



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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GEOGRAPHY

0460/22

Paper 2

October/November 2013

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
 Protractor
 Plain paper
 Calculator

1:50 000 Survey Map Extract is enclosed with this Question Paper.

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.

Answer **all** questions.

The Insert contains Photographs A and B for Question 3, and Photographs C and D for Question 5.
The Survey Map Extract and the Insert are **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 **13** printed pages, **3** blank pages and **1** Insert.



1 Study the map extract, which is for Hippo Valley, Zimbabwe. The scale is 1:50 000.

(a) Fig. 1 shows some of the features in the north east part of the map extract. Study Fig. 1 and the map extract, and answer the questions opposite.

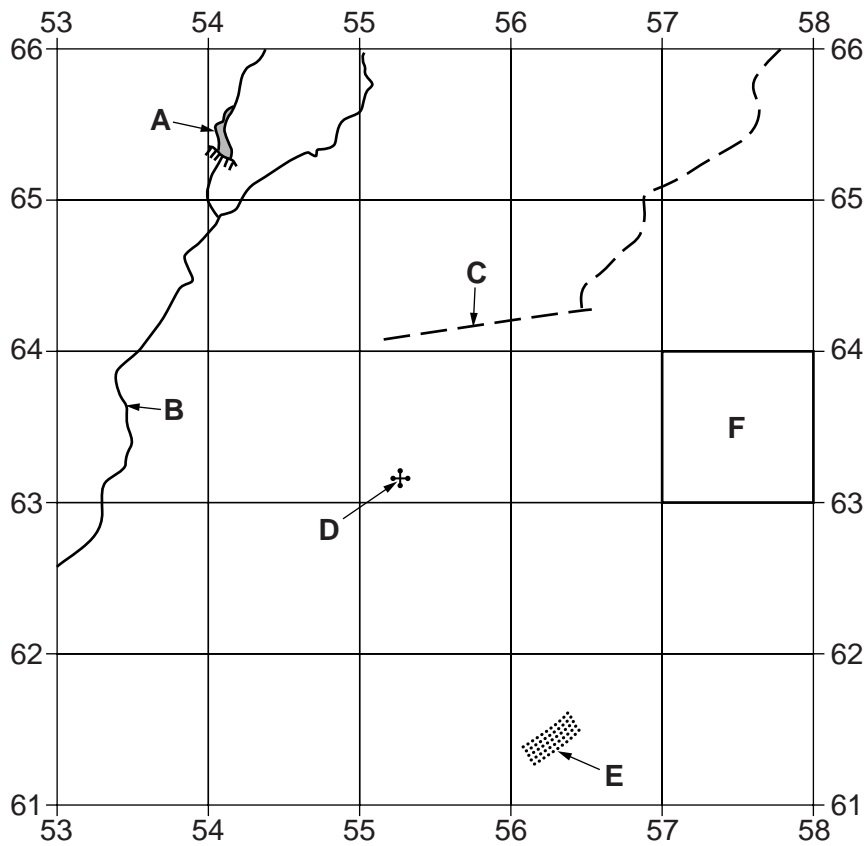


Fig. 1

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

- (i) feature **A**;
.....[1]
- (ii) the name of river **B**;
.....[1]
- (iii) the type of road at **C**;
.....[1]
- (iv) the name of the ruins at **D**;
.....[1]
- (v) feature **E**;
.....[1]
- (vi) the land use in grid square **F**.
.....[1]

(b) Fig. 2 is a cross section from 500574 to 560574 (in the south of the map).

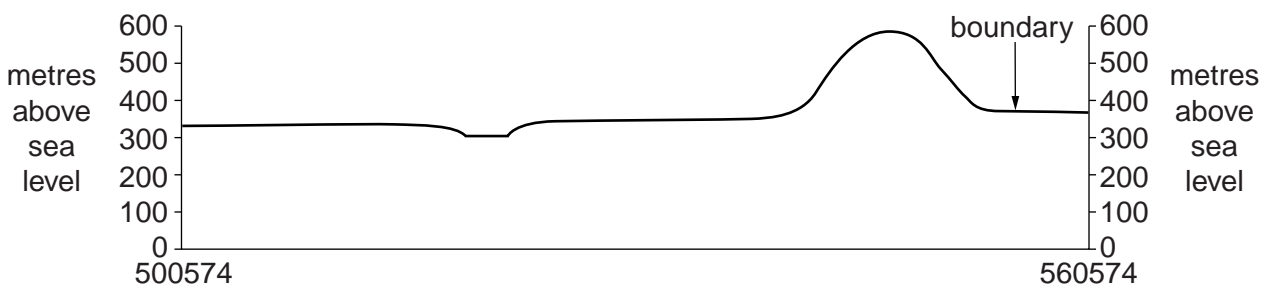


Fig. 2

On Fig. 2, using labelled arrows, mark the positions of:

- (i) a swamp; [1]
- (ii) the Lundi River; [1]
- (iii) a pan; [1]
- (iv) the west-facing slope of Bendezi Hill. [1]

- (c) Study the relief and drainage in the area north of the Lundi River. In each of questions (i) – (v) tick the correct description of this area. Tick (✓) **one** box in each case.

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(i)

Description	Tick (✓)
average height between 240 – 340 m	
average height between 340 – 400 m	
average height between 400 – 440 m	
average height between 440 – 500 m	

[1]

(ii)

Description	Tick (✓)
mostly flat	
mostly gentle slopes	
mostly steep slopes	
mostly cliffs	

[1]

(iii)

Description	Tick (✓)
main rivers flow west	
main rivers flow north	
main rivers flow east	
main rivers flow south	

[1]

(iv)

Description	Tick (✓)
rivers have many waterfalls	
rivers have many rapids	
rivers have many tributaries	
rivers have many distributaries	

[1]

(v)

Description	Tick (✓)
high drainage density	
low drainage density	
wide rivers	
much marsh or swamp	

[1]

(d) Fig. 3 shows the area of wide gravel roads (shown by solid red lines) in the centre of the map.

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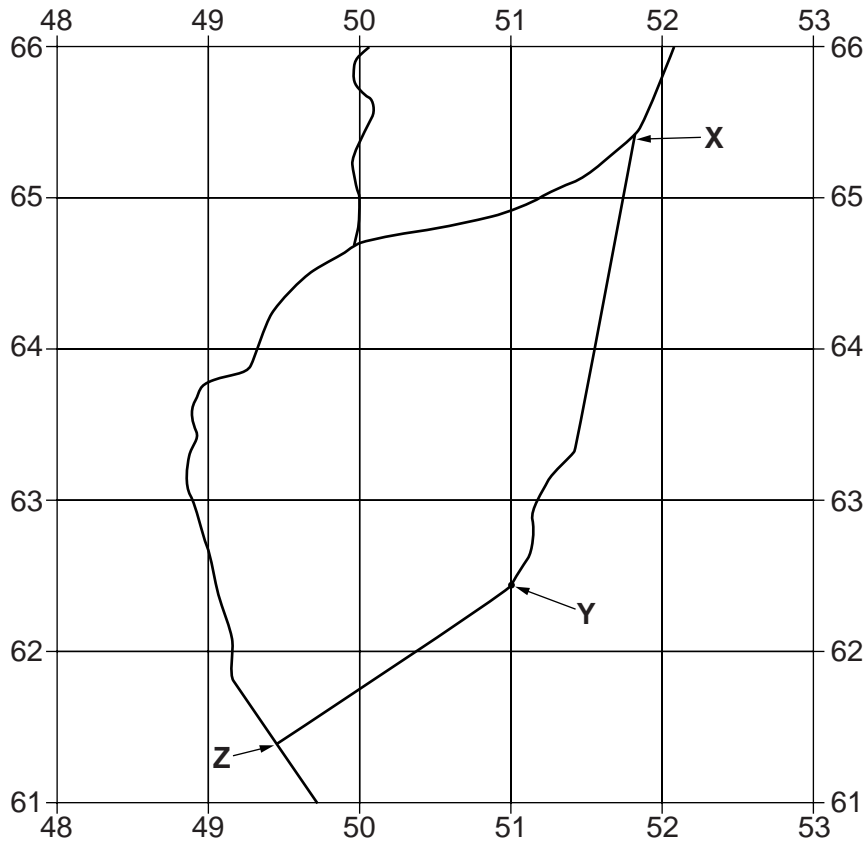


Fig. 3

- (i) What is the height above sea level at point Y?
.....[1]
- (ii) Measure the bearing in degrees from grid north, from point Y to point X.
.....[1]
- (iii) What is the compass direction from point X to point Z?
.....[1]
- (iv) Give the six figure grid reference of point Z.
.....[1]
- (v) Measure the distance along the road between X and Z, going through point Y. Give your answer in metres.
..... metres [1]

[Total: 20 marks]

2 Fig. 4 shows the distribution of population in China in people per square kilometre.

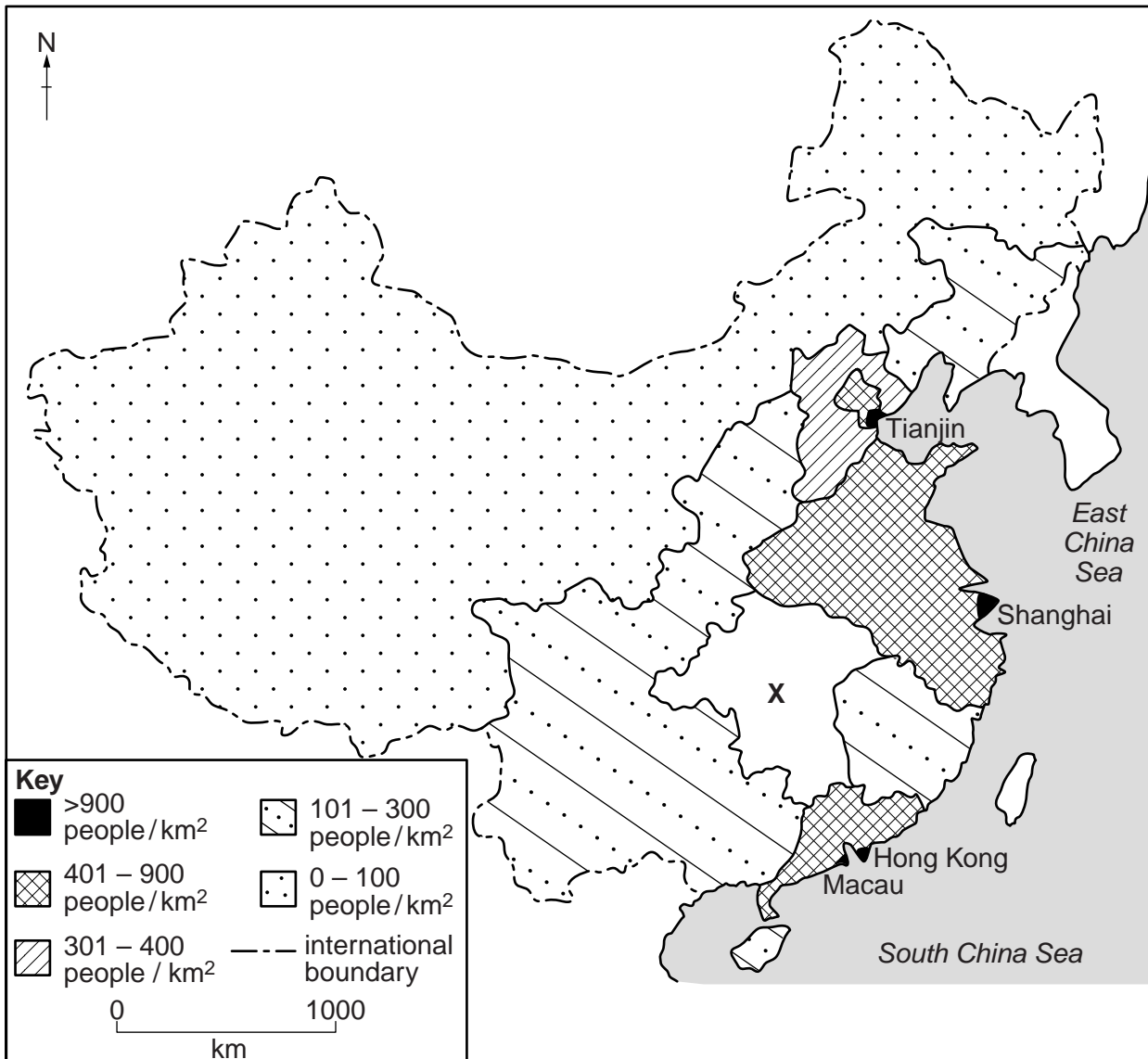


Fig. 4

(a) Find area X on Fig. 4. This area has a population density of 301 – 400 people per square kilometre. Using the key provided, add this information to Fig. 4. [1]

(b) Describe the distribution of population shown on Fig. 4.

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.....[3]

(c) Fig. 5 shows the variation in height above sea level in China.

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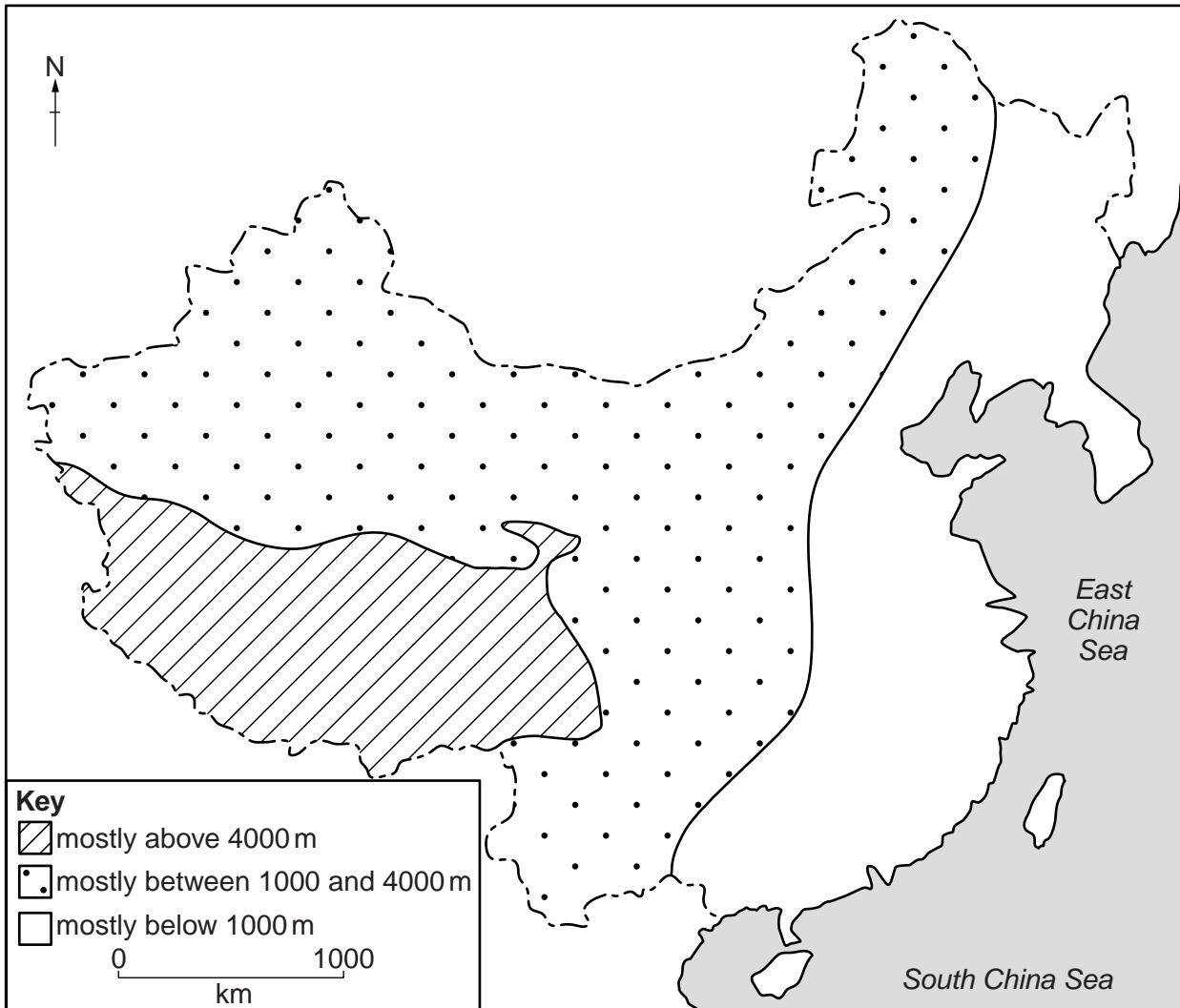


Fig. 5

(i) Describe the relationship between the population distribution shown on Fig. 4 and height above sea level shown on Fig. 5.

.....
.....
.....
.....[2]

(ii) Suggest reasons for the relationship that you have described in (c)(i).

.....
.....
.....
.....[2]

[Total: 8 marks]

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3 (a) The coast shown in Photograph A (Insert) has a tourist industry. Using evidence from Photograph A **only**, explain why a tourist industry has developed on this coast.

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.....[3]

(b) Photograph B (Insert) shows two coastal landforms, **Y** and **Z**, which have formed by deposition. Explain how each of these landforms was formed.

Landform **Y**

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Landform **Z**

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.....[5]

[Total: 8 marks]

4 Figs 6, 7, 8 and 9 are cross sections through four plate margins (plate boundaries). Directions of plate movement are shown by arrows.

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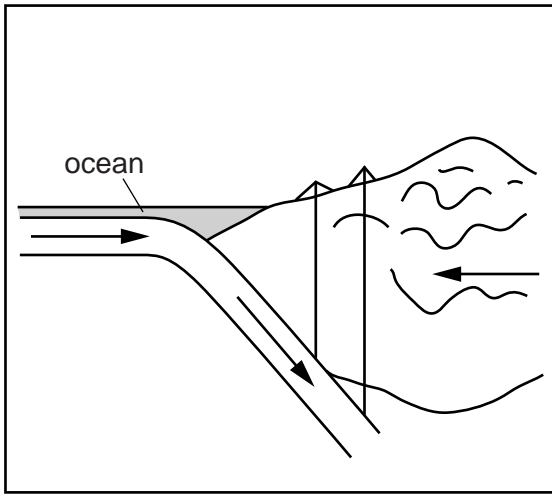


Fig. 6

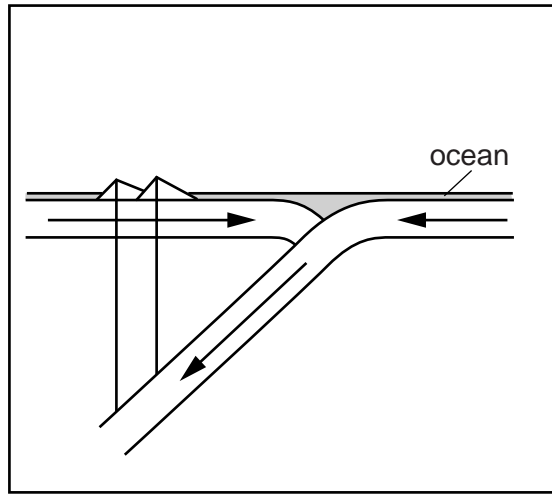


Fig. 7

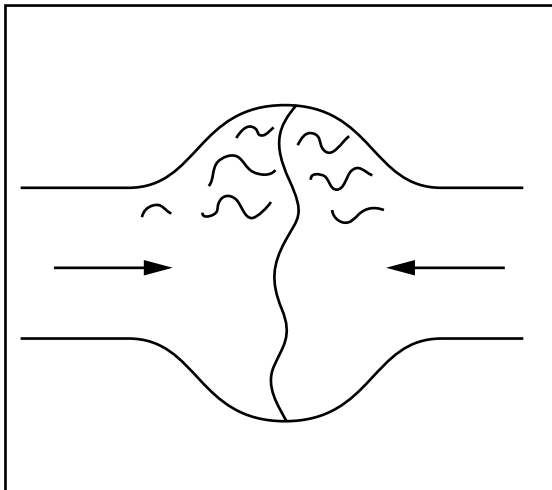


Fig. 8

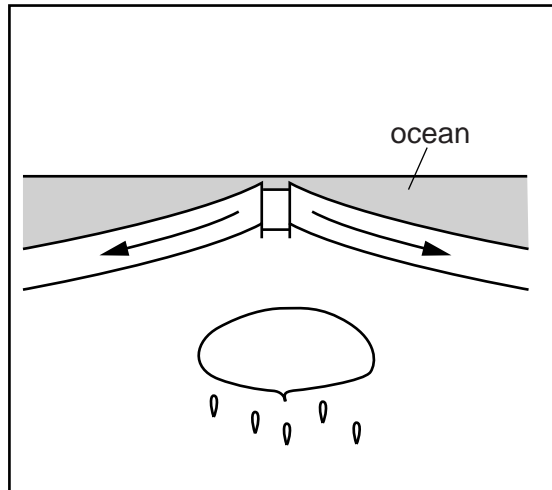


Fig. 9

(a) On Fig. 6 **only**, use labelled arrows to show the positions of:

- (i) a volcano; [1]
- (ii) fold mountains; [1]
- (iii) the focus of an earthquake. [1]

(b) Name the type of plate boundary shown in Fig. 9. [1]

(c) Fig. 10 is a map showing the world's plates, plate margins and plate movements. Six locations, A – F, are shown.

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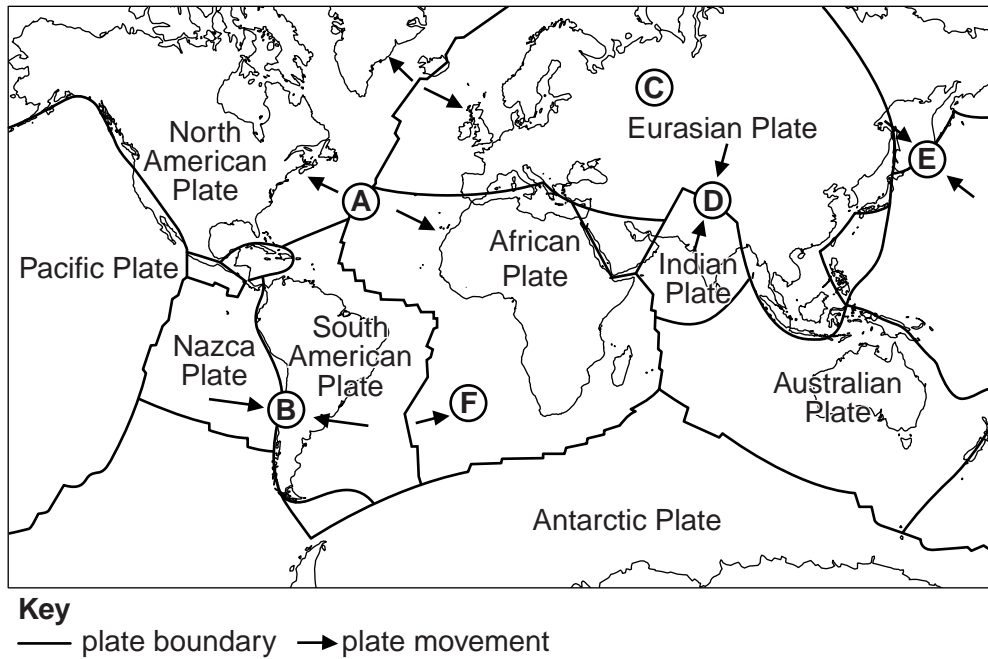


Fig. 10

For each of Figs 6, 7, 8 and 9 (opposite), identify its correct location, choosing from locations A – F on Fig. 10. Use each letter once only

- | | <i>Letter</i> |
|--------|---------------|
| Fig. 6 | |
| Fig. 7 | |
| Fig. 8 | |
| Fig. 9 | |

[4]

[Total: 8 marks]

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5 Photographs C and D (Insert) show an area where subsistence farmers are attempting to increase the food supply.

(a) (i) Which **two** of the descriptions in the table below apply to the farming system shown in Photograph C? Tick (✓) **two** correct answers.

	Tick (✓)
small scale	
pastoral	
large scale	
arable	

[2]

(ii) Name **one** output of the farming system shown in Photograph C.

.....[1]

(b) Name **two** outputs of the farming system shown in Photograph D.

1 2 [2]

(c) Using evidence from Photographs C and D **only**, describe **one** problem of the physical environment which will affect the decisions of the farmers.

.....
.....[1]

(d) Farmers in the area have chosen to carry out two types of farming, one shown in Photograph C and one shown in Photograph D. Suggest why they carry out both types of farming and not just one of them.

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.....[2]

[Total: 8 marks]

- 6 Carbon dioxide (CO₂) is a gas which occurs naturally but is also given out by vehicle exhausts, power stations, industrial processes and domestic heating. It has no direct health effects but is one of the “greenhouse gases”.

Fig. 11 shows carbon dioxide emissions for six countries between 1997 and 2007. Fig. 12 shows how carbon emissions changed over the same period.

**Total carbon dioxide emissions
1997 to 2007**

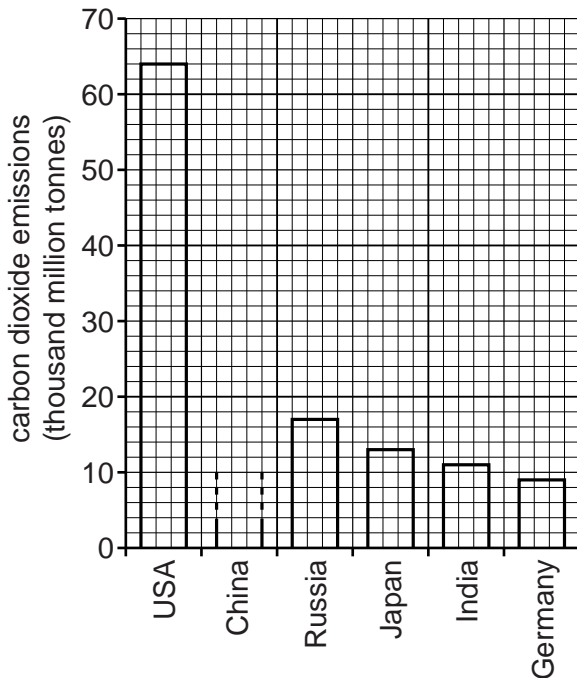


Fig. 11

**Change in carbon dioxide emissions
1997 to 2007**

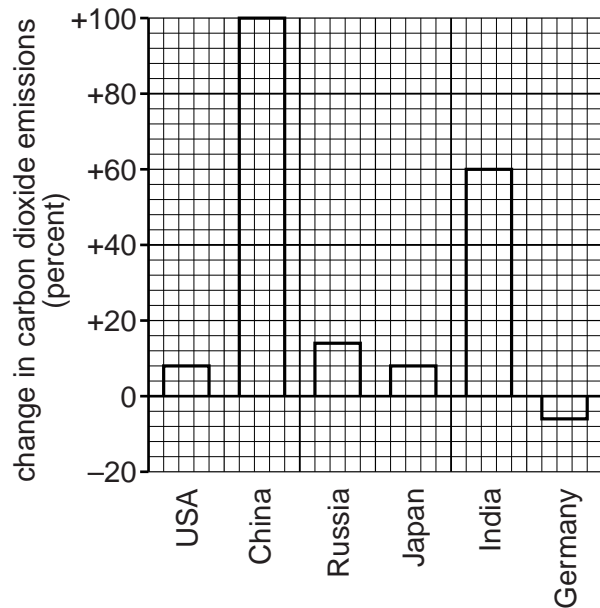


Fig. 12

- (a) (i) China emitted 45 thousand million tonnes of carbon dioxide between 1997 and 2007. Plot this information on Fig. 11. [1]
- (ii) How much carbon dioxide did Russia emit between 1997 and 2007?
 thousand million tonnes [1]
- (b) (i) Which **one** of the six countries decreased its carbon dioxide emissions between 1997 and 2007?
[1]
- (ii) In 1997 China emitted 3.1 thousand million tonnes of carbon dioxide. Using information from Fig. 12, calculate how much carbon dioxide was emitted in 2007. Tick **one** correct answer below.

	Tick (✓)
3.1 thousand million tonnes	
6.2 thousand million tonnes	
9.3 thousand million tonnes	
12.4 thousand million tonnes	

[1]

(c) Fig. 13 shows the “greenhouse effect”.

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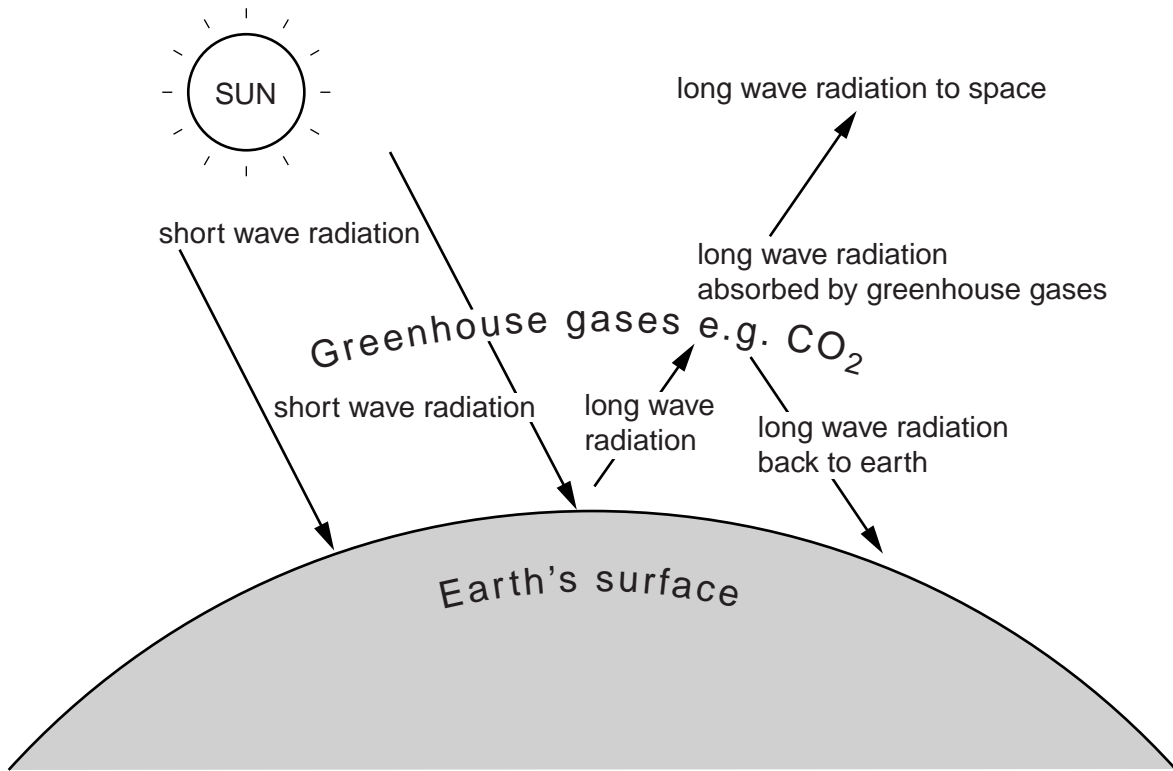


Fig. 13

Using information from Fig. 13 **only**, explain how increases in the carbon dioxide content of the atmosphere could lead to climatic changes.

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.....[4]

[Total: 8 marks]

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Copyright Acknowledgements:

Question 3 Photographs A and B
Question 5 Photographs C and D
Question 6 Figs 11 and 12

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© *Total Carbon Dioxide Emissions from the Consumption of Energy*,
<http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=90&pid=44&aid=8>.

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