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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

7006612826

GEOGRAPHY **0460/23**

Paper 2 **October/November 2012**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper

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 Photograph A for Question 3 and Photograph B for Question 4.
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.

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1 The map extract is for Providence, Mauritius. The scale is 1:25 000.

For Examiner's Use

(a) Fig. 1 shows the positions of some features in the north west of the map.

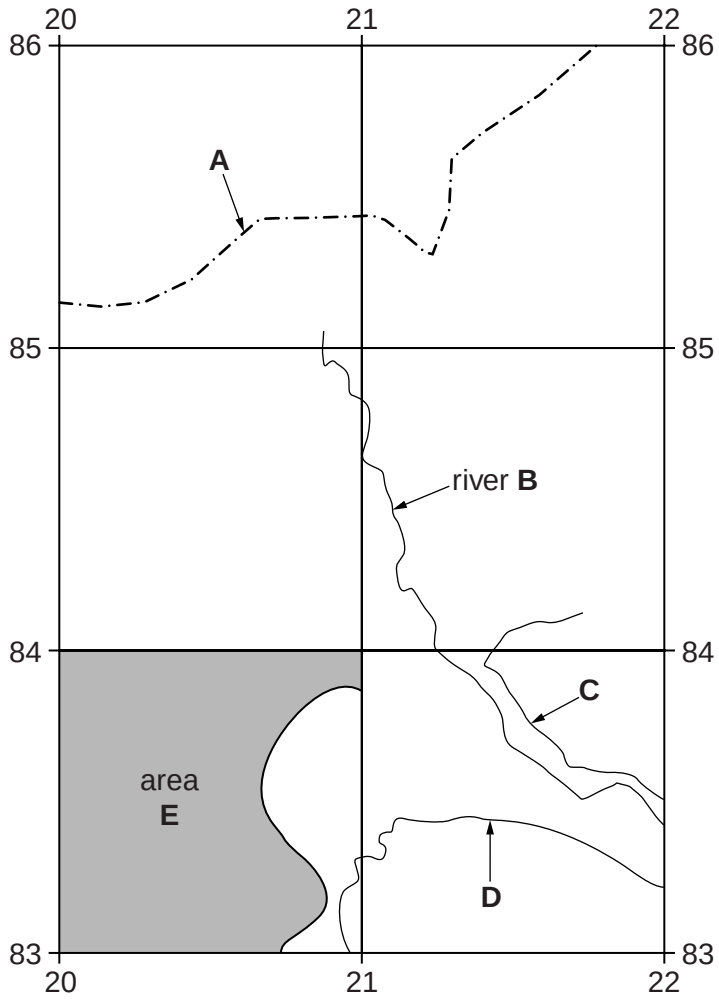

Fig. 1

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

(i) feature **A**;

.....[1]

(ii) the name of river **B**;

.....[1]

(iii) the type of road **C**;

.....[1]

(iv) feature **D**;

.....[1]

(v) the main vegetation type in the shaded area **E**.

.....[1]

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(b) (i) Name the buildings providing different services in the settlements on the map.

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.....

.....

.....

.....[2]

(ii) Describe the settlement pattern and distribution in the area of the map.

pattern .....

distribution .....

.....

.....

.....

.....

.....[4]

(c) Use the map to explain why there is no settlement in grid square 2284.

.....

.....

.....

.....

.....

.....

.....

.....[4]

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(d) Describe the physical features of the coast on the map.

For Examiner's Use

.....

.....

.....

.....

.....

.....[3]

(e) **(i)** Find Lion Mountain and the pier south of grid line 82. Circle the bearing, in degrees from grid north, of the pier from the trigonometrical station on Lion Mountain.

60 120 240 300 [1]

(ii) State the six figure grid reference of the trigonometrical station on Lion Mountain.

.....[1]

[Total: 20 marks]

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2 **(a)** Fig. 2 gives information about settlement hierarchy.

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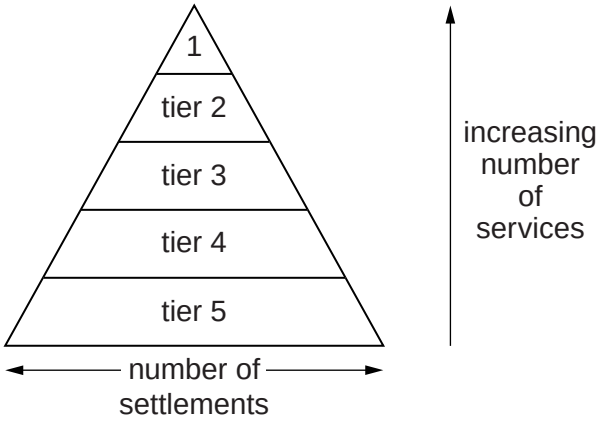

Fig. 2

(i) Which tier of the hierarchy shown in Fig. 2 has the most services?

.....[1]

(ii) Which tier of the hierarchy has the greatest number of settlements?

.....[1]

(b) Table 1 gives information about settlements in a rural area. Use Table 1 to answer the questions which follow.

Table 1

tier	settlement	population	number of general stores	number of banks	number of schools	number of doctors' clinics	number of hospitals	number of libraries	meeting place or village hall present	places of worship present
2	A	12549	9	4	5	4	1	2	✓	✓
3	B	7456	2	2	4	1		1	✓	✓
3	C	4754	2	1	3	1		1	✓	✓
3	D	4517	4	1	2	1		1	✓	✓
4	E	3370	2		1	1			✓	✓
4	F	2707	1		2	2		1	✓	✓
4	G	2277	1		1	1			✓	✓
4	H	1849	1		1				✓	✓
4	I	1195	1		1	1			✓	✓
5	J	1024			1				✓	✓
5	K (7 others in the tier omitted)	616							✓	✓

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(i) Name **one** service found in all the settlements shown in Table 1.

.....[1]

(ii) Which service is present in tier 2 but not in any other tiers?

.....[1]

(iii) How many general stores does settlement D have?

.....[1]

(iv) In what way is settlement J different from the other settlement in tier 5?

.....

.....[1]

(v) From the evidence in Table 1, suggest why settlement J was not placed in tier 4.

.....

.....[1]

(vi) State the letter of a settlement that does not fit the pattern for the number of schools provided for the population.

.....

.....[1]

[Total: 8 marks]

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3 Study Photograph A (Insert), which shows part of Mount Etna, the largest volcano in Europe. Recent volcanic deposits can be seen in the foreground. Use Photograph A to answer the questions which follow.

(a) Describe:

(i) the volcanic deposits in the centre and foreground of Photograph A;

.....

.....

.....

.....[2]

(ii) the shape and features of the volcano in the photograph.

.....

.....

.....

.....[2]

(iii) State the evidence that an eruption had not affected the area for a considerable time before the one which resulted in the recent deposits shown in Photograph A.

.....

.....[1]

(b) (i) Volcanoes have economic benefits, one of which is suggested by the hotel which was under construction when the volcano erupted. What economic benefit will this hotel bring?

.....[1]

(ii) Suggest why building work on the hotel has ceased.

.....

.....

.....

.....[2]

[Total: 8 marks]

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4 **(a)** Study Photograph B (Insert), which shows an area of coastal deposition and Fig. 3, a map of the area in which the photograph was taken.

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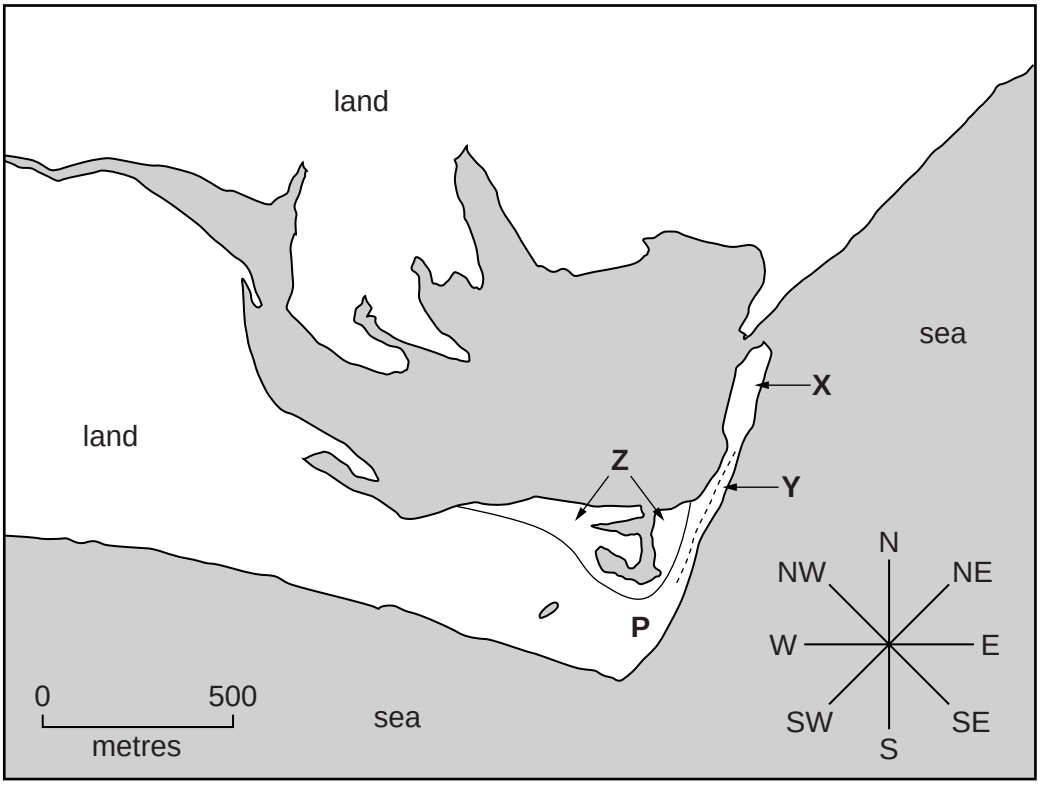

Key
P the point from which Photograph B was taken

Fig. 3

(i) Identify the features labelled **X**, **Y** and **Z** on Fig. 3 and on Photograph B. Circle the correct answer from the options below:

X	bar	bay	spit	
Y	bay	marsh	sand dunes	
Z	bar	marsh	sand dunes	[3]

(ii) Describe feature **Z**.

.....

.....

.....

.....

.....

.....[3]

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(iii) Explain why feature **Z** formed by deposition at this location.

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.....

.....[1]

(b) Using Fig. 3 and Photograph B, state the approximate direction in which the camera was pointing when the photograph was taken.

.....[1]

[Total: 8 marks]

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[Turn over

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5 **(a)** Fig. 4 is a diagram of a power station in Norway, a country which generates 98% of its electricity in hydro-electric power (HEP) stations. Norway is in northern Europe.

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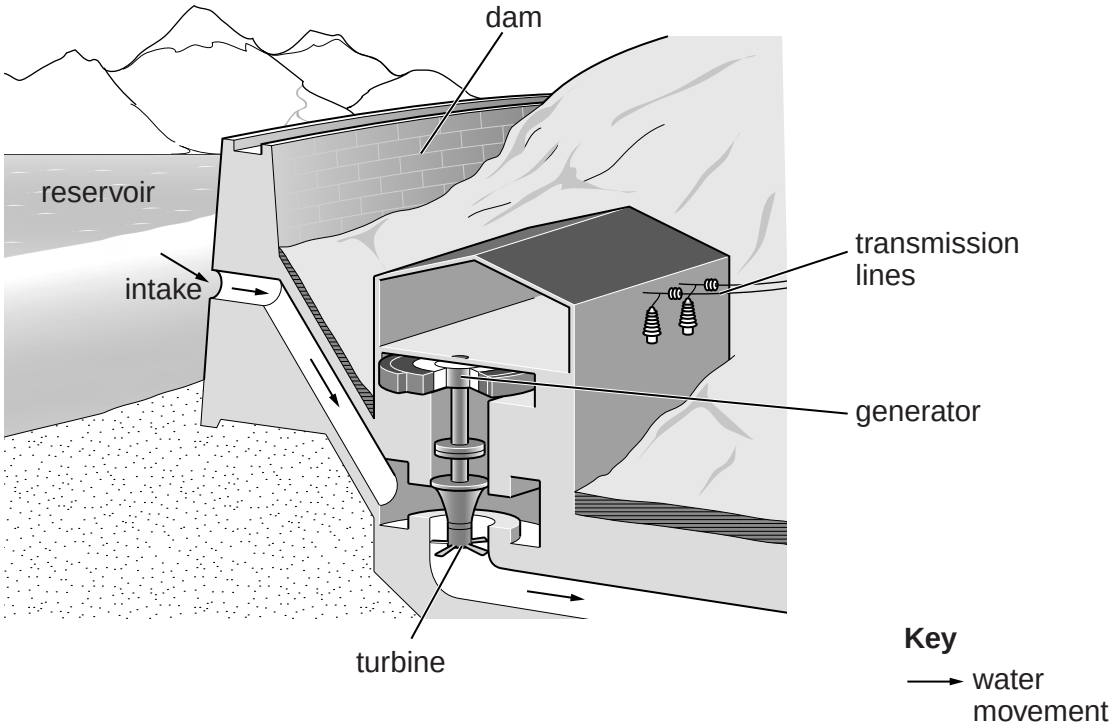

Fig. 4

Use Fig. 4 to:

(i) explain why the power station is on lower ground than the reservoir;

.....

..... [1]

(ii) explain how the relief of the area provides a good site for the reservoir;

.....

.....

.....

..... [2]

(iii) suggest **one** disadvantage of this HEP scheme for the people in the area.

.....

..... [1]

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(b) Fig. 5 is a climate graph for the area of the HEP scheme.

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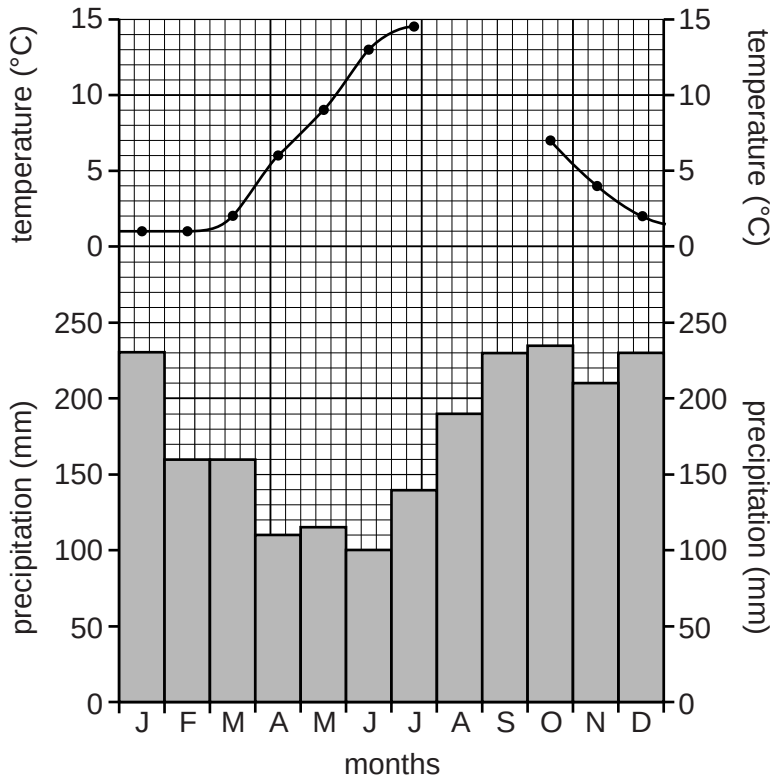

Fig. 5

(i) Complete Fig. 5 by plotting the information given in Table 2 below.

Table 2

month	temperature (°C)
August	14
September	11.5

[2]

(ii) Describe the advantages of the climate of this place for HEP production.

.....

.....

.....

.....[2]

[Total: 8 marks]

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6 Study Fig. 6, which gives information about possible future global and local food shortages.

For Examiner's Use

Some experts are predicting that demand for food will increase by 50% by 2030. At the same time, the world's population is expected to increase by about 2.2 billion. In newly industrialising countries higher living standards are leading to a demand for better and more varied diets, often in competition with people in MEDCs for the type of food they have traditionally eaten. Consequently, food prices will rise and it will be the world's poorest people who will suffer most.

It is hoped that new crop varieties will be developed which will be more resistant to adverse weather conditions.

Fig. 6

(a) The pie graph, Fig. 7A, shows what percentage, on average, of total spending in MEDCs is used for food.

MEDCs

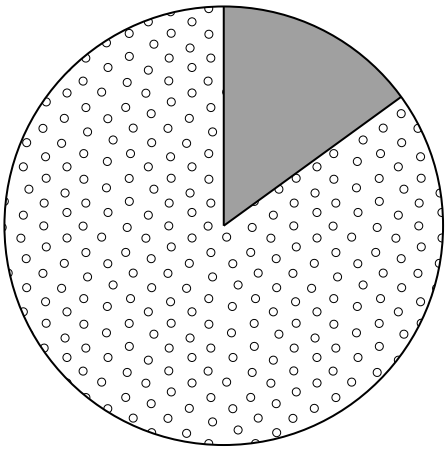

Fig. 7A

LEDCs

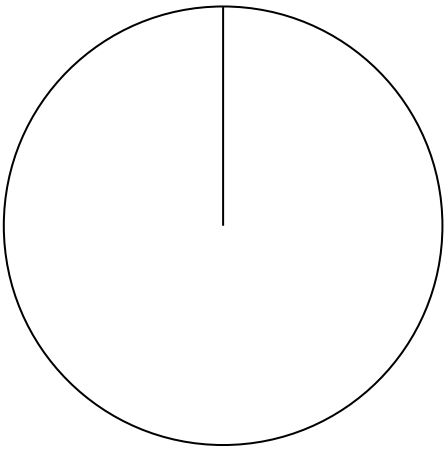

Fig. 7B

Key

spending on food

spending on other items

(i) What average percentage of total spending is used for food in MEDCs?

.....% [1]

(ii) On Fig. 7B show that, on average, people in LEDCs use 70% of their spending on food. Use the key provided. [1]

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(b) **(i)** Fig. 8 shows the wheat harvest in 2003 in Australia. Add a bar on Fig. 8 to show that only 9.8 million tonnes was produced in 2006 when the rains failed.

For Examiner's Use

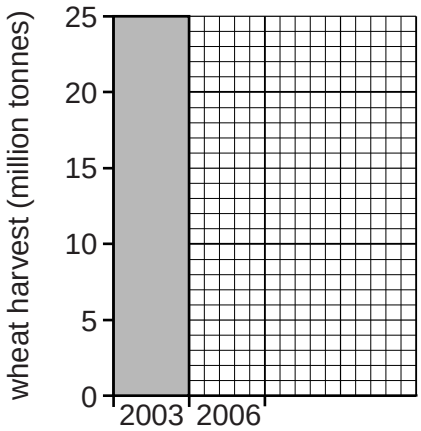

Fig. 8 [1]

(ii) By how much was the harvest reduced in 2006 compared with 2003?

..... million tonnes. [1]

(c) Using the information in Figs 6 and 8 and your own knowledge, explain why it may not be possible to prevent food shortages at times in the future.

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.....

.....

.....

.....

.....

.....[4]

[Total: 8 marks]

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Question 4 Photograph B © M Fretwell (c) UCLES.
Question 5 Fig. 4 © *How is Electricity Produced;* http://www.statkraft.com/Images/Aura_brosjyre_E_tcm4-7240_tcm9-2951.pdf.

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