UNIVERSITY OF CAMBRIDGE INTERNATIONAL EX
International General Certificate of Secondary Educati

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CAN NUMBER

9731119605

GEOGRAPHY **0460/22**

Paper 2 **May/June 2013**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper
Calculator

1:25 000 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.
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 **18** printed pages, **6** blank pages and **1** Insert.

© UCLES 2013

UNIVERSITY of CAMBRIDGE International Examinations

PA CAMBRIDGE

BLANK PAGE

© UCLES 2013

1 Study the map extract for La Ferme Reservoir, Mauritius. The scal

(a) (i) Height above sea level is shown by contour lines. What between the contours on this map? Tick **one** answer bel

	Tick (✓)
1 m	
10 m	
20 m	
50 m	
100 m	

[1]

(ii) The map has grid lines which make squares. What area of land does one grid square show? Tick **one** answer below.

	Tick (✓)
1 km^2	
10 km^2	
20 km^2	
50 km^2	
100 km^2	

[1]

© UCLES 2013

PA CAMBRIDGE

(b) Fig. 1 shows some of the features in the north east part of th
and the map extract, and answer the questions below.

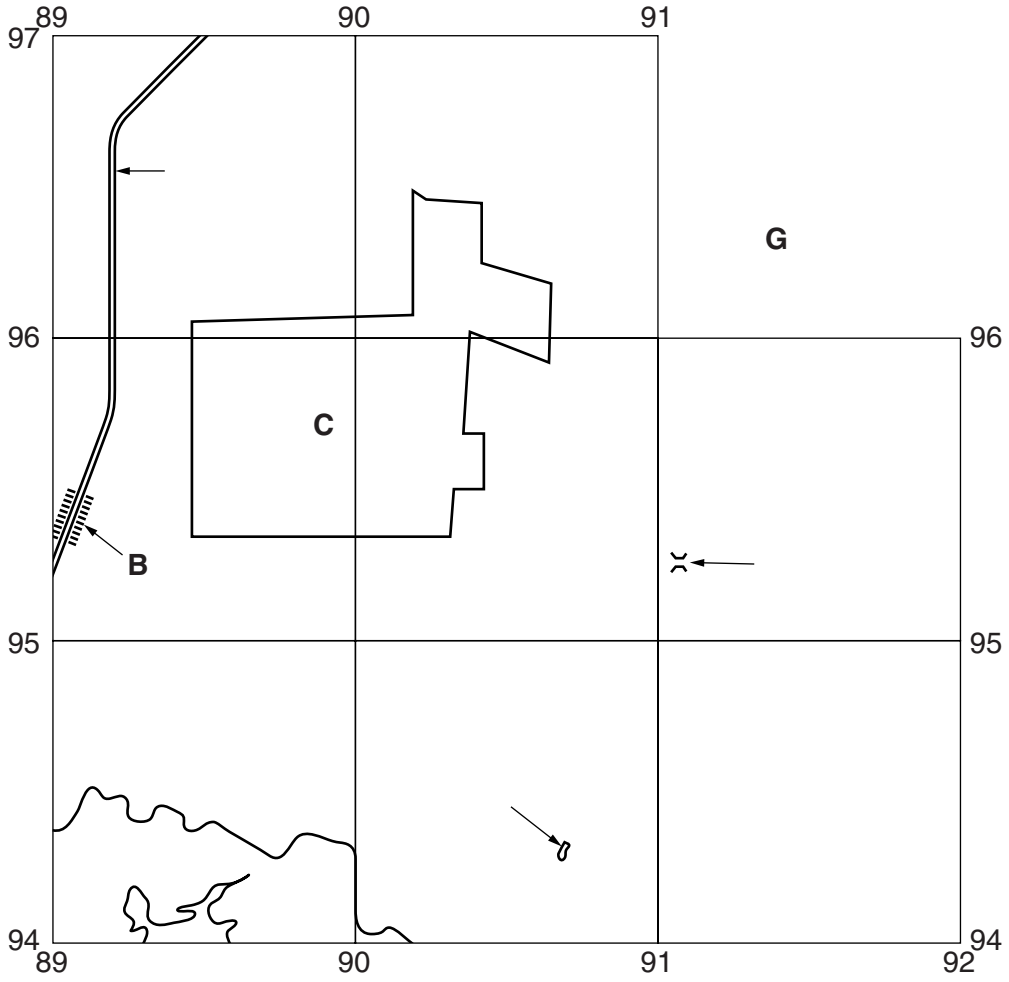


Fig. 1

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

(i) the type of road at **A**;

.....[1]

(ii) feature **B**;

.....[1]

(iii) the land use at **C**;

.....[1]

(iv) the type of land at **D**;

.....[1]

(v) feature **E**;

.....[1]

© UCLES 2013

(vi) feature **F**;

.....

(vii) the type of boundary at **G**.

.....

(c) Fig. 2 shows the location of two grid squares in the west part
are grid square 8495 at Pte Moyenne and grid square 8694 a

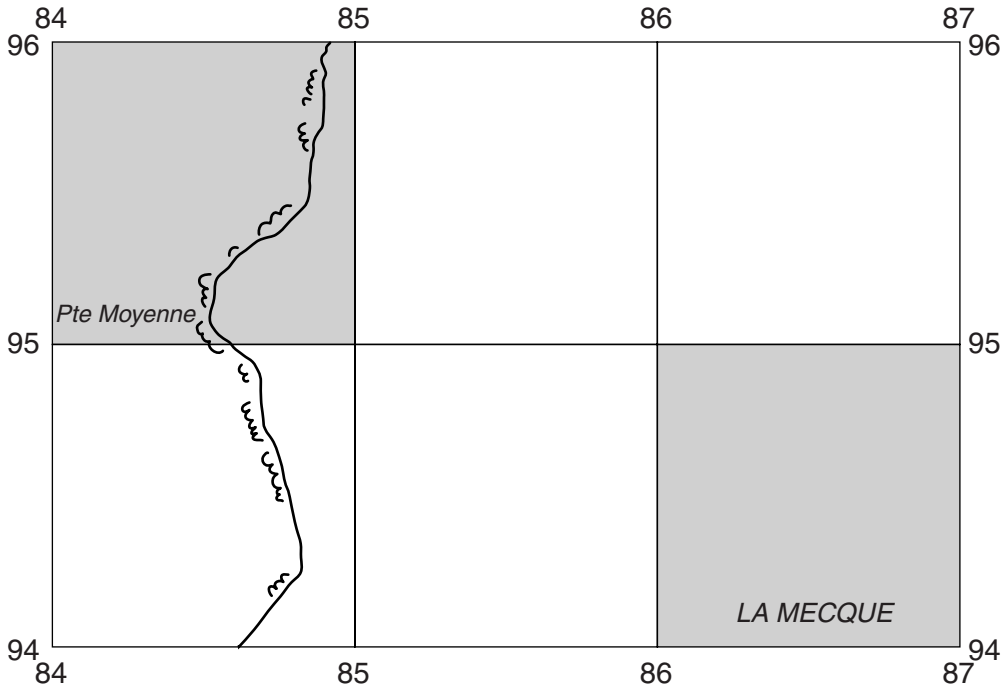


Fig. 2

The table below compares the features of the two grid squares. Complete the table by putting ticks in the correct **five** boxes. Use only **one** tick for each row.

	Pte Moyenne (8495)	La Mecque (8694)	Both these areas	Neither of these areas
Example: sugar plantation			✓	
coral				
a river or watercourse				
a populated area				
forest				
gentle slopes				

[5]

© UCLES 2013

PA CAMBRIDGE

(d) Fig. 3 shows an area in the south east of the map extract.

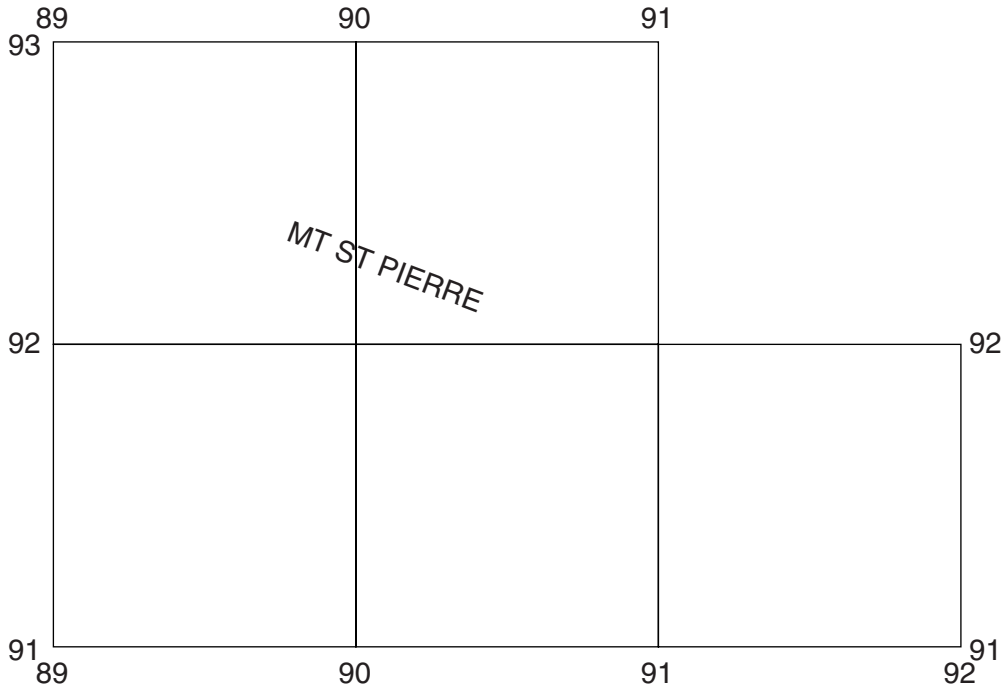


Fig. 3

Describe the relief of the area shown on Fig. 3.

.....

.....

.....

.....

.....

.....[3]

(e) Look at the straight part of the Rivière Noire road from the southern edge of the map to the bend at 874935 at the settlement at Bambous.

(i) Measure the distance along the straight part of the road. Give your answer in metres.

.....metres [1]

(ii) What is the compass direction along the road from the southern edge of the map to Bambous?

.....[1]

© UCLES 2013

PA CAMBRIDGE

(f) A person walks from La Ferme Reservoir southwards to t
St Pierre. The horizontal distance walked is 700 m and the
What is the average gradient of the walk?

Answer .....[1]

[Total: 20 marks]

© UCLES 2013

PA CAMBRIDGE

2 Fig. 4 is a map showing the hierarchy of settlements in an area.

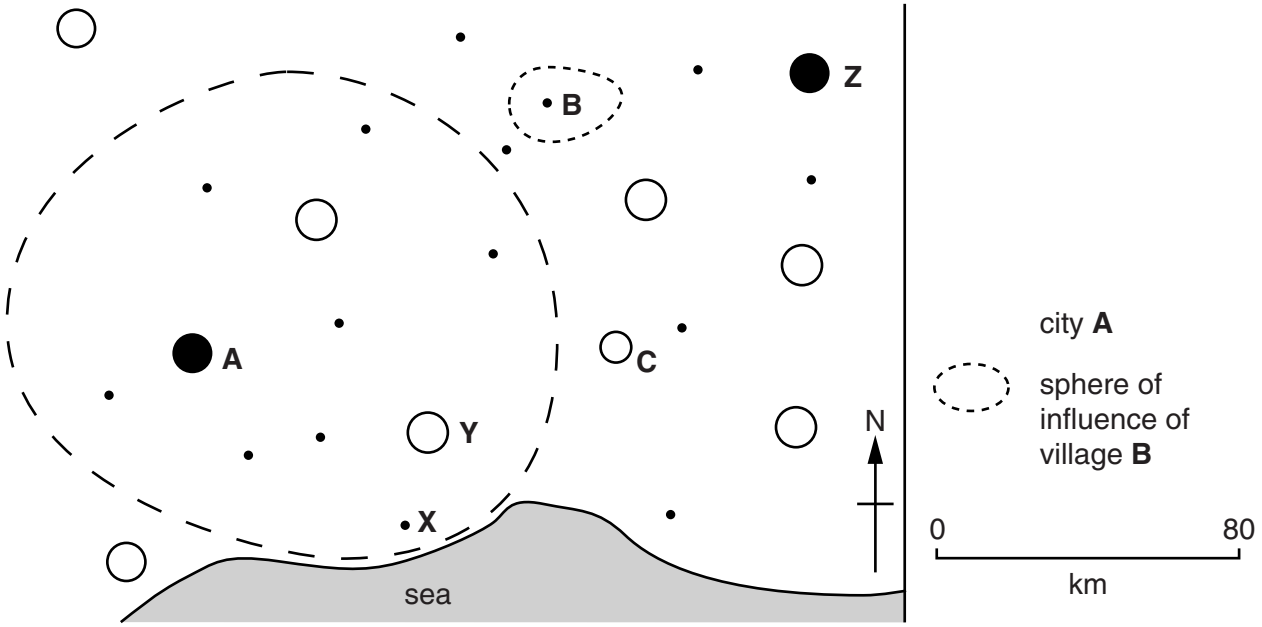


Fig. 4

Fig. 5 shows the number of low order and high order settlements in the area.

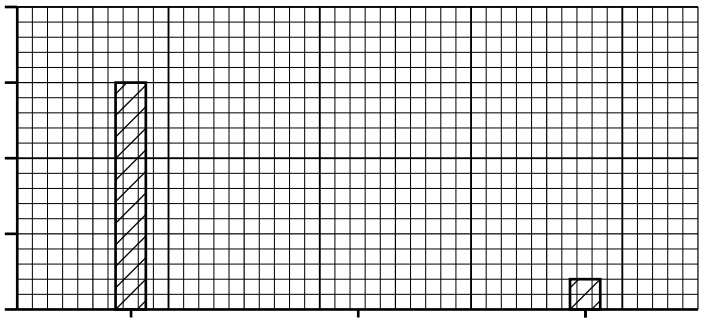


Fig. 5

(a) (i) Using information from Fig. 4, complete Fig. 5 by adding the number of middle order settlements in the area. [1]

(ii) Using Fig. 4, estimate the average distance apart of the low order settlements. Tick (✓) **one** correct answer below.

Average distance apart (km)	Tick (✓)
10	
40	
80	
100	

[1]

© UCLES 2013

(b) The sphere of influence is the area served by a settlement. T city **A** and village **B** are shown on Fig. 4.

(i) On Fig. 4, draw the likely sphere of influence of town **C**.

(ii) Suggest why the sphere of influence of village **B** is small

.....

.....

.....[1]

(c) Table 1 gives information about where the people who live in village **X**, shown on Fig. 4, go to get some of their services.

Table 1

Service	Settlement where people go for service	Distance travelled to the service	How often the service is used
grocery shop	village **X**	less than 1 km	almost every day
primary school	village **X**	less than 1 km	almost every day
bank	town **Y**	25 km	monthly
clothes shop	town **Y**	25 km	every 2–3 months
furniture store	city **Z**	160 km	once a year
airport	city **Z**	160 km	once a year

(i) Why do the people usually prefer to use the grocery shop and primary school in village **X** rather than in another settlement?

.....

.....[1]

(ii) Why are there no banks and clothes shops in village **X**?

.....

.....[1]

(iii) Give **one** example of a high order service listed in Table 1.

.....[1]

(iv) The people from village **X** prefer to use the furniture store in city **Z**, although the furniture stores in city **A** are closer. Suggest **one** possible reason for this.

.....

.....[1]

[Total: 8 marks]

© UCLES 2013

IPA CAMBRIDGE

3 **(a)** Photograph A (Insert) shows an area affected by erosion an evidence seen in Photograph A for each of these processes.

Evidence for **erosion** .....

.....

.....

.....

.....

.....

.....

.....

Evidence for **weathering** .....

.....

.....

.....

.....

.....

.....

.....[4]

© UCLES 2013

(b) Photograph B (Insert) shows another area affected by weath

(i) Describe the effects of weathering on the rocks in Photo

.....

.....

.....

.....

.....

.....[3]

(ii) Suggest **one** process of **physical** weathering which may have affected the rocks.

.....[1]

[Total: 8 marks]

© UCLES 2013

PA CAMBRIDGE

4 Fig. 6 shows the location of the world's active volcanoes and plat of 6 of the most dangerous volcanoes is also shown.

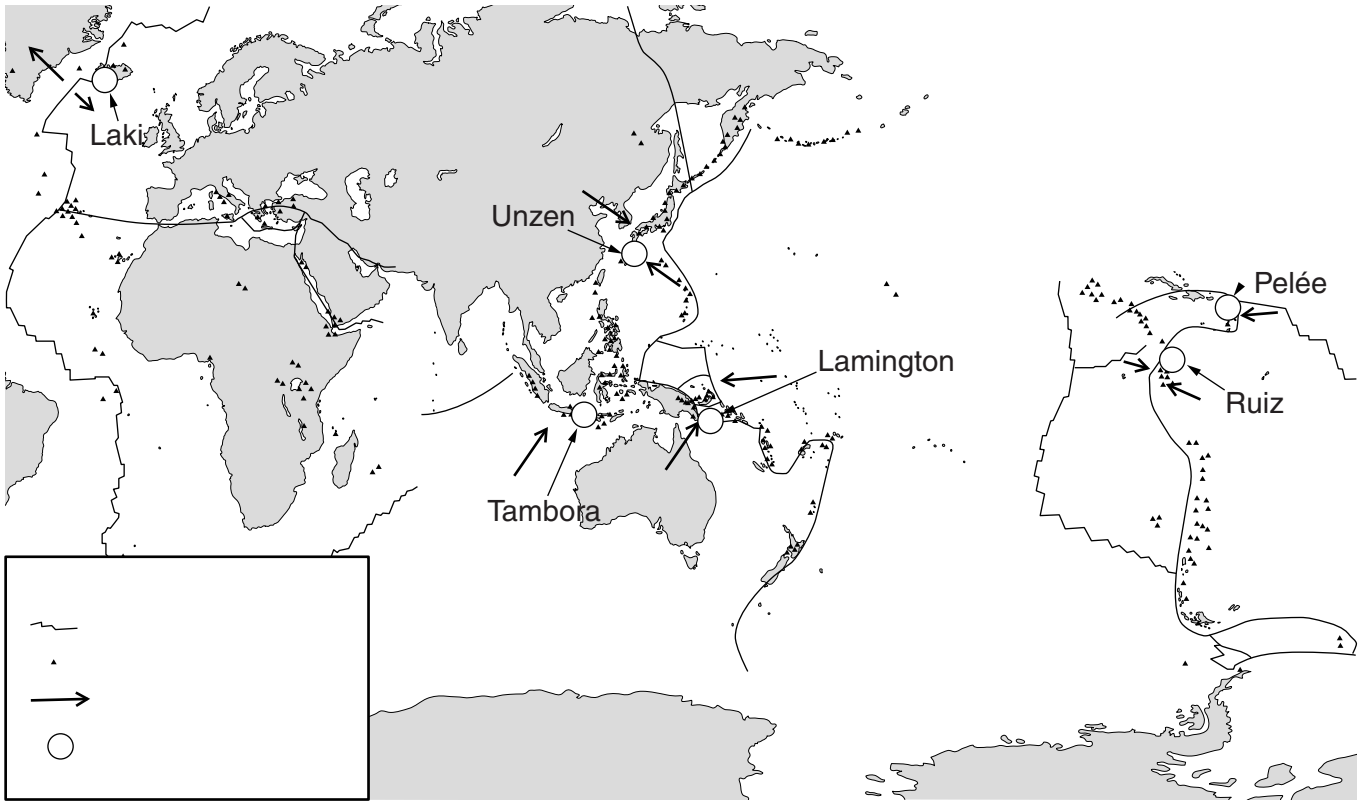


Fig. 6

(a) Tick (✓) **one** correct statement in **each** of **(i)**, **(ii)** and **(iii)** below.

(i)

Statement	Tick
There are no active volcanoes in the continents	
There are no active volcanoes in Africa	
There are no active volcanoes in Asia	
There are active volcanoes in Africa, Asia, Europe, North America and South America	

[1]

(ii)

Statement	Tick
There are active volcanoes close to most coastlines	
There are active volcanoes close to most coastlines of the Pacific Ocean	
There are active volcanoes close to most coastlines of the Atlantic Ocean	
There are active volcanoes close to most coastlines of the Indian Ocean	

[1]

© UCLES 2013

PA CAMBRIDGE

(iii)

Statement
All plate boundaries have active volcanoes
All active volcanoes are close to plate boundaries
Most active volcanoes are close to plate boundaries
Most active volcanoes are away from plate boundaries

(b) For **one** of the volcanoes **named** on Fig. 6, explain why it has formed at the location shown.

Name of volcano .....

Why it has formed at the location shown

.....

.....

.....

.....

.....[2]

© UCLES 2013

PA CAMBRIDGE

(c) Table 2 gives information about six dangerous eruptions of Fig. 6.

Table 2

Number on Fig. 6	Volcano	Location	Year of eruption	Numbe death	
1	Laki	Iceland	1783	9350	
2	Unzen	Japan	1792	1430	tsunami
3	Tambora	Indonesia	1815	92000	ash cloud
4	Mount Pelée	Martinique	1902	29025	pyroclastic flows (nuée ardente)
5	Lamington	Papua New Guinea	1951	2942	pyroclastic flows (nuée ardente)
6	Ruiz	Colombia	1985	25000	lahars (mudflows)

As a result of volcanic activity, 1783 and 1815 were very cold years. Use information from Table 2 to explain this.

.....

.....

.....

.....

.....

.....[3]

[Total: 8 marks]

© UCLES 2013

PA CAMBRIDGE

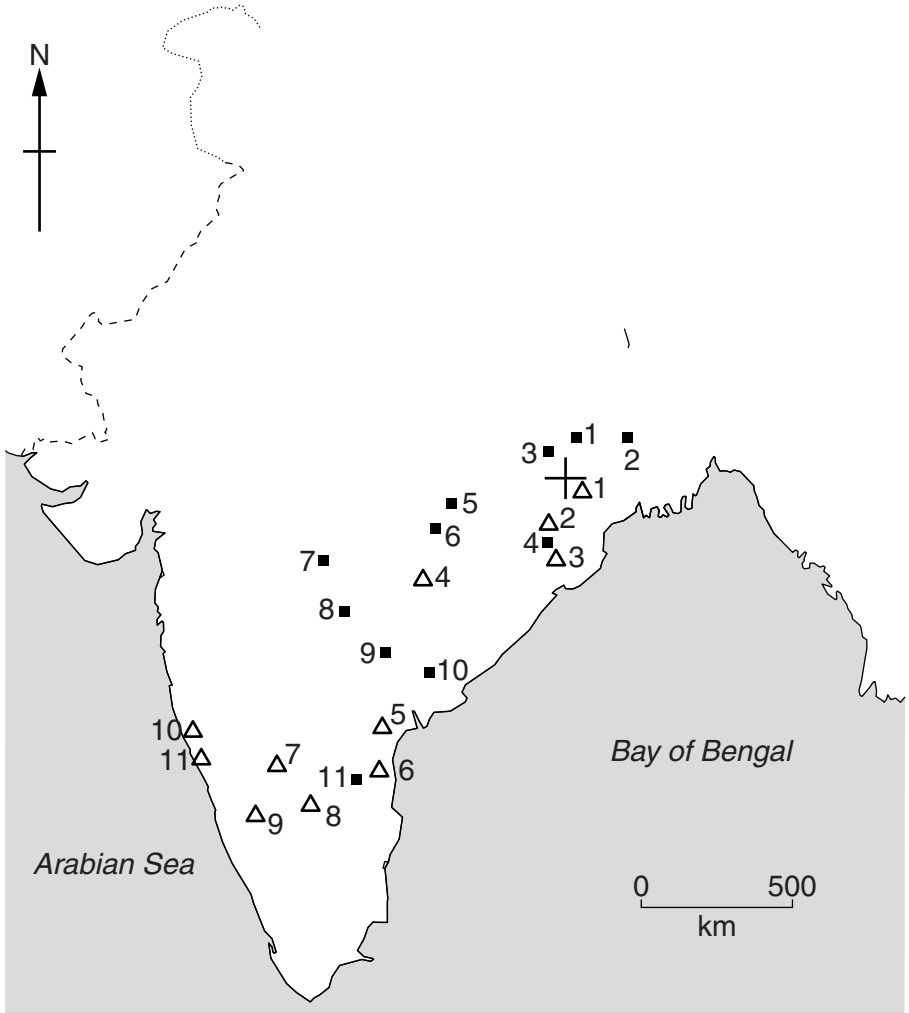
BLANK PAGE

TURN OVER FOR QUESTION 5

© UCLES 2013

PA CAMBRIDGE

5 Fig. 7 shows the location of India's biggest steel manufacturing the country's iron ore and coal mines.



Key

international boundary

Jamshedpur steel works

△ iron ore mines

■ coal mines

1	East Singhbhum	1	Jhana
2	Sundargarh	2	Raniganj
3	Keonjhar	3	Bokara
4	Durg	4	Talcher
5	Guntur	5	Bisrampur
6	Ongole	6	Korba
7	Belery	7	Wardah
8	Chitaurgarh	8	Adilabad
9	Chikmagalooru	9	Warangal
10	North Goa	10	Godvari Valley
11	South Goa	11	Cuddapah

Fig. 7

© UCLES 2013

PA CAMBRIDGE

(a) Using Fig. 7, describe the distribution of iron ore mines and c

Iron ore mines .....

.....

.....

.....

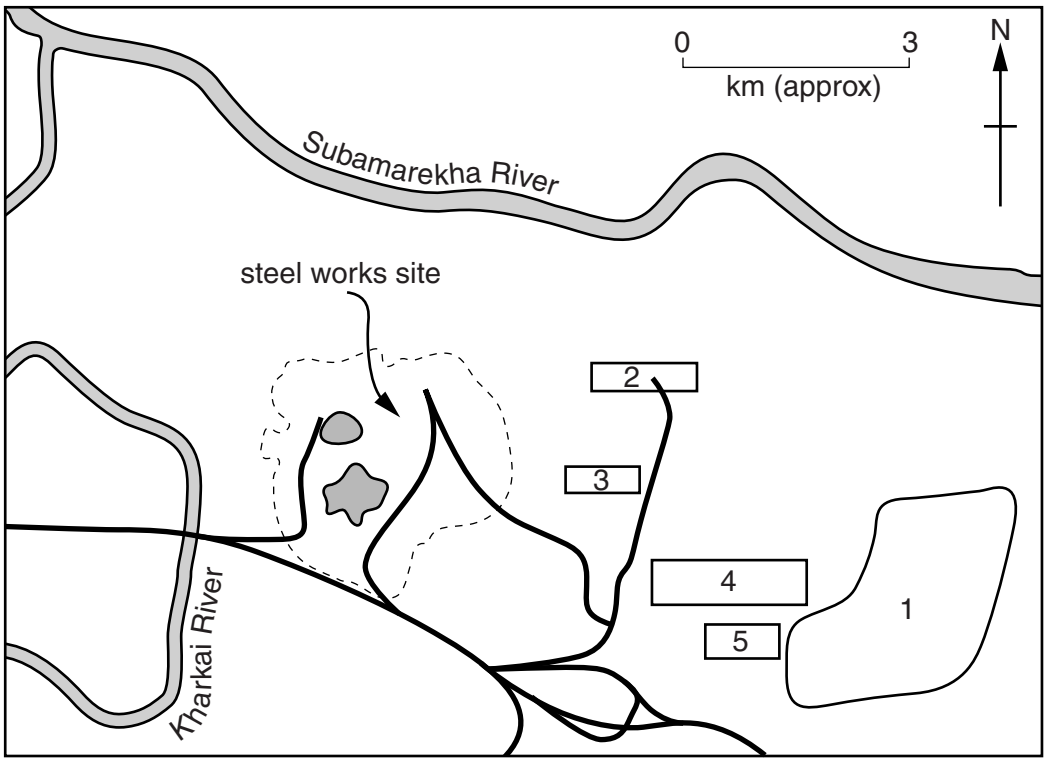
Coal mines .....

.....

.....

.....[3]

(b) Fig. 8 shows the site of the steel works in Jamshedpur.



Key

railway river lake

boundary of steel works

Other industries
1 heavy vehicles and earth moving equipment
2 coated metal sheets
3 steel cables
4 steel pipes
5 wire products

Fig. 8

© UCLES 2013

IPA CAMBRIDGE

(b) Using Figs 7 and 8 **only**, explain the advantages of the positi
works for each of the following factors. Give evidence from Fi

(i) Raw materials (iron ore and coal) .....

.....

.....

.....

(ii) Cooling water .....

.....[1]

(iii) Transport .....

.....[1]

(iv) Markets .....

.....[1]

[Total: 8 marks]

© UCLES 2013

6 It is estimated that there are 20 million km^2 of damaged soils in th

(a) Table 3 shows the main types of soil damage.

Table 3

Type of damage	Percent
eroded by water	
eroded by wind	
other e.g. decline in fertility, increase in acidity	16%

Use the information in Table 3 to complete Fig. 9 below. Use the key provided.

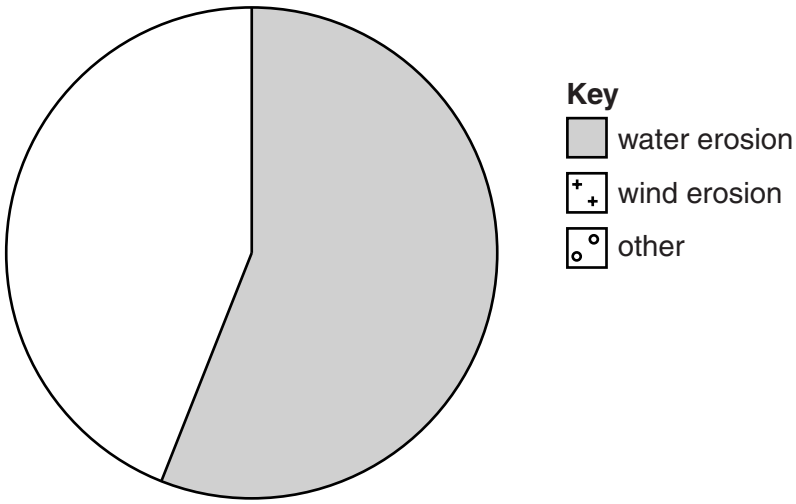


Fig. 9

[3]

(b) Which of the following factors is **not** a cause of soil erosion by water? Tick (✓) **one** box.

Factor	Tick
steep slopes	
heavy rainfall	
grazing many animals on a small area	
strong winds	
burning of vegetation	

[1]

© UCLES 2013

PA CAMBRIDGE

(c) A farmer in an area affected by soil erosion by water is ab
natural vegetation. The farmer needs to make decisions abo
in a way that prevents soil erosion.

For each of the following, tick the correct decision to preve
your choice.

(i)

Remove the natural vegetation completely		Leave strips o between the p	

Explanation .....

.....

.....[1]

(ii)

Plough horizontally across the slope of the hillside		Plough up and down the hillside	

Explanation .....

.....

.....[1]

(iii)

Concentrate on growing the crop that produces the highest yield per hectare		Grow a different crop on each plot for the first three years	

Explanation .....

.....

.....[1]

(iv)

Allow cattle to graze on the remains of the crop after harvest		Fence the land and keep animals away	

Explanation .....

.....

.....[1]

[Total: 8 marks]

© UCLES 2013

PA CAMBRIDGE

BLANK PAGE

© UCLES 2013

BLANK PAGE

© UCLES 2013

BLANK PAGE

© UCLES 2013

BLANK PAGE

Copyright Acknowledgements:

Question 3 Photographs A & B D Kelly © UCLES.

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2013