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**Cambridge International Examinations**
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

**GEOGRAPHY** **0460/12**

Paper 1 **October/November 2016**

**1 hour 45 minutes**

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Calculator

**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 an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

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

Answer **three** questions, **one** from each section.

The Insert contains Photographs A, B and C for Question 1, Photograph D for Question 3, and Photograph E 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.

Definitions
MEDCs – More Economically Developed Countries
LEDCs – Less Economically Developed Countries

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **36** printed pages and **1** Insert.

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## Section A

Answer **one** question from this section.

### QUESTION 1

**1 (a)** Study Fig. 1, which shows information about the percentage of the world's population in each continent between 1800 and 2050.

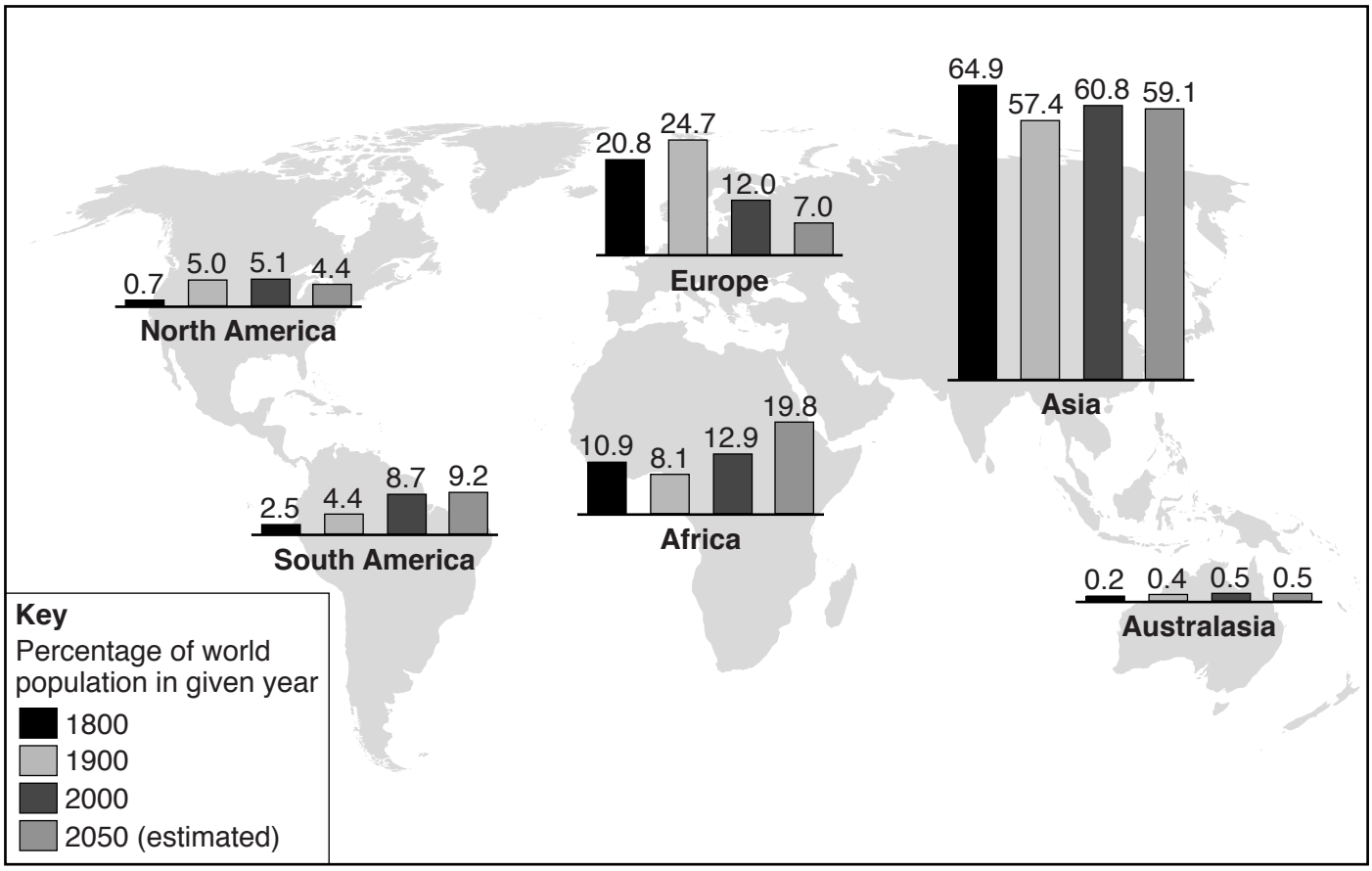



**Fig. 1**

**(i)** State which continent has the greatest percentage of the world's population.

.....[1]

**(ii)** Name the continent where:

– the percentage of the world's population decreased between 1900 and the year 2000;

.....

– the percentage of the world's population is likely to increase the most between 2000 and 2050.

.....[2]

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**(iii)** Explain why natural population growth is still high in many LEDCs.

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.....[3]

**(iv)** Some countries are over-populated whilst others are under-populated.
Explain fully what is meant by over-population and under-population.

Over-population .....

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Under-population .....

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.....[4]

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**[Turn over**

**(b)** Study Fig. 2, which shows information about population density, and Photographs A, B and C (Insert).

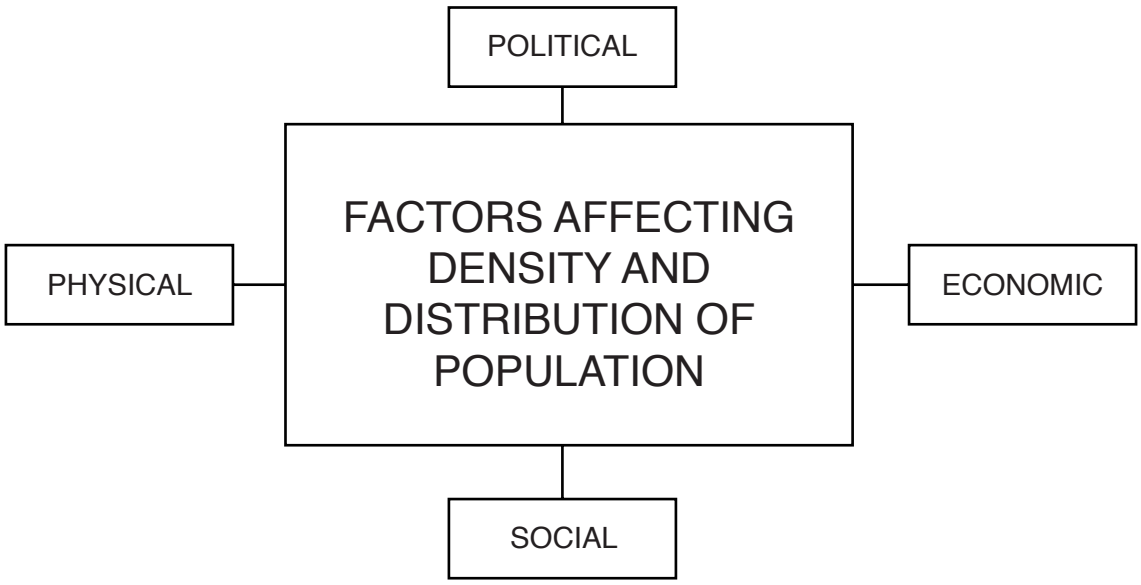



**Fig. 2**

**(i)** Identify a physical factor which explains why each of the areas shown in Photographs A, B and C is sparsely populated. You should choose a different physical factor for each photograph.

Photograph A .....

.....

Photograph B .....

.....

Photograph C .....

.....[3]

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**(ii)** Suggest how factors, other than physical factors, may contribute to low population densities in the areas such as those shown in the photographs.

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.....[5]

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**(c)** Name an example of a country **from which** large numbers of people have migrated. Describe the positive and negative impacts of this migration on the named country which they have left.

Name of country .....

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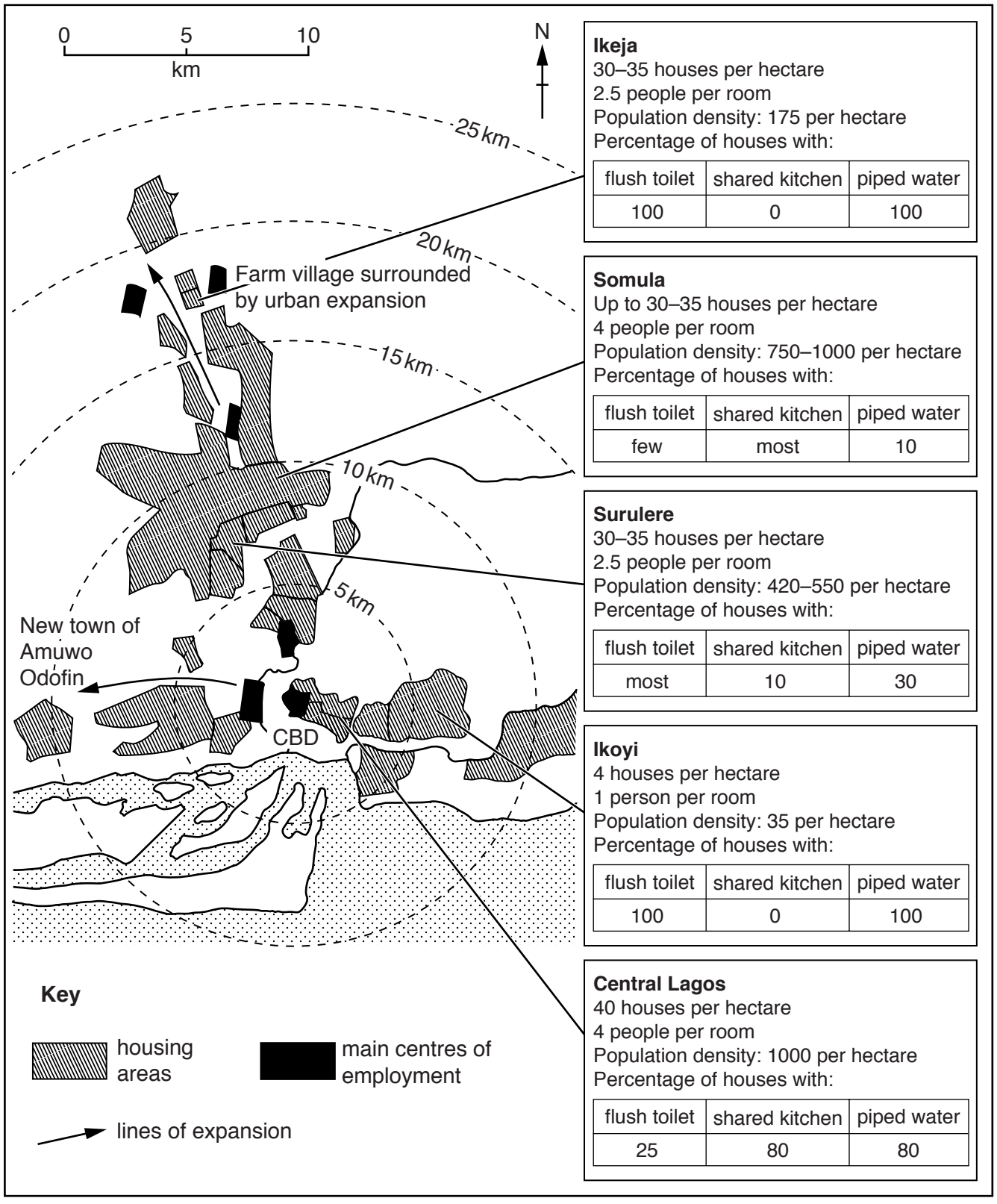
**TURN PAGE FOR QUESTION 2**

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**QUESTION 2**

**2 (a)** Study Fig. 3, which shows information about housing areas in Lagos, a city in Nigeria (an LEDC in Africa).




**Ikeja**
30–35 houses per hectare
2.5 people per room
Population density: 175 per hectare
Percentage of houses with:

| flush toilet | shared kitchen | piped water |
|---|---|---|
| 100 | 0 | 100 |

**Somula**
Up to 30–35 houses per hectare
4 people per room
Population density: 750–1000 per hectare
Percentage of houses with:

| flush toilet | shared kitchen | piped water |
|---|---|---|
| few | most | 10 |

**Surulere**
30–35 houses per hectare
2.5 people per room
Population density: 420–550 per hectare
Percentage of houses with:

| flush toilet | shared kitchen | piped water |
|---|---|---|
| most | 10 | 30 |

**Ikoyi**
4 houses per hectare
1 person per room
Population density: 35 per hectare
Percentage of houses with:

| flush toilet | shared kitchen | piped water |
|---|---|---|
| 100 | 0 | 100 |

**Central Lagos**
40 houses per hectare
4 people per room
Population density: 1000 per hectare
Percentage of houses with:

| flush toilet | shared kitchen | piped water |
|---|---|---|
| 25 | 80 | 80 |

**Fig. 3**

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**(i)** What is the distance from the CBD of Lagos to Ikeja?

..... km [1]

**(ii)** In which **two** of the following directions is Lagos expanding?

Circle your answers from the list below.

north north east north-north west

south-south east south west west [2]

**(iii)** Using evidence from Fig. 3 **only**, name the area that you think has the best housing conditions.

Justify your answer.

Name of area .....

Justification .....

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.....[3]

**(iv)** Growing urban areas like Lagos experience traffic congestion.
Describe **four** methods which are used to manage traffic congestion.

1 .....

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2 .....

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3 .....

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4 .....

.....[4]

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**[Turn over**

**(b)** Study Fig. 4, which shows information about the percentage of population living in urban areas in Africa and Europe.

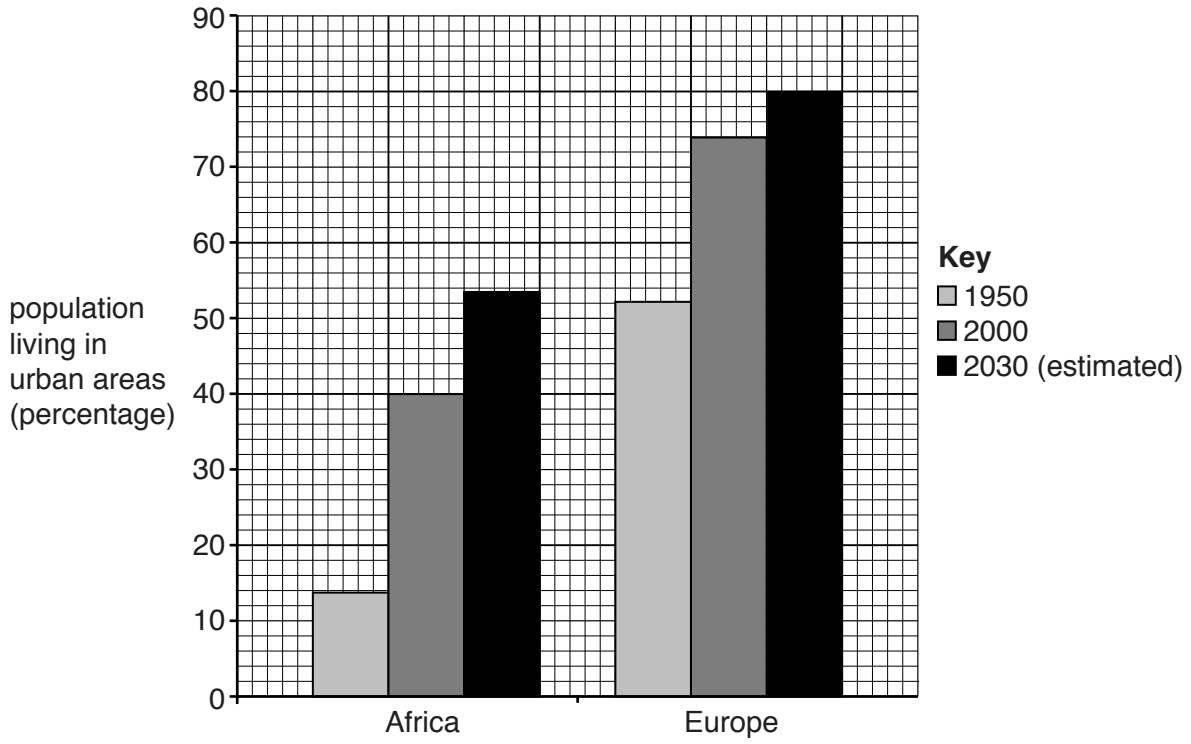



**Fig. 4**

**(i)** Using evidence from Fig. 4 **only**, compare the growth in the percentage of population living in urban areas in Africa and Europe.

Include statistics in your answer.

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**(ii)** Suggest reasons for the migration of population from rural to urban areas in **LEDCs**.

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**[Turn over**

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**(c)** For a named town or city you have studied, describe the impact of urbanisation on the people who live there.

Name of town or city .....

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**TURN PAGE FOR QUESTION 3**

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## Section B

Answer **one** question from this section.

### QUESTION 3

**3** **(a)** Study Photograph D (Insert), which shows a small weather station that uses automatic digital instruments.

**(i)** What is measured by the instrument labelled **X** on Photograph D?

.....[1]

**(ii)** Explain why:

– there is a fence around the weather station;

.....

.....

– the weather station is sited on grass not concrete.

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.....[2]

**(iii)** Describe the cloud type and cover on the day Photograph D was taken.

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.....[3]

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**(iv)** To what extent do you think the weather station is located in a good position? Give reasons for your answer.

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**(b)** Study Fig. 5, which shows information about the weather at Reigate, UK, in December 2013.

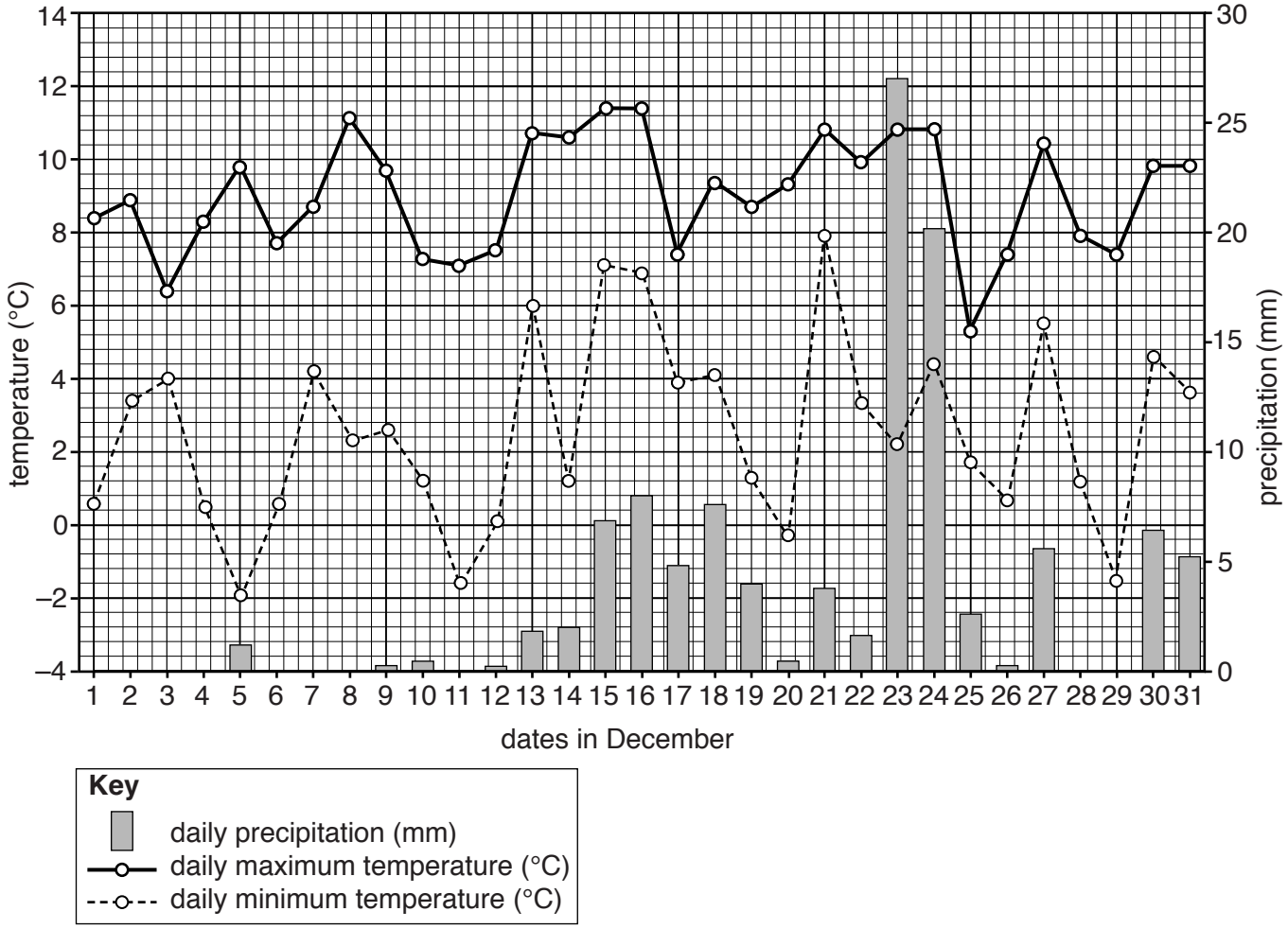



**Fig. 5**

**(i)** Compare the weather at Reigate on 14 and 30 December.

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.....[3]

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**(ii)** The data in Fig. 5 was collected using traditional instruments.
Explain how the data about precipitation and temperature would have been obtained.

Precipitation .....

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Temperature .....

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**(c)** For a named river you have studied, explain why flooding occurs.

Name of river .....

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**TURN PAGE FOR QUESTION 4**

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**QUESTION 4**

**4 (a)** Study Fig. 6, a map of hot deserts.

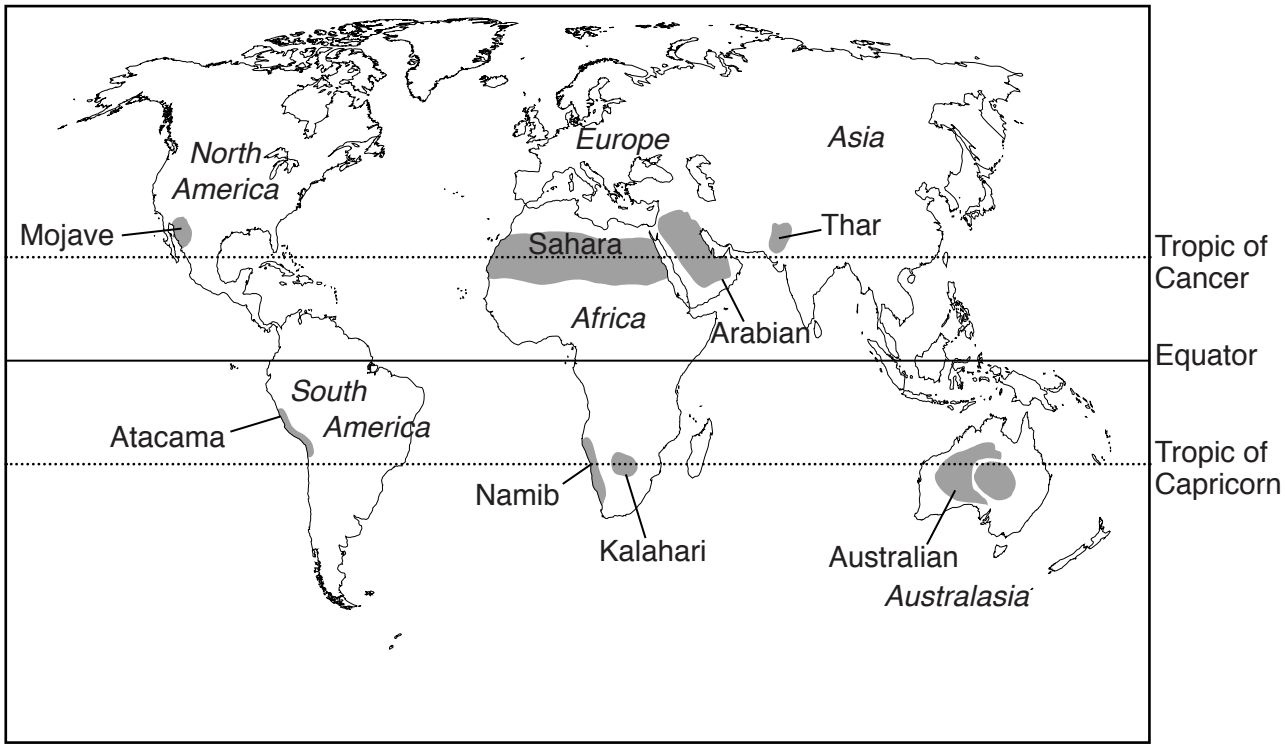



**Fig. 6**

**(i)** Tick the statement which best describes the climate of a hot desert.

| Climate | Tick (✓) |
|---|---|
| annual average rainfall is 250 mm or less | |
| temperatures are always above 30 °C | |
| temperatures never change during the year | |
| it never rains | |

[1]

**(ii)** Name the desert which is located:

– across northern Africa; .....

– along the western coast of South America. .....[2]

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**(iii)** Explain why deserts have a high diurnal (daily) range of temperature.

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.....[3]

**(iv)** Explain how vegetation is adapted to survive in a hot desert.

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**(b)** Study Fig. 7, which shows areas in the Australian Desert.

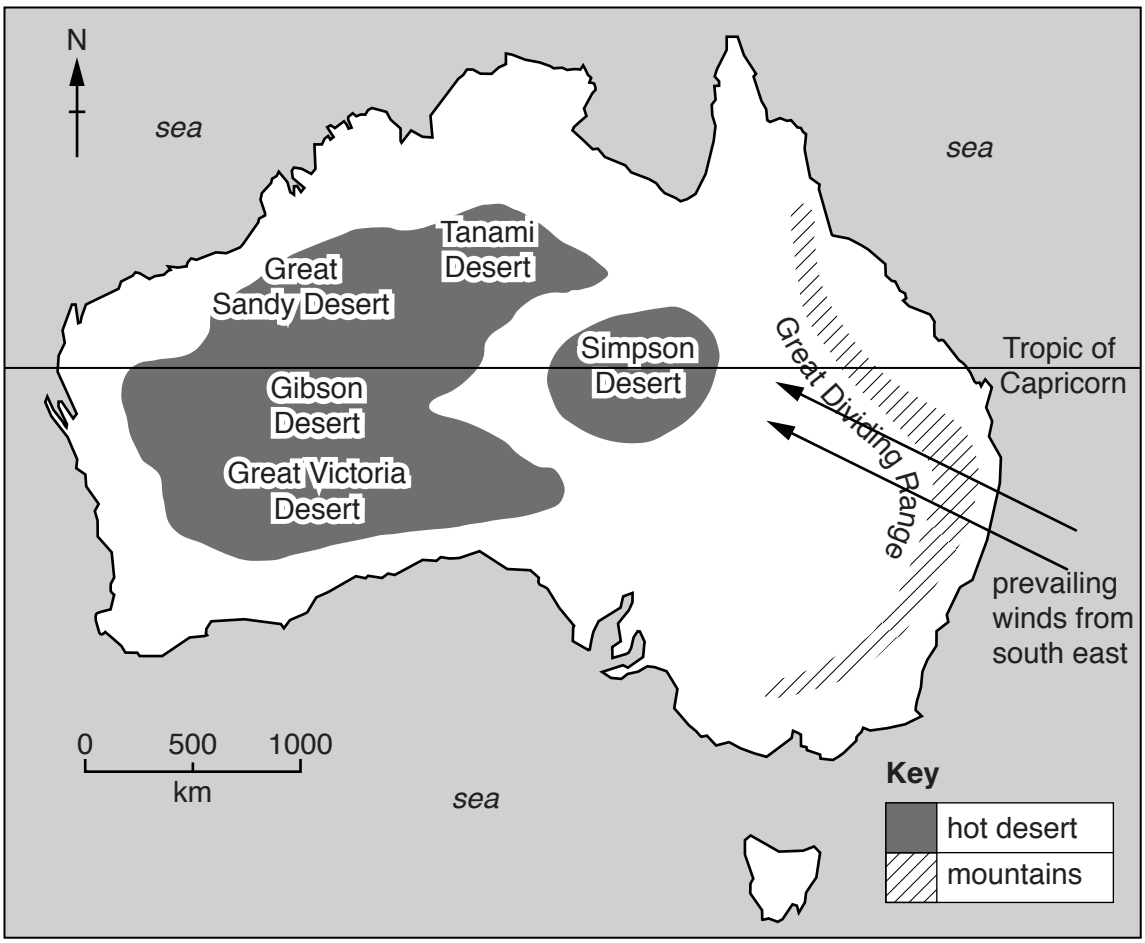



**Fig. 7**

**(i)** Suggest reasons why temperatures are high, especially in December and January, in the deserts shown in Fig. 7.

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**(ii)** Using evidence from Fig. 7, explain why the deserts shown do not receive much rainfall.

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**(c)** Describe the impacts of deforestation of **tropical rainforests** on the global natural environment. You should refer to named areas affected.

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**TURN PAGE FOR QUESTION 5**

## Section C

Answer **one** question from this section.

### QUESTION 5

**5 (a)** Study Fig. 8, which shows some information about water.

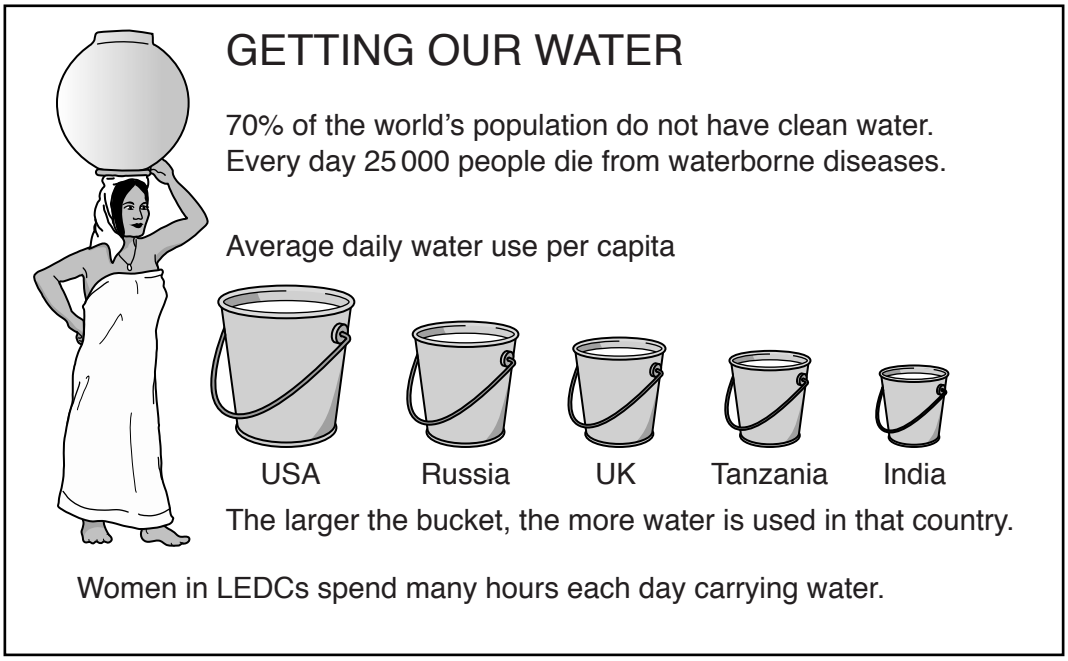



**Fig. 8**

**(i)** What is meant by *average daily water use per capita*?

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.....[1]

**(ii)** Give **two** reasons why water is important for people to survive.

1 .....

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2 .....

.....[2]

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**(iii)** Explain why women in LEDCs spend many hours each day carrying water.

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**(iv)** Explain why many people in LEDCs die from waterborne diseases.

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**[Turn over**

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**(b)** Study Fig. 9, which shows information about a rural area in an LEDC.

The population of 300 people are spread out over a wide area. Most homes have thatched roofs but the newer ones and the small school have corrugated iron roofs. Many villagers get their water from a borehole which is 4 km away. There are times during the dry season, which usually lasts for 6 to 8 months, when there is no water in the borehole. Then villagers have to carry water from springs in the mountains which are over 5 km away.

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Four options are being considered to improve the water supply for the villagers.

Option A — Collect rainwater
Fix plastic gutters to the roofs of homes and build large cement storage tanks for the water to drain into.

Option B — Build four shallow wells near where people live
This is possible where the water table is close to the surface. It takes two unskilled workers 7 days to dig a 10 metre deep well. Each well will need to be lined with concrete.

Option C — Pipe water from the mountains
Pipes can be built from a spring to the area where people live, where it can be stored in a large tank.

Option D — Drill a deep borehole close to the school
A team of engineers will need to bring in a mechanical drilling rig to drill a borehole more than 50 metres deep. Electric pumps will be needed to pump the water to the surface.

**Fig. 9**

**(i)** Suggest why Option A would **not** be a good choice.

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.....[3]

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**(ii)** Which one of Options B, C or D do you think should be chosen? Justify your answer.

Option .....

Justification .....

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**(c)** For a named area you have studied, describe an economic activity which takes place and explain how it is threatening the local natural environment.

Name of area .....

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**TURN PAGE FOR QUESTION 6**

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**QUESTION 6**

**6 (a)** Study Fig. 10, which shows information about a plan to change the source of the energy used in Bavaria, a part of Germany (an MEDC in Europe).

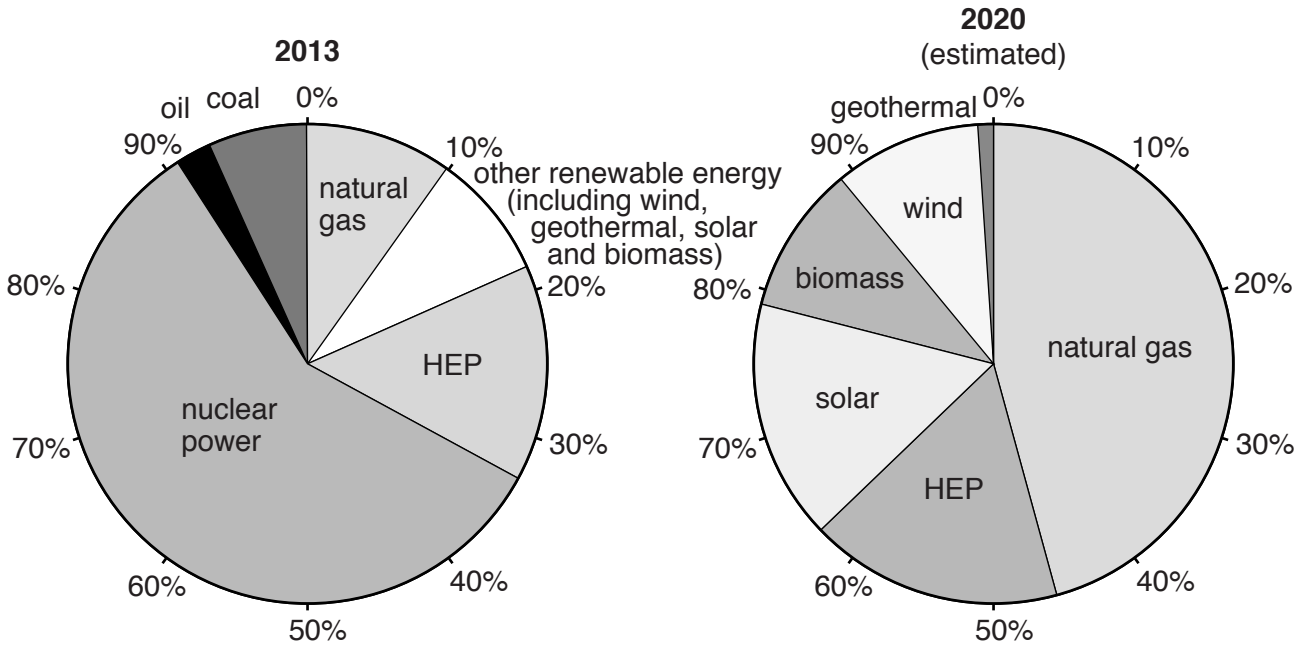



**Fig. 10**

**(i)** What was the main source of energy used in Bavaria in 2013?

.....[1]

**(ii)** Identify from Fig. 10 an example likely to be used in 2020 of:

– a non-renewable form of energy; .....

– a renewable form of energy. ..... [2]

**(iii)** Using evidence from Fig. 10 **only**, describe the main planned changes in Bavaria's energy use. Include statistics in your answer.

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.....[3]

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**(iv)** Explain the benefits of the planned changes shown in Fig. 10.

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**(b)** Study Photograph E (Insert), which shows wind turbines.

**(i)** Explain why this method of generating electricity is of limited use in many countries.

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**(ii)** Explain why some people living close to these wind turbines are likely to support their use whilst others will be against them.

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.....[5]

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**[Turn over**

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**(c)** For an example you have studied, describe and explain the location of a factory or industrial zone.

Name of factory or industrial zone .....

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[Total: 25 marks]

**END OF QUESTION 6**

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## Additional Pages

If you use the following lined pages to complete the answer(s) to any question(s), the question number(s) must be clearly shown.

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