OXFORD
INTERNATIONAL
AQA EXAMINATIONS

Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____

INTERNATIONAL A-LEVEL

GEOGRAPHY

UNIT 5 FIELDWORK AND GEOGRAPHICAL SKILLS

Date of Exam Session Time allowed: 1 hour 30 minutes

Materials

For this paper you must have:

- a ruler with millimetre measurements
- a calculator, which you are expected to use where appropriate.

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of the page.
- Answer **all** questions.
- You must answer the questions in the spaces provided.
  Do not write outside the box around each page or on blank pages.
- All working must be shown.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 60.
- You may use a bilingual dictionary for this exam.
- You may **not** use an English dictionary.

For Examiner's Use	
Question	Mark
1	
2	
3	
4	
5	
TOTAL	

Answer **all** questions in the spaces provided

0 1 Explain why some form of sampling is almost always used when students are carrying out fieldwork to collect data for a geographical investigation.

[3 marks]

0 2 A group of students was planning a piece of fieldwork.

They decided to carry out a study of an area of sand dunes to see how (a) slope and (b) vegetation varied along a 100 metre stretch of the dunes.

They laid out a rope along the transect line.

They decided to take 10 readings of slope and vegetation along that transect line and then they had a discussion about how to select their 10 sample points.

Student A said that they should take a random sample by drawing ten numbers out of a hat.

Student B said they should a systematic sample, at ten 10 metre intervals.

Student C said they should take a structured sample, choosing ten points where there was a change of slope or of vegetation.

Discuss the strengths and weaknesses of the three sampling techniques. Choose the most appropriate method and justify your choice.

[12 marks]

0 3 You are organising a group of your A-level Geography colleagues to carry out a piece of fieldwork in a town in Jordan.

Your task is to complete an environmental survey of a variety of housing areas in this town.

Study **Figure 1 and 2**, two photographs showing an informal settlement on the edge of a town in Jordan.

Figure 1

Figure 2

0 3 . 1 Outline and justify the health and safety instructions that you would provide for the members of your group whilst visiting this informal settlement.

[6 marks]

Study Figure 3 and 4, two photographs showing a different housing area in the same town.

Figure 3

Figure 4

Criteria for assessment	Grading of environment quality				
	Very high	High	Average	Poor	Very poor
Quality of roads					
Quality of construction					
Amount of shade					
Access to services					

0 3 . 2 Your teacher has provided the above framework for an environmental survey of housing areas shown in Figures 1, 2, 3 and 4.

In the space below write **three** more criteria for assessment that would be useful for your survey. Justify each of your **three** criteria.

[6 marks]

0 4 A group of students was carrying out an investigation into rates of infiltration at different points on a transect down a valley side. Their aim was to test the hypothesis that 'The rate of infiltration will be faster on the higher land than it is on the lower land that is on or close to the flood plain.'

They timed how long it took for a measured volume of water to infiltrate into the soil at ten points along the transect. They also measured the angle of slope and the altitude at each of the ten points.

Figure 5

Sample site altitude (in metres)	Time taken for infiltration (in seconds)	Angle of slope (in degrees)
155 (top of valley side)	55	3
150	33	8
145	28	10
140	26	12
135	22	11
130	20	8
125	20	5
120	40	5
115	82	4
110 (on river bank)	120	2

Figure 5 shows the table of data that they produced.

Figure 6

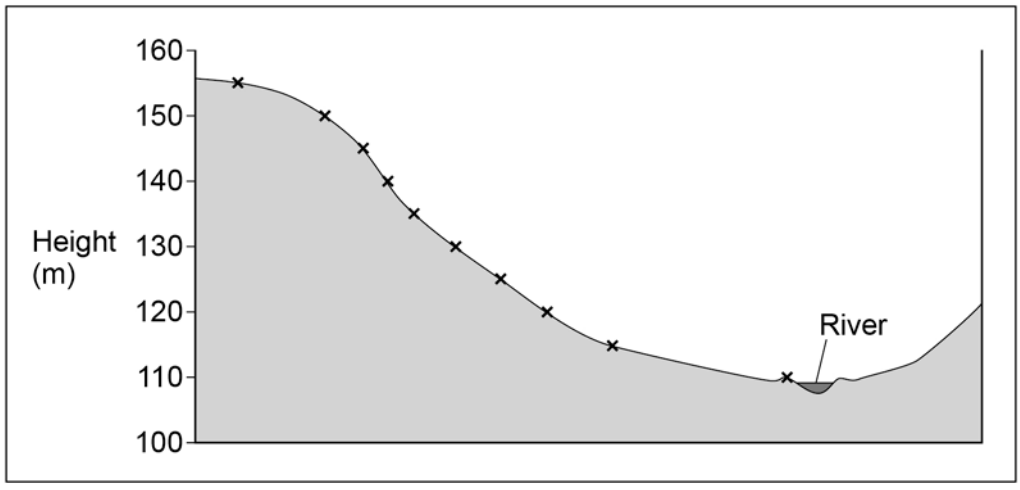


Figure 6 is a cross-section showing the locations of the sampling points

One of the students tested for a correlation between the two sets of data in **Figure 5**, using a Spearman's rank correlation test. **Figure 7** shows how she set out the data and started her calculations.

Figure 7

Sample site	Rank altitude	Infiltration time	Rank time	d	d^2
Altitude (m)	R1	(secs)	R2	(R1–R2)	
155	1	55	8	–7	49
150	2	33	6	–4	16
145	3	28	5	–2	4
140	4	26	4	0	0
135	5	22	3	2	4
130	6	20			
125	7	20	1.5	5.5	30.25
120	8	40	7	1	1
115	9	82	9	0	0
110	10	120	10	0	0

$\sum d^2 =$ _____

$6 \times \sum d^2 =$ _____

$$Rs = 1 - \frac{6\sum d^2}{n^3 - n}$$

$$= 1 - \frac{\_\_\_\_\_}{990}$$

$= 1 -$ _____

$= Rs$ _____

0 4 . 1 Complete the calculation of Rs. Show your working.

[4 marks]

Figure 8

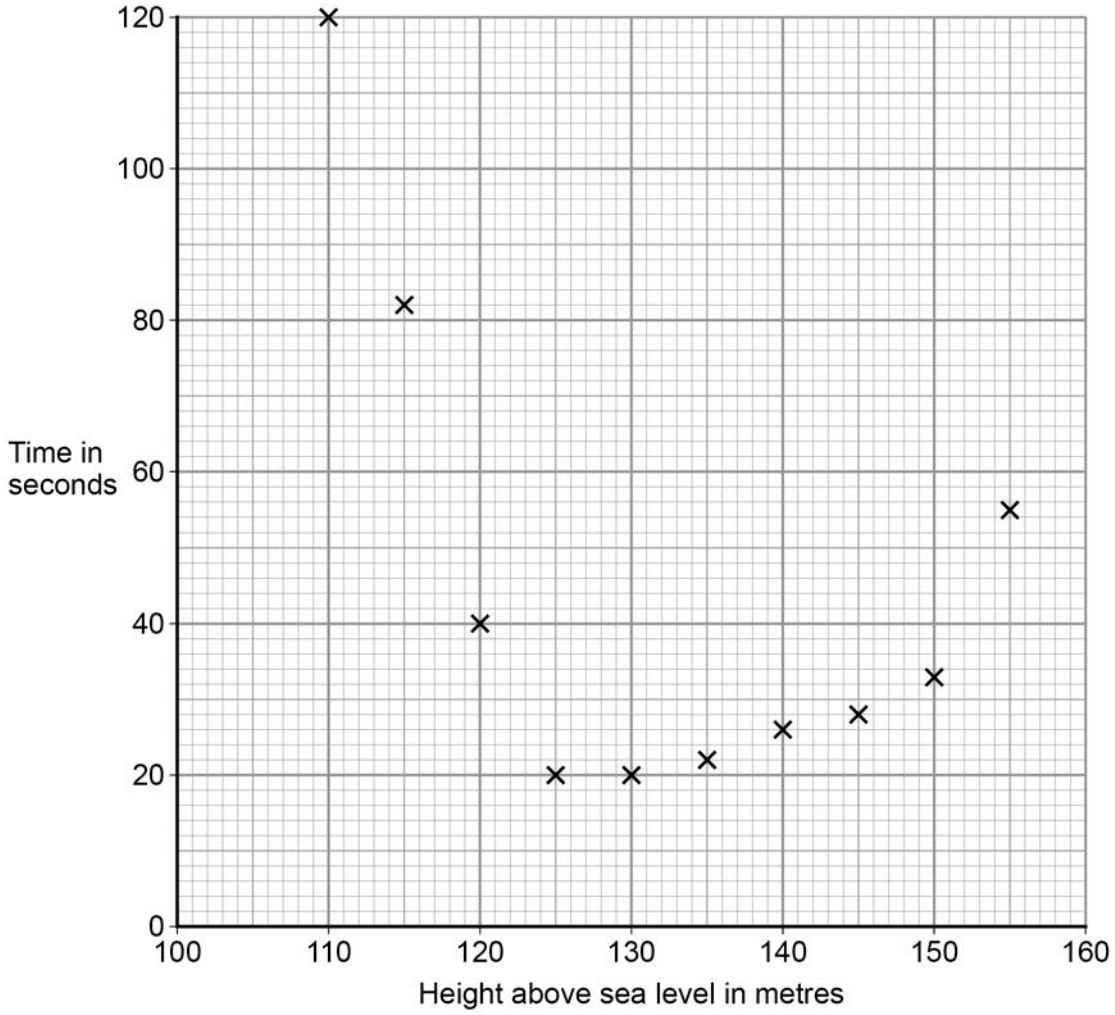
n	Levels of significance	
	0.05	0.01
8	0.643	0.833
9	0.600	0.783
10	0.564	0.746
12	0.506	0.712

Figure 8 shows an extract from the table of critical values for Rs.

0 4 . 2 How confident can you be that the student's hypothesis, 'The rate of infiltration will be faster on the high land than it is on the lower land that is on or close to the flood plain', is supported by the data?

[3 marks]

Figure 9



The student thought that using a scatter graph to show the data would help her analysis. She drew the graph shown in **Figure 9.**

0 4 . 3 Why would it be very difficult to draw a best fit line on the graph in **Figure 9?**

[2 mark]

0 4 . 4 'The rate of infiltration will be faster on the high land than it is on the lower land that is on or close to the flood plain.'

To what extent does the evidence in **Figures 5**, **6** and **9** support the hypothesis?

[9 marks]

0 5 . 1 You have experienced geography fieldwork as part of your course. Use that experience to answer the following questions.

State the aim of your fieldwork investigation.

Explain how the investigation helped you develop your geographical understanding of the place studied.

[6 marks]

0 5 . 2 Evaluate the success of **one** of your data-collection methods and explain how you would make use of an opportunity to revisit the location to develop your enquiry further.

[9 marks]

END OF QUESTIONS

DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED