UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

GEOGRAPHY **0460/02**

Paper 2 **May/June 2009**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper

1:50 000 Survey Map Extract is enclosed with this question paper.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
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.

Answer **all** questions.
The Insert contains Photograph A for Question 3.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

The Survey Map Extract and the Insert are **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.

For Examiner's Use	
Q1	
Q2	
Q3	
Q4	
Q5	
Q6	
Total	

This document consists of **14** printed pages, **2** blank pages and **1** Insert.

1 The map extract is for Shamva, Zimbabwe. The scale is 1:50 000.

For Examiner's Use

(a) Fig. 1 shows the position of some features in the south west part of the map extract. Study the map extract and Fig. 1 and answer the questions below.

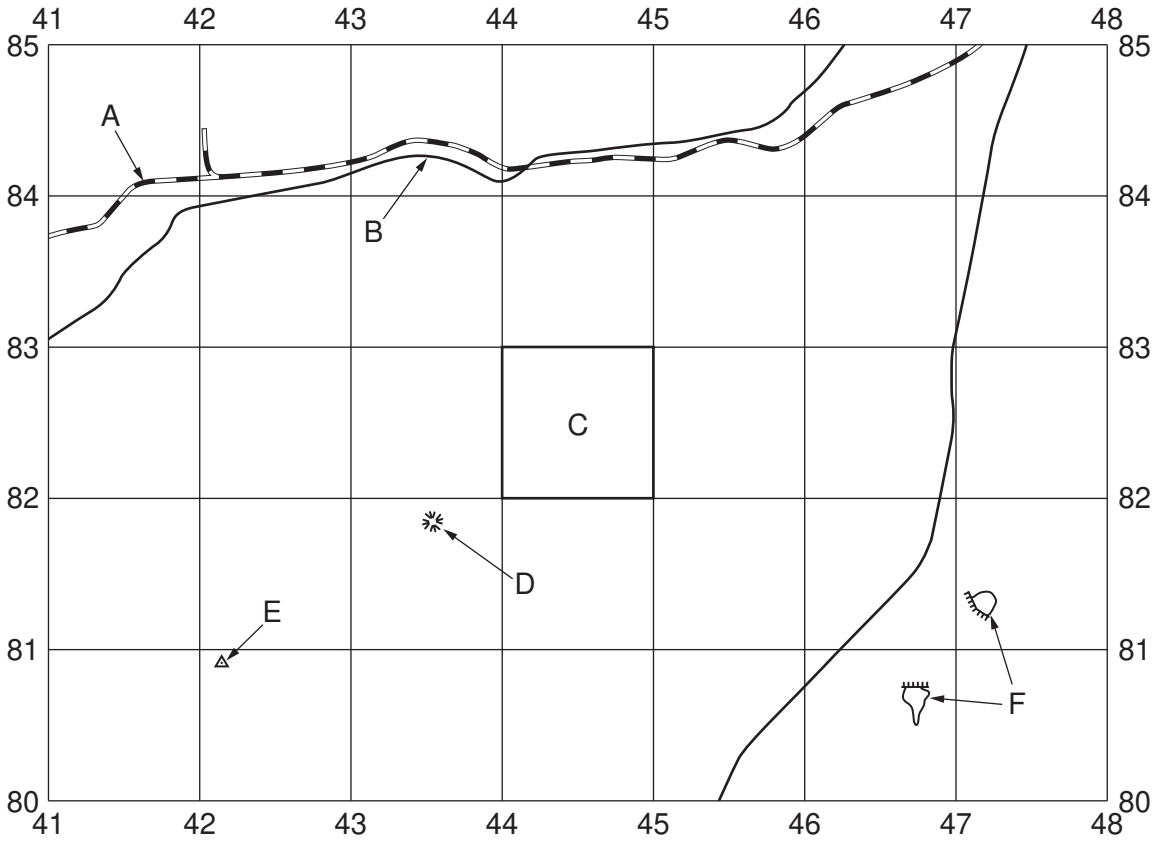

Fig. 1

Using the map extract, identify the following features shown on Fig. 1:

(i) feature A (4184);

.....[1]

(ii) the type of road at B (4384);

.....[1]

(iii) the land use in area C (4482);

.....[1]

(iv) feature D (4381);

.....[1]

(v) the type of feature at E (4280);

.....[1]

(vi) the features at F (4781, 4680).

.....[1]

(b) Fig. 2 shows part of the mining area of Shamva.

For Examiner's Use

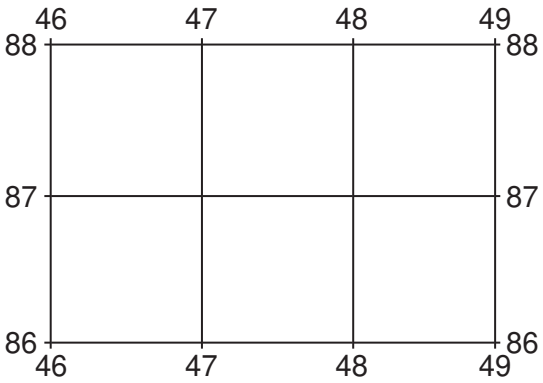

Fig. 2

State **three** functions or services found in this area.

(i) .....

(ii) .....

(iii) ..... [3]

(c) Fig. 3 shows two areas of the map. These are at Richlands and Grahamsdale.

For Examiner's Use

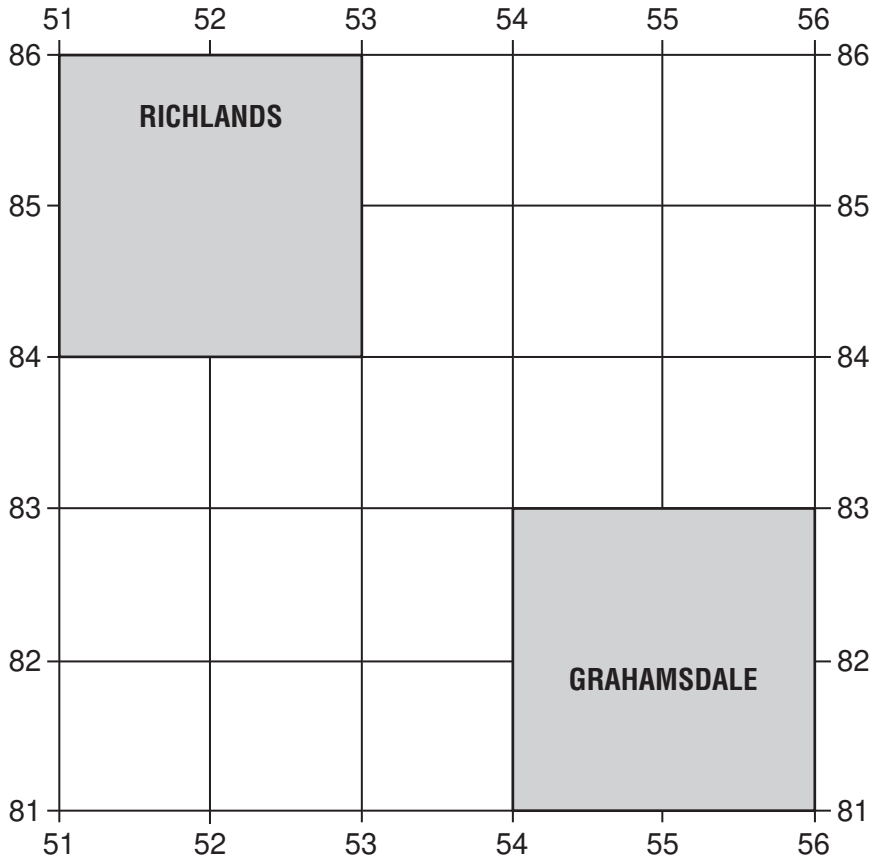

Fig. 3

Table 1 compares the features of the two areas. Complete the table by putting ticks in the correct **five** boxes. Use only **one** tick for each row.

Table 1

	Richlands	Grahamsdale	Neither of these areas
Example: large area of bush	–	✓	–
line of huts			
steep slopes			
quarry or excavation			
power line			
high density of drainage			

[5]

(d) Fig. 4 shows part of the valley of the Mazowe river in the north east part of the map.

For Examiner's Use

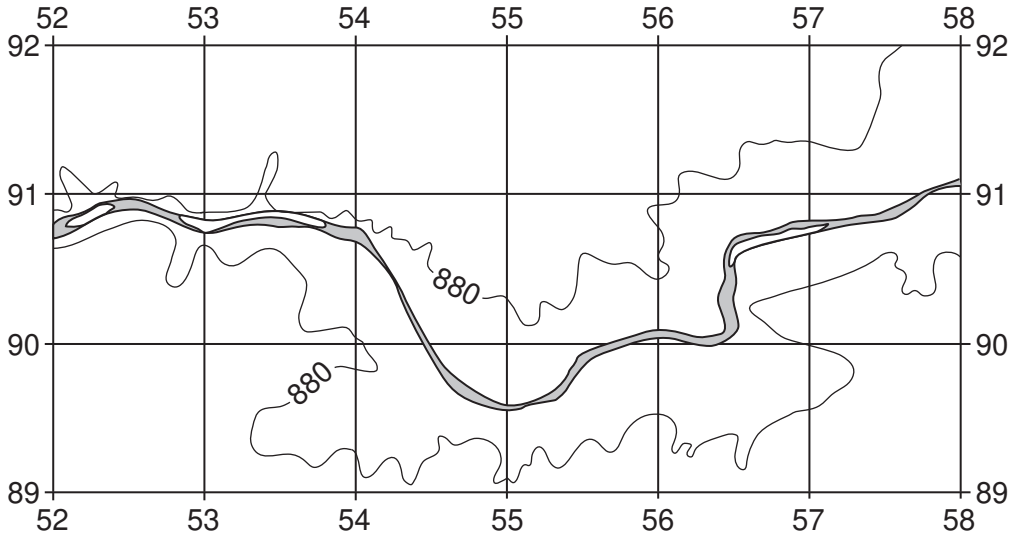

Fig. 4

On Fig. 4, use the letter indicated to show the position of:

(i) a weir (W);

(ii) the river's flood plain (F);

(iii) the confluence (joining point) of the Mushambanyama river with the Mazowe river (C). [3]

(e) Look at the bridge where the wide tarred road crosses the Mazowe River in the north of the map (482906).

(i) What is the distance along the road, between the bridge and the 945 metre spot height in Shamva (472861)? Circle the correct answer.

3 950 metres

4 200 metres

4 650 metres

4 900 metres [1]

(ii) The road at the bridge is 900 metres above sea level. Calculate the gradient along the road from the bridge to the 945 metre spot height in Shamva (472861).

Horizontal distance = ...

Difference in height = ...

Gradient = 1 in ..... [2]

[Total: 20 marks]

2 Study Fig. 5, which shows the structure of the total New Zealand population, and Fig. 6, which shows the structure of the Maori population in 2006. The Maori people form part of the population of New Zealand.

For Examiner's Use

Total New Zealand population, 2006

Fig. 5

Maori population, 2006

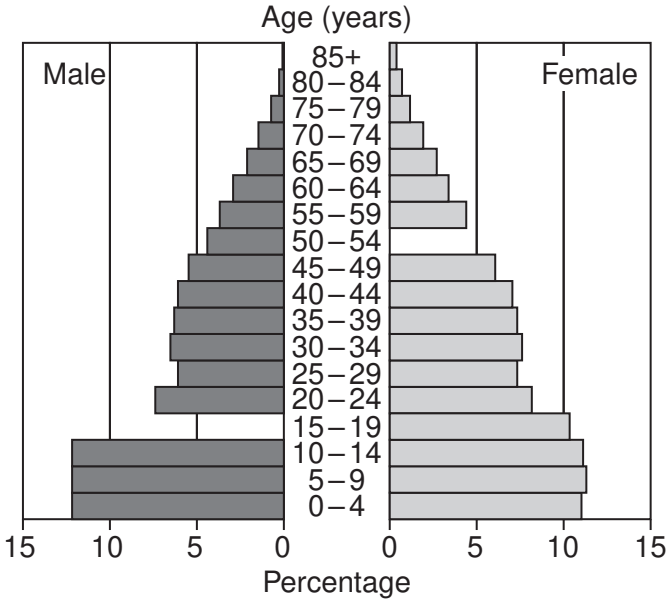

Fig. 6

(a) In 2006, 10% of the male Maori population were aged 15–19 and 5% of the female Maori population were aged 50-54. Complete Fig. 6 by adding this data. [2]

For Examiner's Use

(b) Complete the following sentences by adding the words **greater** or **less**.

(i) The percentage of 0–14 year olds in the Maori population is..... than the percentage of 0–14 year olds in the total New Zealand population. [1]

(ii) The percentage of over 55 year olds in the Maori population is ..... than the percentage of over 55 year olds in the total New Zealand population. [1]

(iii) The percentage of 35–49 year olds in the Maori population is ..... than the percentage of 35–49 year olds in the total New Zealand population. [1]

(c) In 2006, the Maori population formed 14% of the total New Zealand population.

(i) Using evidence from Figs 5 and 6 only, suggest how this may change over the next 50 years.

.....

..... [1]

(ii) Explain your answer to **(c)(i)**.

.....

.....

.....

.....

.....

..... [2]

[Total: 8 marks]

3 Photograph A (Insert) shows an area of small-scale subsistence agriculture in Asia.

For Examiner's Use

(a) Describe the relief of the area shown in Photograph A.

.....

.....

.....

.....

.....

.....

.....

..... [4]

(b) The natural vegetation of the area is tropical rain forest but the forest has been affected by human activity. Which of the following statements describe the distribution of forest shown in Photograph A? Circle **two** correct statements.

- covering the whole area
- on the highest land
- on the steepest slopes
- in valleys
- completely removed

[2]

(c) Soil erosion is a problem in the area shown in Photograph A. What features shown in the photograph may encourage soil erosion?

.....

.....

.....

.....

..... [2]

[Total: 8 marks]

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[Turn over

4 The United Kingdom plans to increase the percentage of electricity it produces from renewable energy sources. Fig. 7 shows the percentage produced from renewable sources in 2005 and the targets for 2010, 2015 and 2020.

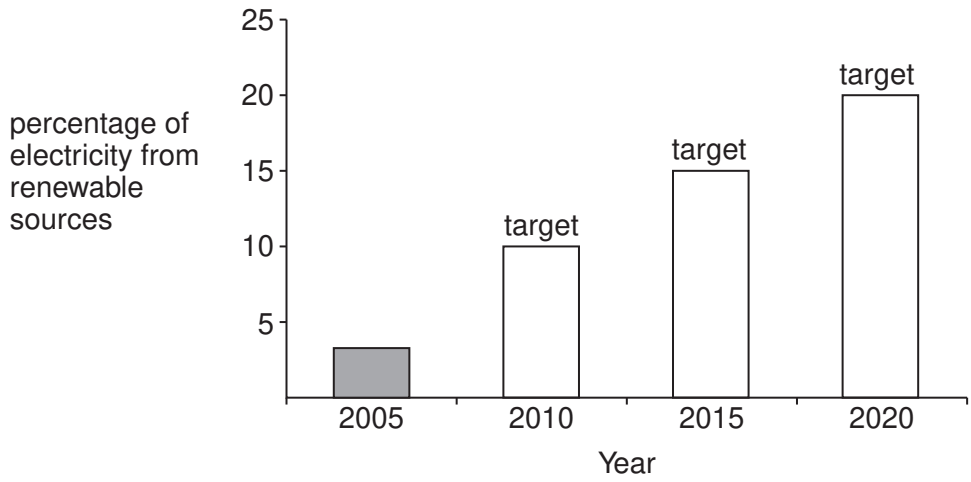
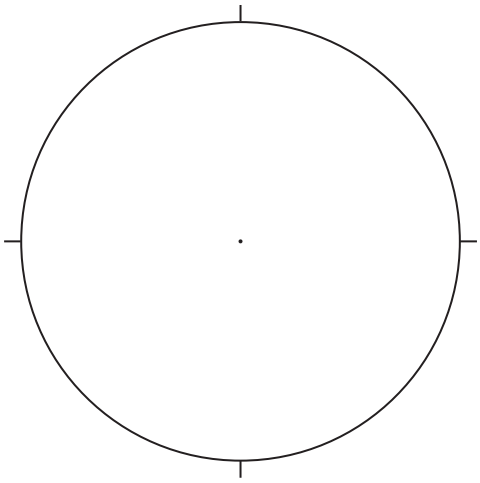


Fig. 7

(a) State the target for the percentage of electricity to be produced from renewable sources in 2015.

..... [1]

(b) The target for electricity from renewable sources in 2020 is 20%. Plot this information as a pie chart on Fig 8. Use the key provided.



Key

[3]

Fig. 8

(c) Wind power is one renewable energy source. Fig. 9 shows a wind farm and some of the advantages and disadvantages of wind power.

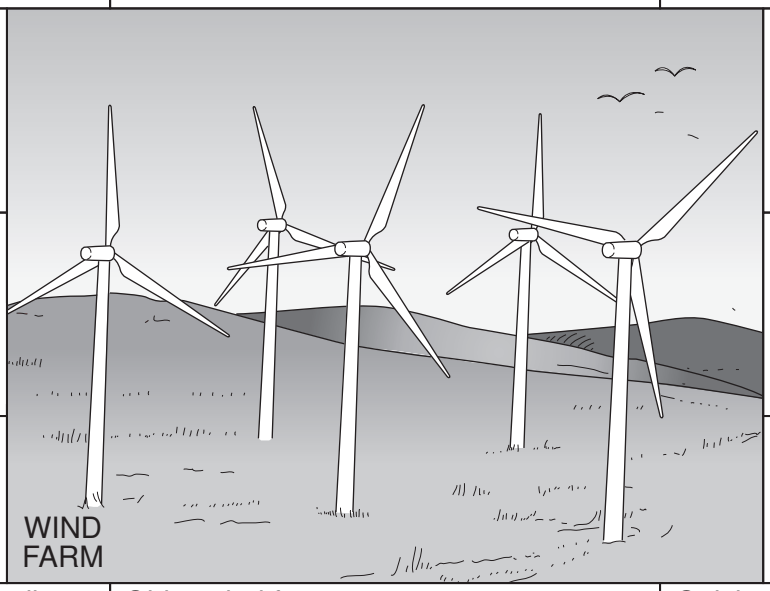
<table>
<tr><td>It will not run out</td><td>Potential effect on house prices and tourism</td><td>Can be generated on land or on sea</td></tr>
<tr><td>Visual impact</td><td colspan="2" rowspan="3"> 
</td><td>Turbines may kill birds</td></tr>
<tr><td>No carbon dioxide emissions or air pollution</td><td>Minimal risk of serious accidents</td></tr>
<tr><td>Amount of wind is variable</td><td>May increase electricity costs for consumers</td></tr>
<tr><td>No need to dig underground for it</td><td>Older wind farms cause some concern over noise</td><td>Quick to build and easy to remove</td></tr>
</table>

Fig. 9

A new wind farm is to be built. Using Fig. 9 only, suggest how this may affect:

(i) energy supplies;

.....

.....

.....

..... [2]

(ii) the natural environment.

.....

.....

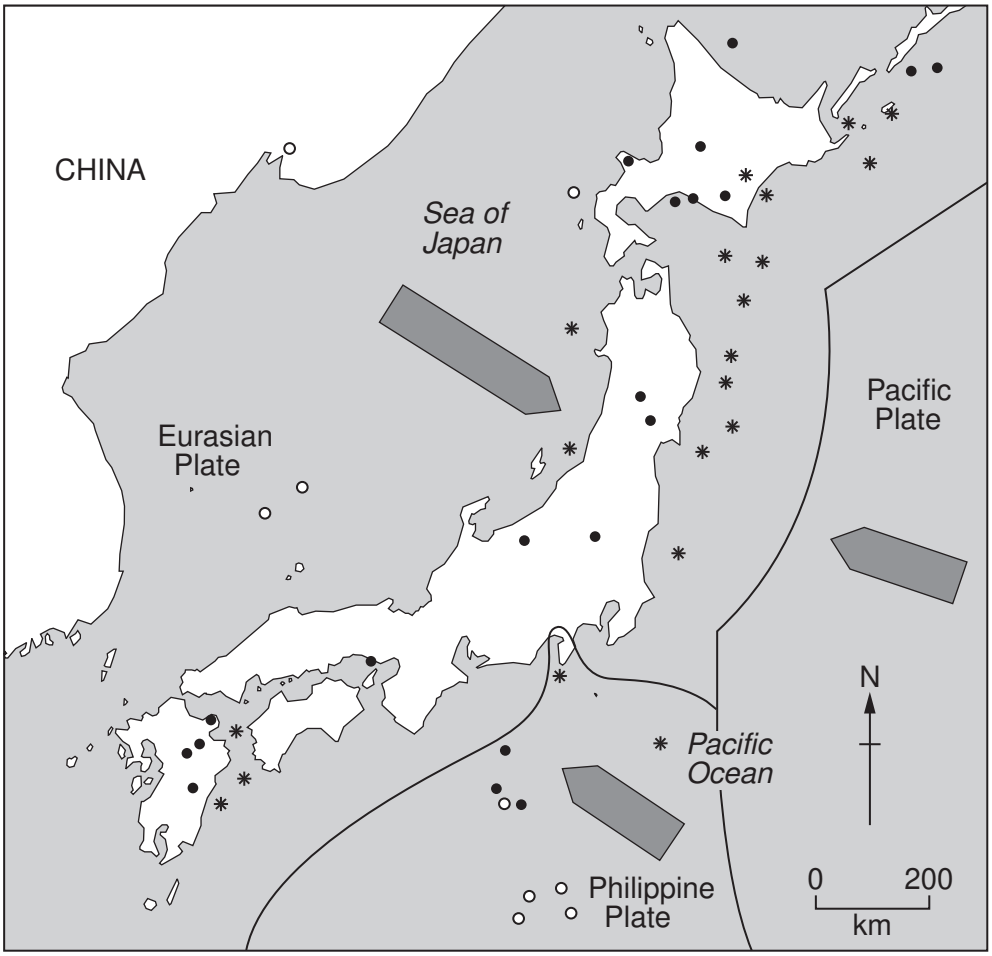
.....

..... [2]

[Total: 8 marks]

5 Fig. 10 is a map showing the islands of Japan and the surrounding region. Plate boundaries, plate movements and selected earthquakes are shown.

The depth of the focus of each earthquake is shown. The focus of an earthquake is the place in the Earth's crust where an earthquake originates.



Key

Direction of plate movement

Plate boundary

* Earthquake focus shallower than 100m below the Earth's surface
* Earthquake focus between 100m and 400m below the Earth's surface
* Earthquake focus deeper than 400m below the Earth's surface

Fig. 10

(a) Which of the following statements describe the plate movements shown on Fig. 10? Tick **two** correct statements.

For Examiner's Use

Statement	Tick
plates sliding past each other	
plates moving towards each other	
plates moving away from each other	
plates moving north west and south east	
plates moving north east and south west	
plates moving north and south	

[2]

(b) Describe **one** feature of the distribution of the following earthquakes shown on Fig. 10:

(i) earthquakes with their focus shallower than 100 m below the Earth's surface;

.....

..... [1]

(ii) earthquakes with their focus between 100 m and 400 m below the Earth's surface;

.....

..... [1]

(iii) earthquakes with their focus deeper than 400 m below the Earth's surface.

.....

..... [1]

(c) Explain why and how earthquakes occur in the area shown on Fig. 10.

.....

.....

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.....

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..... [3]

[Total: 8 marks]

6 Fig. 11 is a map showing the four main iron and steel manufacturing centres in South Africa. Table 2 shows further information about these centres.

For Examiner's Use

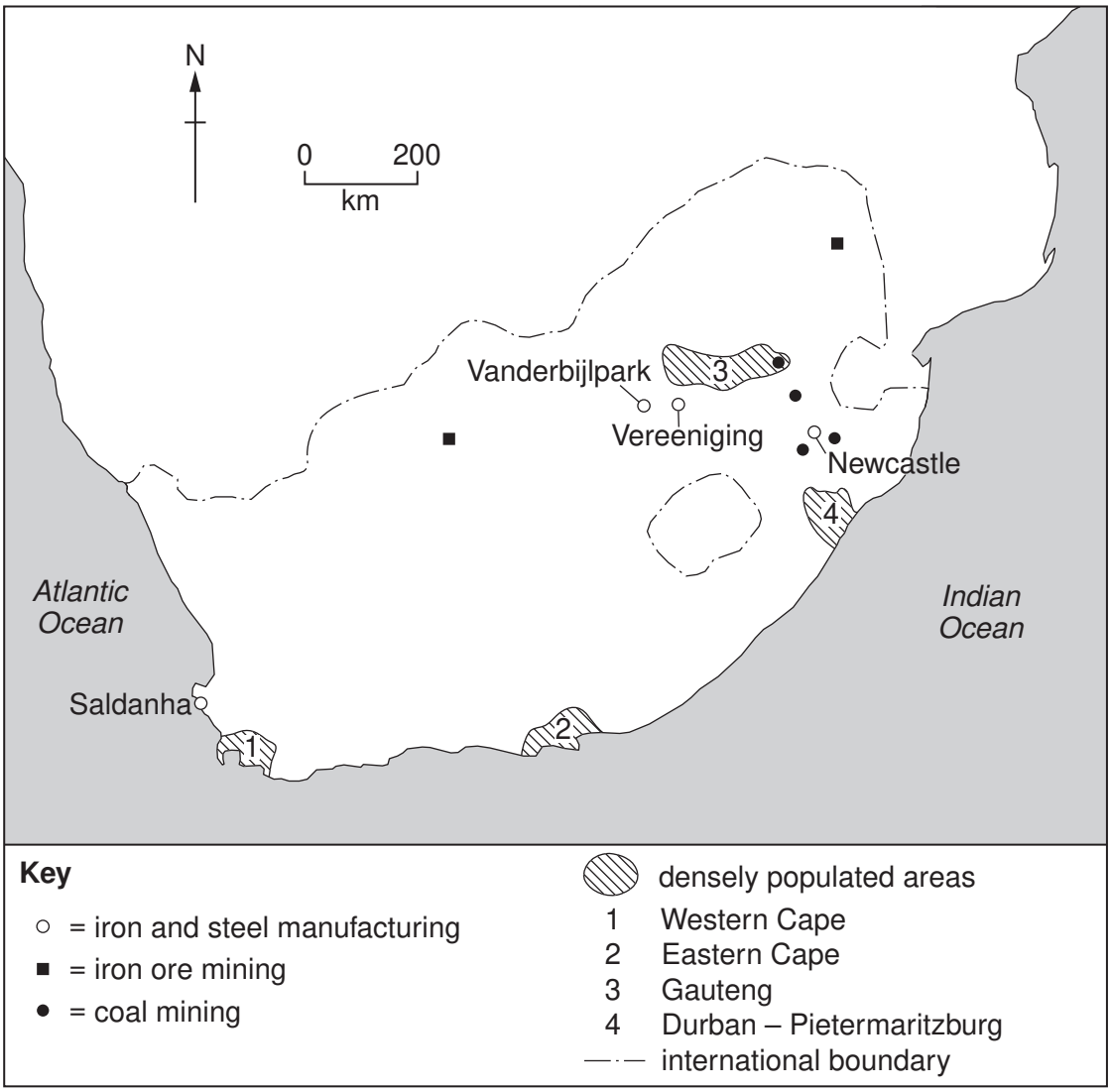

Fig. 11

Table 2

	Newcastle	Saldanha	Vanderbijlpark	Vereeniging
Percentage of South African output	23	17	54	6
Main market	South Africa	Export	South Africa	South Africa
Labour force	2200	685	5200	1300

(a) Fig. 12 is a divided bar graph showing the output of the iron and steel centres as a percentage of the South African output. Use the information in Table 2 to complete Fig. 12.

For Examiner's Use

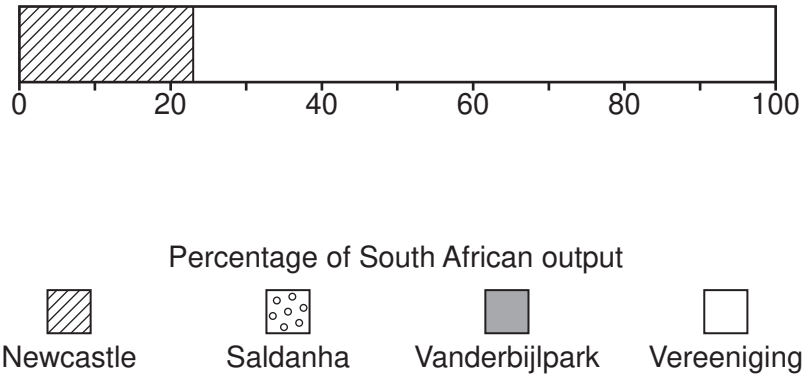

Fig. 12

[3]

(b) Factors affecting the location of the iron and steel industry include:

- raw materials – coal and iron ore
- local markets
- international markets
- transport costs
- labour

Using Fig. 11 and Table 2, describe the advantages and disadvantages of the location of the iron and steel industry at Saldanha.

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..... [5]

[Total: 8 marks]

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