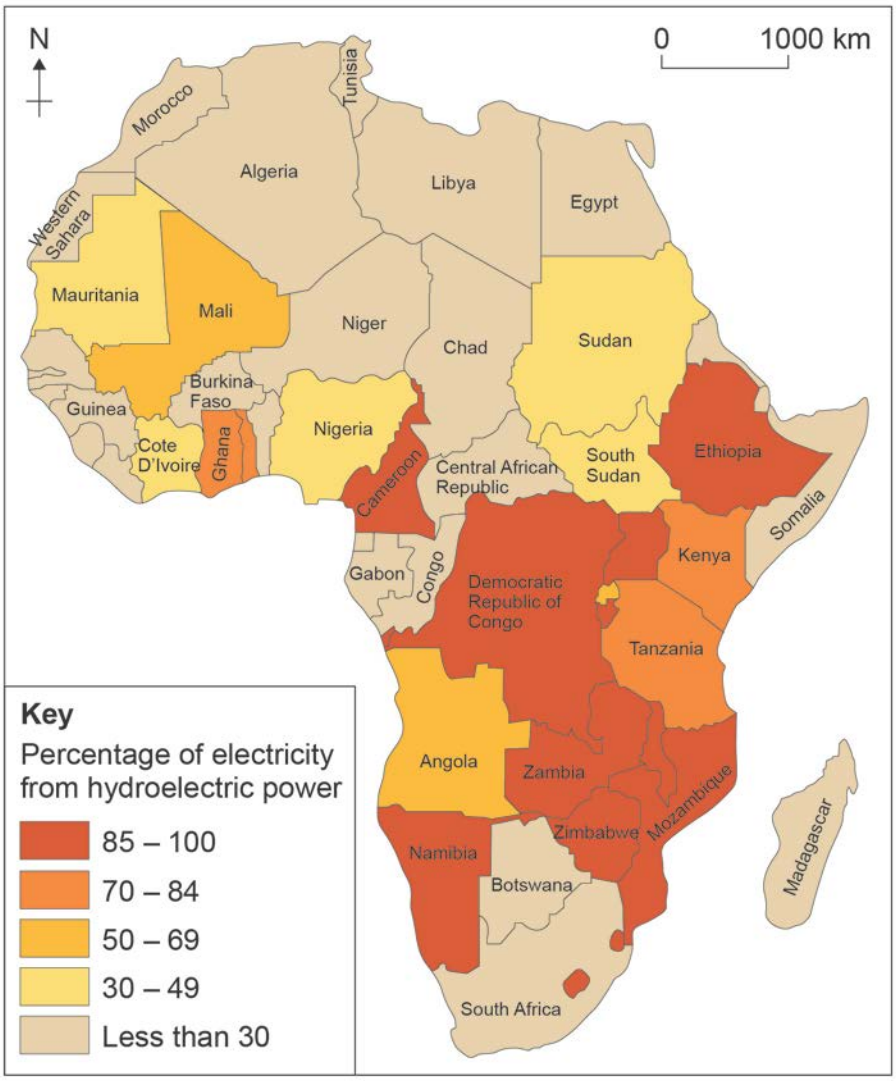
0 5 . 4 Explain how water security can be improved.

[6 marks]

Question 6 **Energy resources**

Study **Figure 15**, a map showing the percentage of electricity from hydroelectric power in Africa.

Figure 15



0 6 . 1 What is the percentage of electricity from hydroelectric power in Mauritania? Shade **one** circle only.

A 30–49% ⬭

B 50–69% ⬭

C 70–84% ⬭

D 85–100% ⬭

[1 mark]

0 6 . 2 Using **Figure 15**, describe the distribution of countries in Africa where the percentage of electricity from hydroelectric power is 85% or more.

[2 marks]

0 6 . 3 Give **two** causes of energy insecurity.

[2 marks]

Cause 1:

Cause 2:

0 6 . 4 Explain how energy security can be improved.

[6 marks]

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