



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
NUMBER

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GEOGRAPHY

2217/23

Paper 2

May/June 2010

2 hours 15 minutes

Candidates answer on the Question Paper.

- Additional Materials: Ruler
 Calculator
 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.

Section A

Answer **all** questions.

Section B

Answer **one** question.

Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

Insert contains Photograph A for Question 3, Fig. 8 for Question 6, Figs. 9 and 10 for Question 7 and Photograph B and Fig. 14 for Question 8.

The Survey Map Extract and the Inserts 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

Section A

Q1

Q2

Q3

Q4

Q5

Q6

Section B

Q7

Q8

Total

This document consists of **25** printed pages, **3** blank pages and **1** Insert.



Section A

Answer **all** questions in this section.

For
Examiner's
Use

1 Study the 1:25 000 map of Curepipe, Mauritius.

(a) Give the six-figure grid reference of the Town Hall in Curepipe.

..... [1]

(b) Give the compass direction and distance along the St Paul Road from the turn at Vacoas (954884) to the junction at St Paul (981898).

Direction.....

Distance..... metres [2]

(c) Complete Fig. 1, to compare the settlement in grid square 9787 (Floreal) with grid square 9986 (Curepipe).

	Floreal	Curepipe
Size of blocks of buildings in town		
Density of building		
Availability of services		

Fig. 1 [3]

(d) A sugar factory is located in grid square 9687. Suggest why this is a good location for a sugar factory.

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..... [3]

(e) Describe the relief and drainage in grid square 9886.

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..... [4]

(f) Study the valley of the River du Rempart to the west of the map. Describe the valley using the following headings:

(i) vegetation and agriculture,

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..... [3]

(ii) other evidence of human activity.

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..... [3]

(g) State the compass direction of the flow of the River du Rempart.

..... [1]

[Total: 20 marks]

2 Study Fig. 2, which shows data for a hydro-electric power station in **northern Europe**.

For
Examiner's
Use

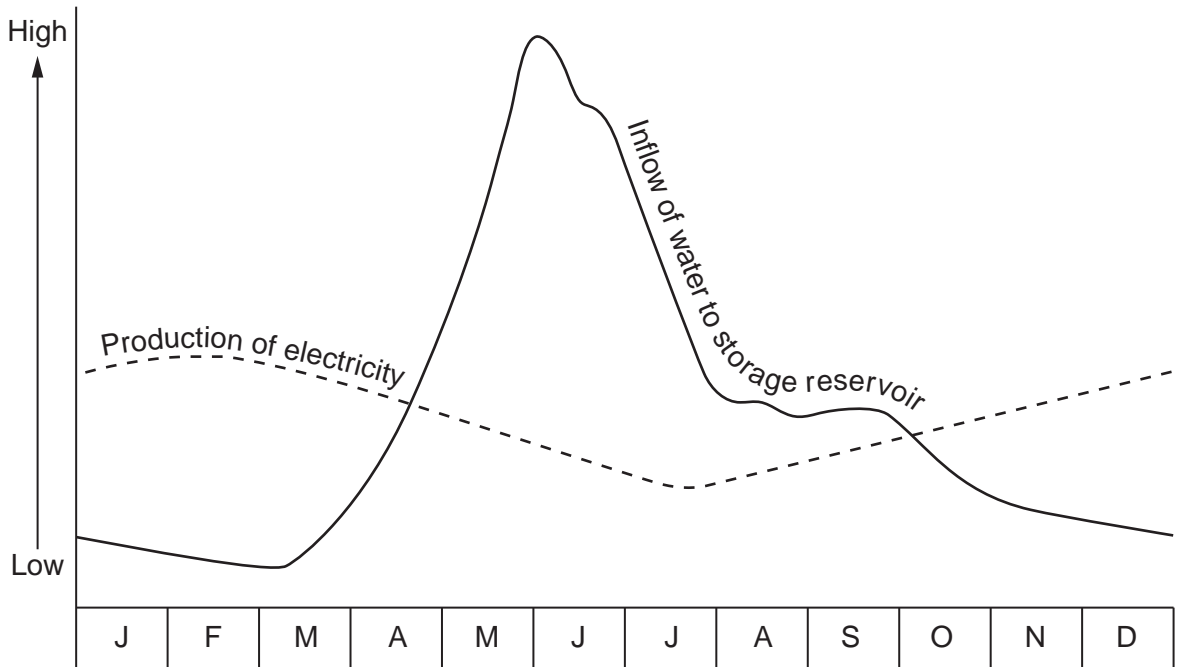


Fig. 2

(a) Describe how the inflow of water to the storage reservoir varies through the year.

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..... [3]

(b) Study Table 1, which shows climate data for the area of the reservoir.

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temperature °C	-3	-3	1	8	15	17	21	19	14	8	3	-6
Precipitation mm	35	15	35	60	30	110	80	70	95	80	40	50

Table 1

Give **two** reasons why the inflow of water to the reservoir is low in February.

.....

.....

..... [2]

(c) (i) Production of electricity varies to meet demand. Which month is likely to have the greatest demand for electricity?

..... [1]

(ii) Suggest a reason for the higher demand in this month.

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

(iii) Suggest what is happening to the water level in the reservoir during this month.

..... [1]

[Total: 8 marks]

3 Study Photograph A (Insert), which shows part of the CBD of Zimbabwe's capital city, Harare, and Fig. 3, a sketch of the same area.

For
Examiner's
Use

National History Museum

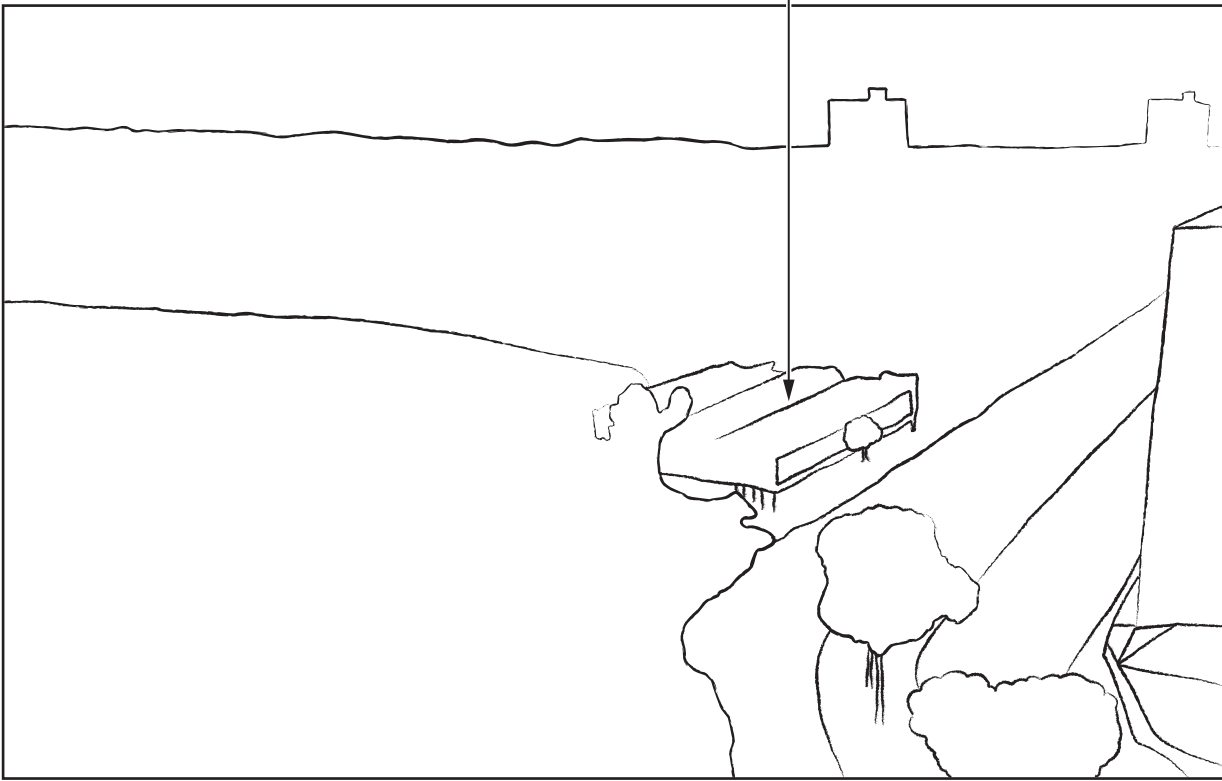


Fig. 3

(a) Label Fig. 3 to show the location of:

- a building with more than 10 storeys
- the city park
- on-street parking

[3]

(b) Describe the pattern of vegetation as shown in Photograph A.

.....

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..... [2]

(c) What evidence would you look for in order to identify a CBD?

For
Examiner's
Use

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..... [3]

[Total: 8 marks]

- 4 Study Fig. 4, which shows the percentage of population living in urban areas and GDP per person (a measure of wealth) for several countries.

For
Examiner's
Use

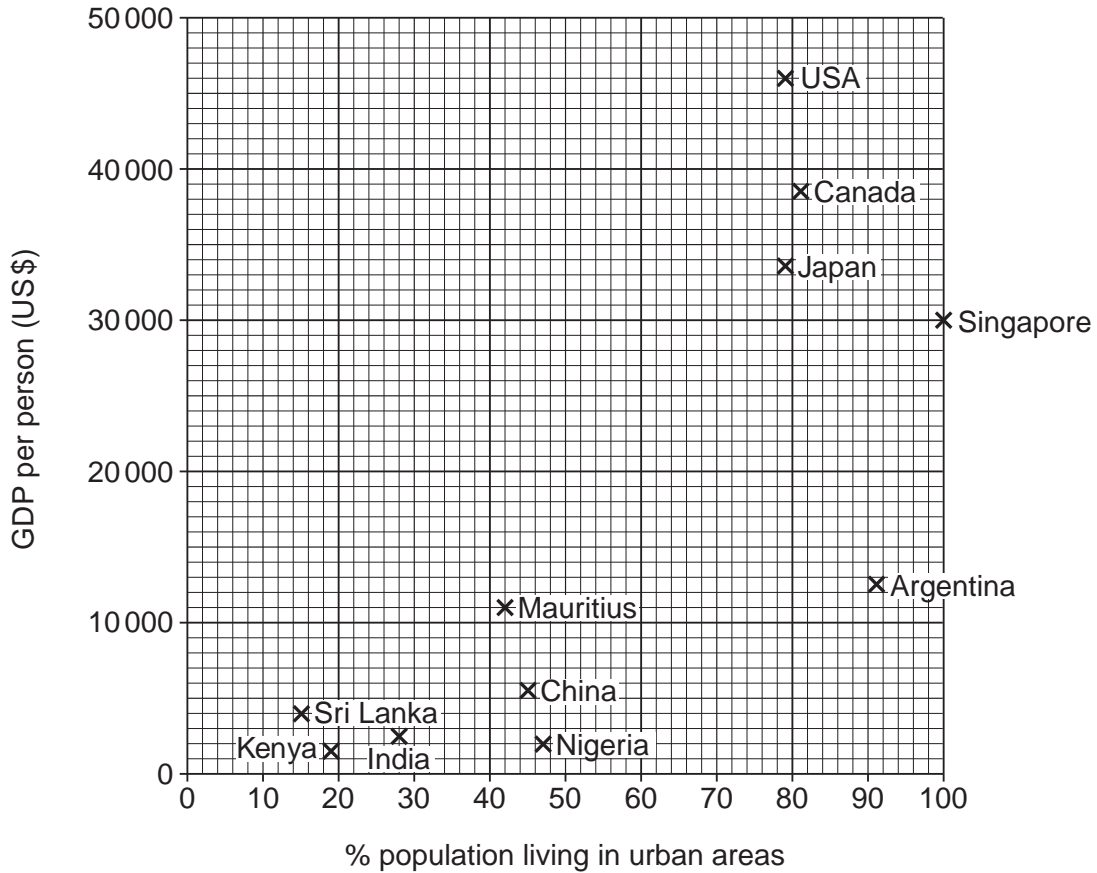


Fig. 4

- (a) (i) Complete the graph to show that Pakistan has 35% of its population living in urban areas and a GDP per person of US\$ 2500. [1]
- (ii) Which country, shown on Fig. 4, has the lowest GDP per person?
..... [1]
- (iii) Complete the paragraph by using information from Fig. 4.
Countries with a high percentage of population living in urban areas have a high GDP per person except for..... . All countries with a low percentage of population living in urban areas have a GDP per person. [2]

(b) Study Fig. 5, which shows employment structure.

For
Examiner's
Use

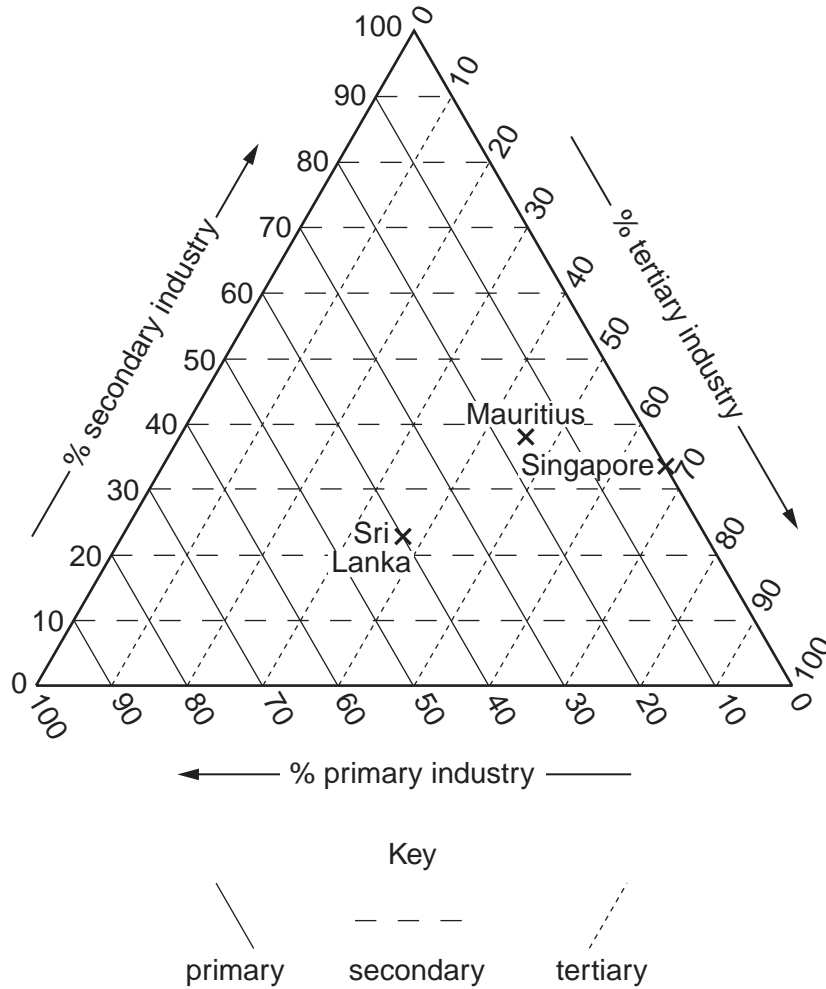


Fig. 5

(i) Use the data for Japan to complete Fig. 5.
Japan Employment Structure : Primary = 5%, Secondary = 37%, Tertiary = 58% [1]

(ii) Compare the employment structure of Sri Lanka with Mauritius.

.....

.....

.....

..... [2]

(c) Using Fig. 4, suggest why there are very few primary industry workers in Singapore.

.....

..... [1]

[Total: 8 marks]

5 Study Fig. 6, which shows the origin of some agricultural imports to the USA.

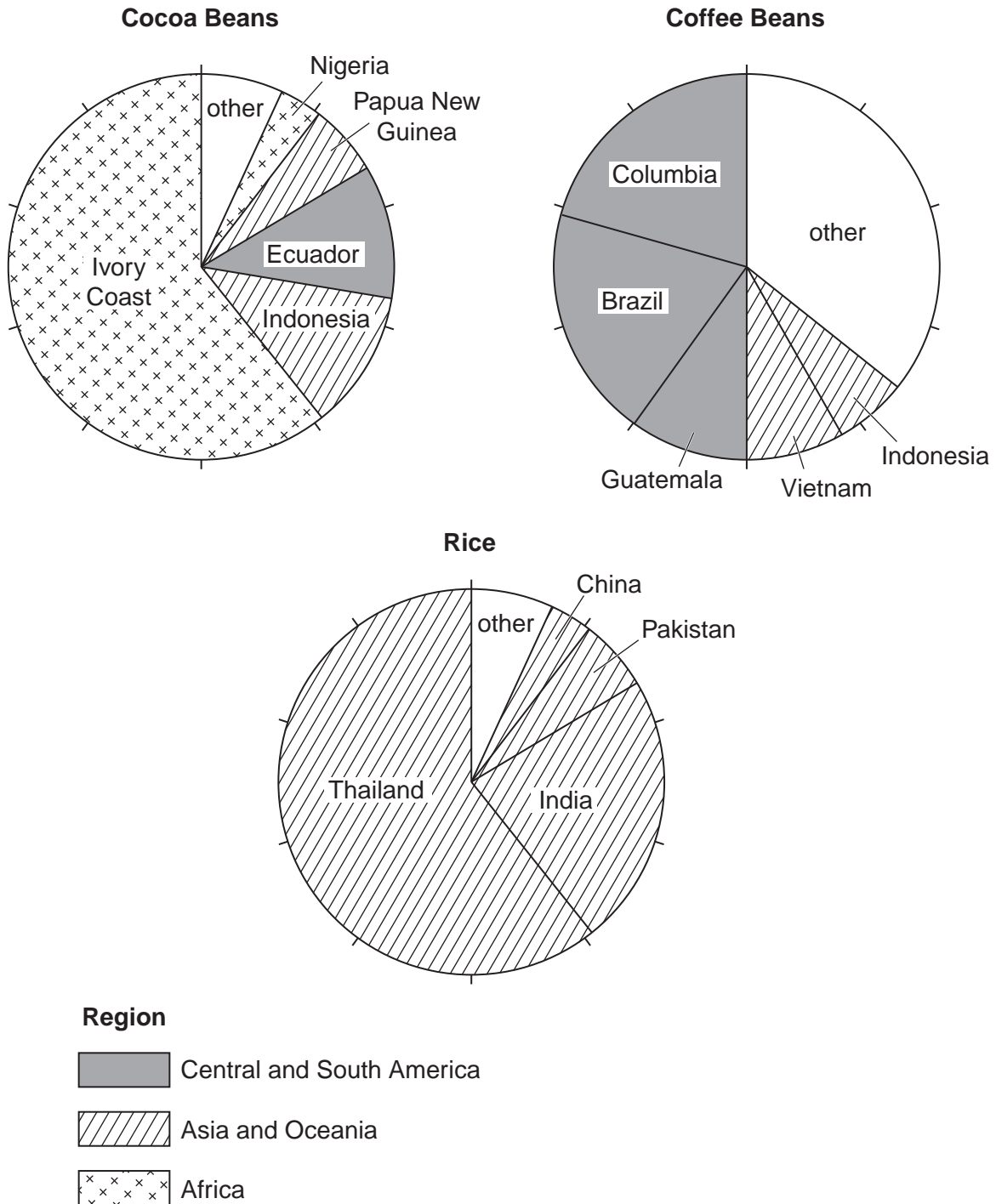


Fig. 6

- (a) (i) Which product mainly comes from Ivory Coast?
 [1]
- (ii) From which country does the USA import both coffee and cocoa?
 [1]

(iii) Which region supplies 50% of USA coffee imports?
..... [1]

(iv) What percentage of rice imports into the USA come from Thailand?
..... [1]

(v) Suggest **two** disadvantages of relying on one country to supply a large percentage of a primary product.
.....
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.....
..... [2]

(b) (i) Rice harvests can be affected by weather conditions. Study Fig. 7A and then complete Fig. 7B to show the effect of plentiful rains.

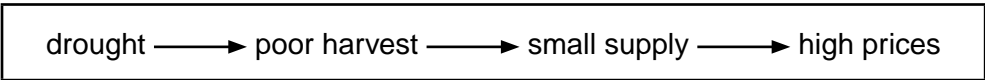


Fig. 7A

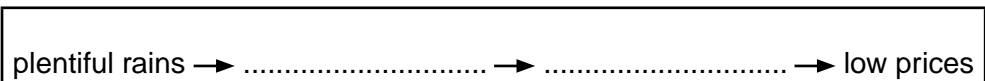


Fig. 7B

[1]

(ii) In some years, global food shortages have caused some countries to restrict exports of food. How might this affect prices in the importing countries?
.....
..... [1]

[Total: 8 marks]

6 Study Fig. 8 (Insert), which shows land use in Japan.

(a) (i) Name the products of farming shown on the map.

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

(ii) Which crop is grown throughout Japan?

..... [1]

(iii) Name two products of mining shown on the map.

..... [1]

(iv) Apart from farming and mining, name another primary industry shown on the map.

..... [1]

(b) How far is it to transport apples from their growing area to Tokyo?

Circle the correct answer.

200 km 400 km 600 km 800 km [1]

(c) Describe the distribution of manufacturing industry in Japan.

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..... [3]

[Total: 8 marks]

Section B

Answer **one** question in this section.

For
Examiner's
Use

- 7 Four students wanted to find out more about visitors to a national park. They produced a questionnaire to gain evidence with which to investigate two hypotheses:

Hypothesis 1: *The age of visitors influences the activities they take part in within the national park.*

Hypothesis 2: *Most visitors have a positive opinion of national parks.*

- (a) The four students divided themselves into two pairs to decide on questions to include in a questionnaire.

The questionnaire produced by the pair of students who finished the task first is shown in Fig. 9 (Insert).

- (i) Unfortunately when they showed their completed questionnaire to their teacher, the students did not receive a positive report. Suggest **three** weaknesses of the questionnaire.

1

.....

2

.....

3

..... [3]

- (ii) The questionnaire produced by the other pair of students was approved by the teacher. This questionnaire is shown in Fig. 10 (Insert). Suggest **two** good features of this questionnaire.

1

.....

2

..... [2]

- (iii) Before using the questionnaire shown in Fig. 10 (Insert), the four students thought about the best way to make use of it. They decided to use a systematic sampling method and to question every tenth person who passed them. They decided to question 100 people in total.

Give **two** advantages of this sampling method.

1

.....

2

.....[2]

- (iv) The students decided to use their questionnaire in a large car park located near to the centre of the national park. Suggest why this is a good place to use the questionnaire.

.....

.....[1]

- (v) Finally they decided to ask their questions as visitors returned to their cars before leaving the car park. Suggest why they made this decision and **one** possible disadvantage of their decision.

Why they made the decision:

.....

Disadvantage:

.....[2]

- (b) (i) The results of Question 2 (*Have you visited the national park before?*) in the questionnaire are shown in Table 2 below

Table 2

Answer	Number of people
Yes	75
No	25

Use these results to complete Fig. 11 below. [1]

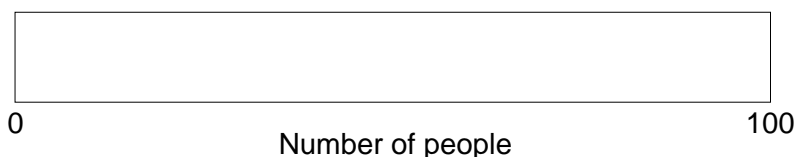


Fig. 11

- (ii) The results of Question 3 (*How long are you staying in the national park?*) are shown in Table 3 below.

For
Examiner's
Use

Table 3

Number of days	Number of people
1	60
2 or 3	22
4 or 5	13
More than 5	5

Use these results to complete Fig. 12 below.

[2]

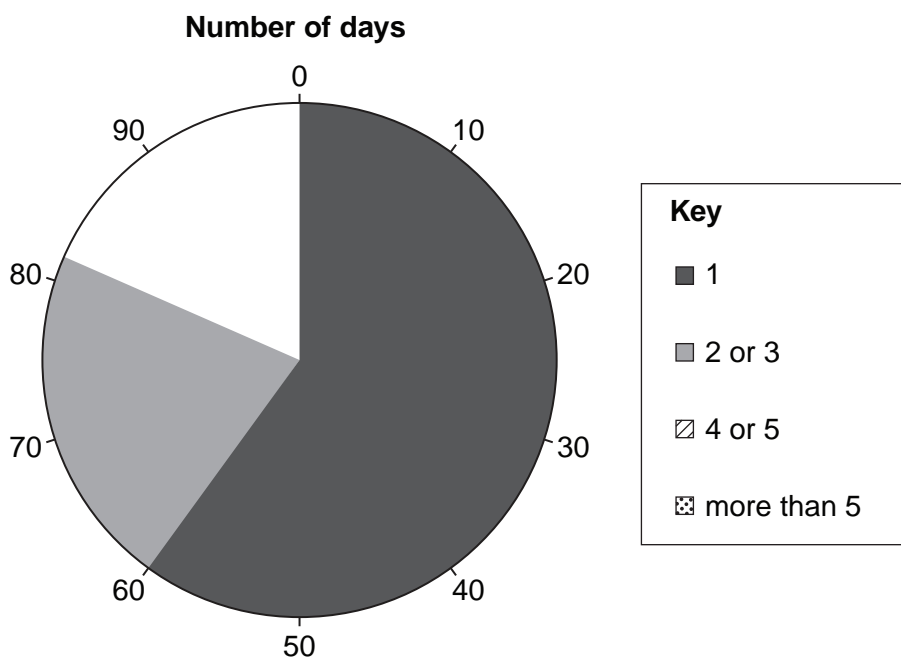


Fig. 12

(iii) The results of Question 4 (*What is the main activity you have been doing in the national park today?*) are shown in Table 4, below, with the age groups of the people interviewed.

Table 4

Activity	Age					Total
	Under 20	20–35	36–50	51–65	Over 65	
Walking less than 5 km	5	4	5	5	3	2
Walking more than 5 km	1	5	6	2		1
Climbing		3	4			7
Having picnic	2		2			4
Sightseeing			2		4	
Bird watching				2		2
Cycling / mountain biking	5	2	2			9
Horse riding	3	2				5
Driving			2	2	2	6
Running / jogging	2	1	1			4
Shopping			3	1	3	7
Visiting historic monument / building	2			5	2	9
Total	20	17	27	22	14	100

2
4

Complete Table 4 by inserting the following information:

- 5 people aged 51–65 were sightseeing.
- the total number of people who were sightseeing.

[1]

(iv) The students used the information in Table 4 to work out a conclusion to **Hypothesis 1**: *The age of visitors influences the activities they take part in within the national park.*

Do you agree with the hypothesis? Support your conclusion with evidence from Table 4.

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[4]

- (c) People gave many different answers to Question 5 (*What do you like most about the national park?*) in the questionnaire (Fig. 10). To make it easier to record these answers, the students grouped them into different categories. These results are shown in Table 5.

For
Examiner's
Use

Table 5

Category	Number of people
Easy to get to	8
Lots of facilities for visitors	9
Opportunity to do my favourite activity	44
Peace and quiet	18
Scenery	21

- (i) Which categories would the following answers to Question 5 fit into?
- The motorway is only 10km away from this car park and I can use it for almost all my journey home.
Category:
 - The mountains and lakes look spectacular in the summer sun and winter snow.
Category:
 - There are plenty of paths where no vehicles are allowed so it is safe to cycle along them.
Category: [3]

- (ii) Table 6 shows the main improvements suggested by visitors in their answers to Question 6 (*Suggest one improvement that would make your visit better*) in the questionnaire.

Table 6

New walking routes signposted
More car parks
Better toilet facilities
More cafes and refreshment facilities
More cycling / horse riding routes
More information boards
Improved footpath surfaces

Write down **two** of these ideas and suggest how each might improve a visit to the national park.

Idea 1

How it might improve a visit

.....
.....

Idea 2

How it might improve a visit.....

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

- (iii) The students considered **Hypothesis 2: Most visitors have a positive opinion of national parks.**

Do you think that this hypothesis is true? Explain your decision.

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.....
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..... [3]

(d) To extend their investigation the students decided to find out more about where visitors to the national park came from.

(i) Suggest **one** suitable question that students could add to the questionnaire.

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

(ii) Describe, in detail, how the students could present this information.

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.....[3]

[Total: 30 marks]

8 Some students wanted to investigate the flow of a river on a meander. Before they began their fieldwork their teacher spoke to them about safety when planning their fieldwork.

(a) Suggest **three** pieces of advice their teacher gave them to keep them safe.

- 1
-
- 2
-
- 3
- [3]

The students decided to investigate two hypotheses about the speed of flow (velocity) of the water in the river:

Hypothesis 1: *Velocity on the surface varies across a river meander.*

Hypothesis 2: *Velocity is greater on the surface and decreases as the depth of the channel increases.*

(b) To investigate **Hypothesis 1**, the students made some measurements on the meander.

(i) Describe how the students measured velocity on the surface using an orange as a float, a tape measure and a stopwatch.

-
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-
-
- [3]

(ii) How did the students measure the depth of the river? Refer to the equipment they would have used.

-
-
-
-
-
- [3]

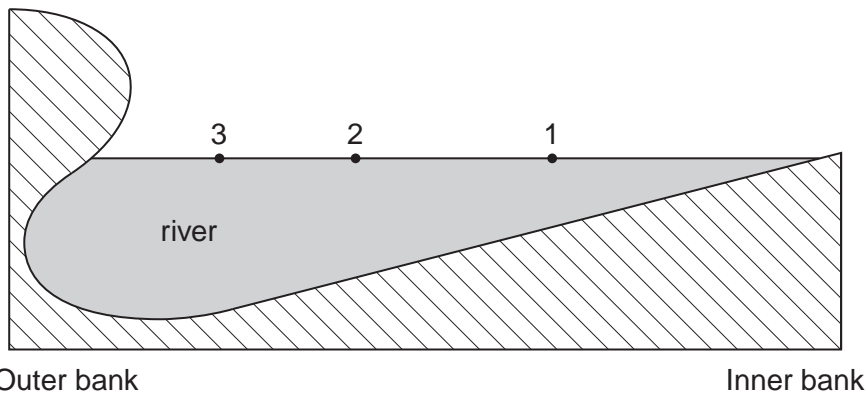
(iii) The results of their measurements are shown in Table 7. Fig. 13 is a sketch of the meander bend to show sample points.

For
Examiner's
Use

Table 7

Sample point	Velocity on the surface (cm per second)	Depth of channel (metres)
1	18	0.35
2	41	0.62
3	72	0.75

Sketch of meander bend to show sample points



<p>Key</p> <ul style="list-style-type: none"> • Sample points

Fig. 13

The students agreed with **Hypothesis 1**: *Velocity on the surface varies across a river meander*. Use evidence from Table 7 to suggest how they reached their conclusion.

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..... [2]

- (c) When the students got back to school they described to their teacher how they had carried out their investigation to measure surface velocity. Their teacher then suggested some weaknesses in their method.

Give **three** weaknesses that might have been suggested.

1

.....

2

.....

3

..... [3]

- (d) Taking the advice from their teacher the students went to another meander on the river in order to improve their measuring procedures.

- (i) First they used a flowmeter to measure the velocity. This is shown in Photograph B and Fig. 14 (Insert). Suggest how they used this equipment.

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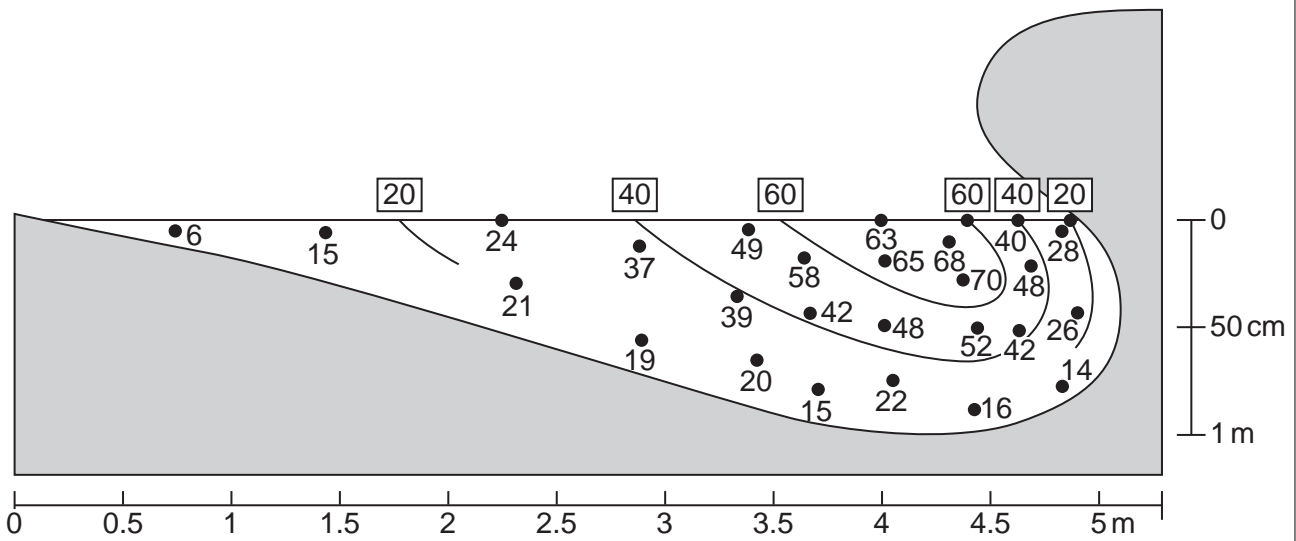
.....

..... [3]

- (ii) Using their results obtained with the flowmeter, the students were able to plot velocity more accurately. Their results are shown in Fig. 15 below.

For
Examiner's
Use

Sketch of the meander to show velocity at different points



Key

- 15 velocity of river at selected points in centimetres per second
- 60 isoline (line joining points of equal velocity) in centimetres per second

Fig. 15

On Fig. 15 complete the 20 cm per second isoline. [2]

- (iii) On Fig.15, shade in the part of the river where the current is greater than 40 cm per second. [1]

- (iv) Use the information on Fig. 15 to decide whether you agree with **Hypothesis 2: Velocity is greater on the surface and decreases as the depth of the channel increases.** Support your conclusion with figures from Fig. 15.

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.....[4]

- (v) Explain why the velocity of the river on the meander varies as shown in Fig. 15.

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.....[2]

- (e) In order to extend their fieldwork the students decided to compare their results from the meander with a straight section of river 100 metres further downstream.

For
Examiner's
Use

Suggest what similarities and differences the students would find between the velocity in the two sections of river. You may draw a diagram as part of your answer.



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..... [4]

[Total: 30 marks]

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Copyright Acknowledgements:

- Question 2 Figure 2 © The production of electricity and the inflow of water during the year for the Sima power station;
www.lookatnorway.org.uk/images/pdfs/hydro_elec_case%20study.pdf.
- Question 3 Photograph A © Photograph of Harare, Zimbabwe; James Harper, Belfast.
- Question 6 Figure 8 © Map of Land Use of Japan; http://static.howstuffworks.com/gif/maps/ASA_JP_THEM_LandUse.pdf.
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