CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

GEOGRAPHY **0460/05**

Paper 5 Alternative to Coursework

May/June 2003

1 hour 45 minutes

Additional Materials: Answer Booklet/Paper
                          Ruler

READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen on both sides of the paper.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.
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.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

This document consists of **3** printed pages, **1** blank page and an insert.

University of Cambridge

1 Students visited an area of upland. They chose to measure soil erosion along ⟨...⟩ ⟨...⟩ to investigate the impact of tourists. A two-metre length of string was placed across the ⟨...⟩ regular intervals of 200 m from the Information Centre as shown on Fig. 1 (Inser⟨...⟩ measurements were taken at each site

- the width of the footpath using a measuring tape,
- the percentage of bare ground using a quadrat or measuring frame.

(a) The results were recorded on a recording sheet. State **three** pieces of essential information, *other than the results*, required on every recording sheet of this investigation. [3]

(b) Study Fig. 1 and the results for the footpath width in Table 1 (Insert). Describe the overall patterns of width change for **each** path as distance from the Information Centre increases. [2]

(c) A quadrat was placed four times across the 2 m string, twice on either side of the path centre. The percentage of bare ground was calculated in each quadrat.

   (i) Study Fig. 1. Compare in detail, stating data, the changes in bare ground along the two paths. You should consider the distance from the Information Centre and changes across the footpaths. [6]

   (ii) State **two** ways in which this method of investigating footpath erosion may be either unreliable or inaccurate. [2]

(d) The students also decided to count the number of pedestrians using the paths at different times of the day.

   (i) Suggest why different times were chosen. [1]

   (ii) Which recording method is most suitable for counting pedestrians? [1]

   (iii) Use the results in Table 2 (Insert) to suggest the most common distance people walk from the Information Centre. Give reasons for your answer. [3]

(e) **(i)** Explain in detail why a large number of people may increase soil erosion on a footpath. [5]

   (ii) Using the information from Fig. 1, state where the soil erosion should be reduced. Suggest how this may be done. [3]

(f) Tourists may also increase the amount of litter in an area. Describe in detail how students in the area shown in Fig. 1 would investigate this environmental problem. [4]

[Total : 30]

2 Geography students compared three settlements to investigate the settlement hierarchy of the area. The students decided to test the following hypothesis:

'A larger settlement will have a greater number of services and more traffic than a smaller settlement.'

(a) **(i)** What is a 'settlement hierarchy'? [1]

(ii) Describe and explain how the number of services and the traffic volume may change within a settlement hierarchy. [3]

(b) Table 3 (Insert) shows the results of a building count and the survey of services and traffic in each settlement.

(i) The number of buildings in each settlement was found by using a secondary source of data. What is a secondary source of data? State **one** example of a secondary source. [2]

(ii) Briefly compare the different types of services available at each settlement shown in Table 3. [2]

(c) Study Table 3 and Fig. 2 (Insert).

(i) Using information from Table 3 plot and label clearly each of the settlements A, B and C on Fig. 2. The graph also shows a number of other settlements. [3]

(ii) Draw a 'best fit line' onto the scattergraph. [2]

(d) The students measured traffic at 10.00 hours in the three settlements. One student observed that settlement A was linear but settlements B and C were nucleated.

(i) Explain, with the help of diagrams, what the student meant by 'linear settlement' and 'nucleated settlement'. [4]

(ii) The students decided to count traffic in the centre of each settlement. Why was a central location chosen? [2]

(iii) Suggest when and why the traffic survey should be repeated. [2]

(e) The results of the traffic survey are shown on Table 3.
Draw an accurate bar graph to plot the traffic survey results for settlements A, B and C. [5]

(f) Write a conclusion to this investigation. You should state if you accept the hypothesis. Give reasons for your answer with reference to the services and traffic results. [4]

[Total : 30]

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