Location Entry Codes

UNIVERSITY of CAMBRIDGE
International Examinations

As part of CIE's continual commitment to maintaining best practice in assessment, CIE has begun to use different variants of some question papers for our most popular assessments with extremely large and widespread candidature, The question papers are closely related and the relationships between them have been thoroughly established using our assessment expertise. All versions of the paper give assessment of equal standard.

The content assessed by the examination papers and the type of questions are unchanged.

This change means that for this component there are now two variant Question Papers, Mark Schemes and Principal Examiner's Reports where previously there was only one. For any individual country, it is intended that only one variant is used. This document contains both variants which will give all Centres access to even more past examination material than is usually the case.

The diagram shows the relationship between the Question Papers, Mark Schemes and Principal Examiner's Reports.

Question Paper	Mark Scheme	Principal Examiner's Report
Introduction	Introduction	Introduction
First variant Question Paper	First variant Mark Scheme	First variant Principal Examiner's Report
Second variant Question Paper	Second variant Mark Scheme	Second variant Principal Examiner's Report

Who can I contact for further information on these changes?
Please direct any questions about this to CIE's Customer Services team at: international@cie.org.uk

GEOGRAPHY

Paper 0460/11

Paper 1

General comments

The paper was considered to be appropriate for the ability range of candidates and it achieved a high degree of differentiation. **Questions 1**, **2** and **5** were very popular, **Question 3** was the least popular. Whatever questions candidates chose there were plenty of questions where for A and A* grade candidates were able to show their abilities, whilst the less demanding and/or more structured tasks provided all candidates with the opportunity to achieve positively in some areas, particularly those involving the use and interpretation of the source materials. Many Examiners were impressed by the excellent geographical learning which had taken place, and once again commented on the year on year improvement in the standard of work from many Centres. There were of course other Centres which, for a variety of reasons submit scripts from candidates whose performance was generally weak, and where candidates for a variety of reasons seemed poorly prepared for an examination of this style. Some of these Centres were from new Centres as IGCSE continues to grow, others simply seemed to be entering candidates who struggled to cope with the demands of the paper, perhaps through lack of effort, ability or linguistic problems which they experience answering an examination in the English language. As the detailed comments on questions below are considered the strengths and weaknesses of candidates are highlighted, and careful consideration of these comments and the advice therein should be invaluable in preparing candidates for future examinations.

However the following items of general advice, which many good teachers of IGCSE Geography will have seen before, should be considered, and offered to future candidates who should:

- make the choice of questions with care, making sure that for each question they choose they have a case study about which they can write with confidence.
- answer the three chosen questions in order, starting with the one which they are the most confident with, and finishing with the one which they are least confident with (in case they run out of time).
- read the entire question first before answering any part, in order to decide which section requires which information to avoid repetition of answers.
- highlight the command words and possibly other key words so that answers are always relevant to the question.
- use the mark allocations in brackets as a guide to the amount of detail or number of responses required, not devoting too much time to those questions worth few marks, but ensuring that those worth more marks are answered in sufficient detail.
- think carefully about their answers to case studies, which provide a good opportunity for well prepared candidates to score high marks. The key is to ensure that the focus is correct rather than including all facts, particularly those which are irrelevant, about the chosen topic or area, and developing each point rather than writing extensive lists of simple points.
- use resources such as maps, graphs, diagrams and extracts carefully. However there is little point in copying out parts of resources. Use appropriate facts and statistics derived from resources of course to back up an answer, but always aim to interpret them by making appropriate comments.

Comments on specific questions

Section A

Question 1

(a) (i) Most understood that international migration involved the movement between countries though some referred to continents. Some candidates tried to define by repeating words ‘migration’ and ‘international’ which is not a good way to show knowledge of what the term means.

(ii) Vietnam was a common error in but the vast majority of candidates selected two appropriate countries and were able to demonstrate the skill of using proportionate flow lines.

(iii) The majority of candidates gave good answers, referring to pushes such as employment, education and health care. Some, however, did not read the question carefully and described pushes rather than pulls, and other gave weak answers such as ''better services/facilities/amenities without qualification.

(iv) Many candidates showed an excellent understanding here of why the quality of life remained poor, referring to issues such as lack of skills/qualifications, low pay, discrimination and the problems caused by lack of finances, particularly in relation to accommodation. A few weak candidates just described life in ghettoes/squatter areas rather than explaining why all too often the immigrants to MEDC are forced to live there and some referred to reasons why they have moved to MEDCs.

(b) (i) The distribution of states was generally poorly described. Too many candidates seemed unfamiliar with the command 'describe the distribution' just listing states or attempting explanations, though those candidates who had rehearsed this skill gave clear distributions referring to the south-east near the Atlantic Ocean for example, the north east and the west.

(ii) Many candidates showed a good understanding of why people are leaving urban areas, though a minority wrongly described pull factors,

(c) Whilst some excellent case studies were seen there were many candidates chose a country (e.g. Kenya) not all of which has a low population density. Others choose large, sparsely populated areas such as the Sahara desert or Antarctica, which is fine, however those who did so found it difficult to introduce a place specific element into their responses. Some candidates answered the question correctly and chose a suitable area, however their points were not developed (e.g. 'it is dry', it is difficult to get to', thus not achieving higher than Level 1 (3 marks). Some candidates lost out because they attributed the low density to lack of amenities/entertainment etc. instead of more primary reasons for lack of people and others offered little more than the irrelevant notion that places are empty because everybody has migrated. Many weak answers read the question as 'low population' and wrote about low birth rates/high death rates, or government policy such as China's one-child policy, whilst others entirely focused their answers on migration away from an area, often one which is quite densely populated (e.g. Mexico to USA.) or indeed an urban area which was clearly not going to have a low population density (e.g. New York).

Question 2

(a) (i) The population increase was well calculated by most candidates, though some just put ' from 1.4 million to 2.2 million'.

(ii) Almost all candidates chose two correct areas of Amman where high rise buildings are being constructed.

(iii) There was a range of marks here, some excellent answers referred to lack of space and/or the fact that high rise building saves space, cost of land and demand for land for residential or business use. Weak candidates chose a section of the extract to copy out which showed no understanding and therefore gained no marks.

(iv) This was poorly done by many candidates. Few candidates actually knew what infrastructure meant as they wrote about housing and/or jobs. Even those who referred to specific services such as schools, hospitals or traffic, or utilities such as water or electricity, did not really refer to 'pressure' on these services, despite the fact that these are likely to be problems which many candidates may well be experiencing in their daily lives in crowded areas where they live.

(b) (i) Most candidates recognised the land uses from the photographs though some answered without linking them to the letters A, B and C.

(ii) This differentiated well, with able candidates using the evidence in the photographs to wrote relevant details about access to shops, housing and schools, and/or the provision of good roads, access to taxis and work. Weaker candidates did little more than repeat their answer to the previous question, rather than elaborating in terms of how these features would enhance quality of

life, whilst others generally wrote about the advantages of urban life, ignoring evidence in the photograph (e.g. 'presence of health care facilities, factories for employment etc.).

(c) This case study was well answered by many candidates, usually in the context of LEDC cities, though to achieve the highest level they needed to refer to both causes and solutions. A large number of weak candidates wrote about squatter settlements but their existence is not in itself a cause of a shortage of housing, more the result of it. The best answers referred to real schemes in cities such as Rio de Janeiro, Sao Paulo, Delhi and Mumbai, however those schemes which merely improve the quality of housing, rather than reduce housing shortages (e.g. provide electricity/sanitation/fresh water) were not relevant unless linked in some way with the construction of more places to live. A number of weaker candidates tended to reproduce the content from (a), with obvious limited success.

Question 3

(a) (i) Most candidates recognised the arch.

(ii) Most candidates knew the definition of hydraulic action and corrosion, although some confused the latter with corrasion.

(iii) Few candidates could describe the features of the shown in the photograph and many just explained it's formation, often in great detail but scored no marks as this was not what the question was asking.

(iv) Well prepared candidates could describe how constructive waves created a beach, though most did little more than stating that the swash was stronger than the backwash, and many candidates included irrelevant details and/or diagrams about longshore drift.

(b) (i) For some candidates this task was just guesswork, though many recognised the atoll if not the fringing and barrier reefs.

(ii) This differentiated well with some excellent answers given from well prepared candidates relating to ideas such as temperature and light condition for example, which were very well developed and exemplified. Weaker candidates omitted the question or just guessed, often trying to relate the existence of coral reefs simply to the presence or absence of human activity.

(c) This was remarkably poorly answered by virtually all candidates, many writing spits or about dunes being formed by longshore drift or constructive waves, rather than the wind, and virtually none knew of a named example.

Question 4

(a) (i) There were many correct answers yet other definitions were inaccurate as they failed to include any reference to either 'atmospheric conditions' or 'in situ', clearly key points as references to 'rocks being broken into smaller pieces' could just as well be definitions of erosion.

(ii) This was answered well though a few candidates put 5C for the second part of the question.

(iii) Many candidates used the resource well to explain how plants grew from seeds in cracks, then as they grew applied pressure to break up the rocks. A few also made relevant points about burrowing animals and acids from decaying vegetation. Some candidates strayed into explaining freeze-thaw, clearly not a form of biological weathering.

(b) (i) Landscape description mainly focused on the central crack and the tree growing out of the top, which were worthy of credit. A few mentioned scree. A number wrongly focused on the background, identifying fields, a settlement and electricity pylon. As in 3 (a) (iii) there were many candidates who appeared to be unfamiliar with the skill of describing features, attempting instead to explain it's formation or describing weathering processes which were occurring, thus repeating information from (a) (iii) and/or (b) (ii).

(ii) Again many candidates wrongly wrote about freeze-thaw rather than chemical weathering. Of those candidates who did understand that this involved a chemical process, most mentioned acid rain and its reaction with limestone but relatively few candidates were fully conversant with the reactions which resulted in the solution process. There were a few impressive responses seen, with reference to the reaction of rain water with carbon dioxide producing carbonic acid, and the conversion to calcium bicarbonate in solution, however most were satisfied with 'acid rain dissolving limestone'.

(iii) This question differentiated well, tourism and farming being popular suggestions, and some mentioned mentioned the educational value of such areas. Many answers were imaginative in terms of suggestions. The impression given was that such landscapes were largely unfamiliar to candidates and ideas suggested, whilst often valid, appeared to be more speculative overall.

(c) Drought and tropical storms was the most popular choices here, though there were some examples of floods. Candidates who focused on specific examples (e.g. New Orleans – Hurricane Katrina, Bangladesh flooding) tended to achieve more success than those who chose larger areas (e.g. the Sahara desert). The question asked for causes and impacts and the latter tended to be far more effectively covered than the former. For drought and tropical storms the causes were often unstated or very superficially covered (most simple stated what a drought or tropical storm was), however some candidates wrote well, and in great detail, about the causes of their chosen flood event, especially examples such as Bangladesh.

Question 5

(a) (i) Providing candidates showed their understanding by giving a little detail about the sectors (with many naming them) they scored well.

(ii) Virtually all candidates gave good examples of jobs in the primary and tertiary sectors, with farming/mining and teachers/doctors being popular choices.

(iii) Most candidates could, to some extent, use the compound graph provided. The changes required were generally well described for the primary and tertiary sectors, but many missed the changes in the secondary curve (i.e. increase followed by a decrease). The answers to the question needed a dynamic approach – it was about 'change'. Weak candidates simple stated initial and final percentages.

(b) (i) This was generally well answered, apart from weak candidates who were not conversant with the terms and stated that 'cattle farmers' were an input and 'markets' an output.

(ii) Likely benefits included jobs and money to spend and many candidates expressed these ideas well. A number also developed pertinent points about the improvement of the infrastructure and the multiplier effect of the factory within the area. Others focused too narrowly on the availability (or reduced cost) of beef in the area, a credit worthy idea but not sufficient to score all the available marks.

(iii) This question differentiated well and there were some very perceptive answers with references to atmospheric pollution (from the factory and transport), visual pollution and pollution of water courses. Some referred to the loss of natural vegetation and habitats for the construction of the factory, though many focused on environmental problems as a result of cattle grazing rather than the growth of manufacturing industry. There were even some strange references to the extinction of cattle! The requirement to focus on 'natural environment' was ignored by too many candidates, who referred to problems for the local people such as noise, smell and traffic congestion.

(c) Here there were some excellent place-specific answers from cases studies such as Silicon Valley and the M4 corridor, the best candidates developing their ideas in relation to their chosen case studies. Many other answers were too vague/general and did not specify the hi-tech industry despite clues in the question. As the question asked specifically about hi-tech industry answers about car manufacture or other types of manufacturing industry were not acceptable, though candidates could gain some credit at Level 1 for generic ideas relating to the factors influencing industrial location.

Question 6

(a) (i) Most candidates interpreted the graphs correctly.

(ii) Most candidates knew commercial farming involved selling, though some expressed their understanding by reference to profit or export. International tourism was also known by most candidates, though some did not show an understanding of 'international' dimension or indeed 'tourism'. A repeat of the word international' was insufficient for the former, and for the latter 'moving to another country' could be migration not tourism.

(iii) Most candidates recognised the decline in agriculture and the increase in tourism and some were able to gain full marks by giving accurate figures as evidence. As in 5 (a) (iii) some candidates ignored the requirement to consider 'change' and some candidates poorly judged the percentage figures despite the clarity of the graphs.

(iv) This was generally poorly answered. Virtually all candidates wrote about exchange of foreign currency into Turkish currency, rather than how foreign currency would be earned by visitors paying for hotels, specific goods and services or transport.

(b) (i) Many candidates use the climatic statistics to focus on the dry summer conditions posing problems for farmers, however many other references to climate were of little significance (e.g. temperatures, sunshine hours). Some candidates correctly used the photograph identity difficulties caused by steep slopes and rocky outcrops, however it was unusual for candidates to score the full three marks.

(ii) Generally the resources were more effectively used in this question than in (i) as references to temperatures, rainfall and sunshine hours were all valid. Various attractions were stated using photographic evidence (particularly in relation to the sea), however references to hotels, or a beach, or culture were not accepted as the question demanded only the use of evidence in the resources provided.

(c) This was done well by many candidates, and there was a sense that many were writing from personal experience, especially in political terms. Sound choices were made by many candidates at a country scale where there are food shortages (e.g. Zimbabwe, Ethiopia, Sudan), though place specific details were omitted by all but the most well prepared candidates. There was an excellent understanding shown by perceptive candidates that food shortages were not only the result of adverse physical conditions, but could also be the result of policy decisions, some countries having a large export trade in food while starving their own people. It is hoped that the political leaders do not catch sight of many of these responses....on second thoughts perhaps they ought to see what the future electorate thinks! Weak candidates identified broad area examples such as 'Africa' and made weakly developed, simplistic points at Level 1.

GEOGRAPHY

Paper 0460/12

Paper 1

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The detailed comments on questions below considered the strengths and weaknesses of candidates. Careful consideration of these comments and the advice therein should be invaluable in preparing candidates for future examinations.

However the following items of general advice, which many good teachers of IGCSE Geography will have seen before, should be considered, and offered to future candidates who should:

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- use resources such as maps, graphs, diagrams and extracts carefully. However there is little point in copying out parts of resources. Use appropriate facts and statistics derived from resources of course to back up an answer, but always aim to interpret them by making appropriate comments.

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Section A

Question 1

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(c) Whilst some excellent case studies were seen there were many candidates chose a country (e.g. Kenya) not all of which has a low population density. Others choose large, sparsely populated areas such as the Sahara desert or Antarctica, which is fine, however those who did so found it difficult to introduce a place specific element into their responses. Some candidates answered the question correctly and chose a suitable area, however their points were not developed (e.g. 'it is dry', it is difficult to get to', thus not achieving higher than Level 1 (3 marks). Some candidates lost out because they attributed the low density to lack of amenities/entertainment etc. instead of more primary reasons for lack of people and others offered little more than the irrelevant notion that places are empty because everybody has migrated. Many weak answers read the question as 'low population' and wrote about low birth rates/high death rates, or government policy such as China's one-child policy, whilst others entirely focused their answers on migration away from an area, often one which is quite densely populated (e.g. Mexico to USA.) or indeed an urban area which was clearly not going to have a low population density (e.g. New York).

Question 2

(a) (i) Most candidates answered this correctly.

(ii) Most gained at least one mark here as they could give either the distance or direction. Surprisingly a relatively large number of candidates only answered one part of the question.

(iii) Generally this well not well answered and many candidates structured their responses poorly in describing the land uses in each square rather than seeking the obvious differences which existed.

(iv) This was well answered, most candidates gained high four marks and particularly demonstrated their understanding of the significance of transport routes in industrial location.

(b) (i) There were a number of well crafted answers which focused on differences such as height, age and building materials, but again comparisons were not always made and many candidates included irrelevant details, such as of the location and the road rather than the apartment blocks themselves.

(ii) This differentiated very well. There were some very perceptive and well crafted answers, with developed points reflecting a balance between benefits and problems, at the opposite end of the spectrum candidates listing ideas such as noise, traffic and work with little further elaboration.

(c) This case study was well answered by many candidates, usually in the context of a city within their own country, thus enabling the inclusion of appropriate place specific detail. To achieve the highest level candidates needed to refer to both causes and solutions, and in some Centres candidates were not as competent in describing the attempted solutions as they were the causes of traffic congestion.

Question 3

(a) (i) Many correct answers were seen, however the feature was incorrectly identified as a beach by significant numbers of candidates

(ii) Most candidates knew the definition of 'hydraulic action' though less successfully defined 'corrasion', some confusing it with corrosion.

(iii) Few candidates could describe the features of the landform shown in the photograph and many just tried to explain its formation, often in great detail but scored no marks as this was not what the question was asking.

(iv) This was generally well answered, with well prepared candidates referring to erosional processes to explain the sequential formation of back to back caves and natural arches on a headland. Some candidates included useful diagrams, which is good practice providing they are fully labelled but not merely repeating written text.

(b) (i) Many candidates used the resource well to make a comparison of points P and Q in relation to aspects such as height, slope, beach material and proximity to the sea/cliffs.

(ii) Well prepared candidates could describe how constructive waves created a beach, though most did little more than stating that the swash was stronger than the backwash, and many candidates included irrelevant details and/or diagrams about longshore drift.

(c) There were a limited number of examples of this question being answered extremely well, although those seen were hugely impressive as it was clearly a topic which candidates had learned thoroughly and understood very well. In contrast the majority of answers were very weak, with even the generic points being brief and simplistic, and such answers frequently failed to even name an appropriate case study let alone relate their answer to it.

Question 4

(a) (i) There were many correct answers yet other definitions were inaccurate as they failed to include any reference to either 'atmospheric conditions' or 'in situ', clearly key points as references to 'rocks being broken into smaller pieces' could just as well be definitions of erosion.

(ii) This was answered well though a few candidates put 5C for the second part of the question.

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(c) Drought and tropical storms was the most popular choices here, though there were some examples of floods. Candidates who focused on specific examples (e.g. New Orleans – Hurricane Katrina, Bangladesh flooding) tended to achieve more success than those who chose larger areas (e.g. the Sahara desert). The question asked for causes and impacts and the latter tended to be far more effectively covered than the former. For drought and tropical storms the causes were often unstated or very superficially covered (most simple stated what a drought or tropical storm was), however some candidates wrote well, and in great detail, about the causes of their chosen flood event, especially examples such as Bangladesh.

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(a) (i) Providing candidates showed their understanding by giving a little detail about the sectors (with many naming them) they scored well.

(ii) Virtually all candidates gave good examples of jobs in the primary and tertiary sectors, with farming/mining and teachers/doctors being popular choices.

(iii) Most candidates could, to some extent, use the compound graph provided. The changes required were generally well described for the primary and tertiary sectors, but many missed the changes in the secondary curve (i.e. increase followed by a decrease). The answers to the question needed a dynamic approach – it was about 'change'. Weak candidates simple stated initial and final percentages.

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(c) Here there were some excellent place-specific answers from cases studies such as Silicon Valley and the M4 corridor, the best candidates developing their ideas in relation to their chosen case studies. Many other answers were too vague/general and did not specify the hi-tech industry despite clues in the question. As the question asked specifically about hi-tech industry answers about car manufacture or other types of manufacturing industry were not acceptable, though candidates could gain some credit at Level 1 for generic ideas relating to the factors influencing industrial location.

Question 6

(a) (i) There were many accurate answers though a significant number stated that subsistence farmers 'grow food for themselves and to sell' which failed to demonstrate the required knowledge.

(ii) Most candidates showed a good understanding of the resource and gained credit, particularly in reference **part B** (rice) which was better answered than A (groundnuts).

(iii) This differentiated well with some excellent responses from candidates who gave details relating to physical, economic and political factors. Weak candidates tended to do little more than refer to an inability to afford food or the means of producing it.

(iv) As in (i) there were a wide range of answers, with the better ones looking at a range of ideas for the four marks, and developing them, rather than focusing on one issue. Simplistic lists are not to be encouraged (e.g. buy more fertilizers, pesticides, machines and seeds) as candidates need to show their understanding in questions which are worth several marks by developing their ideas.)

(b) (i) Although some candidates misunderstood the question and explained how the women could work in hotels and the tourist trade, there were many candidates who made pertinent points about increased sales of produce to hotels which would make money, or perhaps secure regular earnings. Some candidates observed that infrastructural developments as a result of tourism (e.g. road and airport development) might provide better access to more distant markets, though it was unusual to see responses showing such sophisticated understanding.

(ii) This differentiated well and some excellent answers were seen covering a whole range of significant disadvantages of tourism for local people, and in some cases developing them very well. Others gained one or two marks only for simple references to noise or litter for example, whilst others included irrelevant information which related to disadvantages to the environment rather than the people.

(c) Many answers were characterised by a series of very short Level 1 statements about many different attractions (e.g. 'sandy beaches' and 'good nightlife'). Candidates who were more successful described more fully just a smaller number of attractions, and exemplified by naming specific named details, thus making their answers place specific. A whole range of case studies were used, including many local ones (which is good practice) along with text book examples (e.g. Costa del Sol). Those candidates who used individual cities or relatively small areas as examples tended to be more successful than those who used whole countries (e.g. Kenya) and failed to specify a clear location.

GEOGRAPHY

Paper 0460/02

Paper 2

General

The paper was about on a par with previous papers; it may have been slightly easier in that there was no question which was found to be particularly difficult. Unusually, a number of candidates scored full marks on the survey map reading question. Questions which proved to be particularly easy were 2(b) and 4(a). The paper differentiated between candidates very well, and there was a very wide spread of marks. Few candidates scored less than 20 marks so the weaker candidates had opportunity to show their skills. There were more marks above 50 than last year.

The standard of written English was generally good, although some candidates experienced problems in expressing their ideas accurately. Scripts were neat and legible in general, although there was some rather slapdash shading on diagrams.

As last year, the main problem was caused by a lack of understanding of the meaning of the term 'relief' in its geographical sense. Many candidates do not know what a flood plain is or how to calculate a gradient; questions on these topics were frequently omitted. On the other hand, mapwork skills continue to improve.

Question 1

Part (a) was found slightly more difficult than the equivalent question last year. Frequent errors included Carse Estate and Tafuna railway siding in (i), wide tarred road in (ii), aerodrome landing area and farming in (iii), Queen's Gift, quarry or mine and mining trench in (iv), hill feature in (v) and lakes in (vi). Nevertheless, most candidates scored high marks.

In **part (b)** many candidates gained full marks, although those not familiar with the terms *functions* or *services* did not. Some did not confine their answers to the specified area and suggested, for example, staff quarters.

Part (c) was often well done; the main weakness was the lack of recognition that neither area had a high density of drainage. Candidates were comfortable with the style of the question.

Part (d) was usually well done. Weaker candidates were able to locate the weir and confluence but the floodplain was often omitted.

Part (e) proved more difficult, with all options being chosen by many candidates in (i) and many not attempting (ii). Those who did calculate the difference in height correctly often failed to express the gradient appropriately, in ratio form, as the question clearly required. Some placed the decimal place incorrectly and some divided 45 by 4650.

Question 2

In **part (a)** most candidates scored full marks. A surprising number, even some good candidates, did not attempt to complete the population pyramid. Occasionally candidates stated that there were no people in those categories in the answer to (c). Almost all candidates answered all parts of (b) correctly. In **part (c)**, by contrast, few candidates gained maximum marks. Many candidates did not note the information provided, that the Maori people form part of the population of New Zealand, so they wrote irrelevantly about the migration of Maoris from an LEDC to New Zealand and how it would alter the population structure. The second common source of error was the failure to heed the instruction in the question to answer 'using evidence from Figs 5 and 6 only'. These candidates wrote about the consequences of development suggesting, incorrectly, that the percentage of Maoris in the New Zealand population would decrease because of better medical care and contraception leading to lower birth rates and increasing life expectancy giving more aged.

Question 3

Only rarely were maximum marks gained for the photograph description in **part (a)** because many candidates did not know what 'relief' means. Almost all candidates included much irrelevant information about vegetation, climate, settlement and agriculture. Many described the area was mountainous, rather than hilly with gentle slopes rather than steep ones. Some noticed the v shaped valleys and spurs and, more infrequently, the ridge. As usual, there was a lot of vague comment about slopes and valleys without any descriptions of them. Many wrote answers about the susceptibility of the area to soil erosion, which would have scored well in (c), if repeated, which often was not the case.

Part (b) discriminated well and all options were selected by some candidates.

There were some good answers to **part (c)** with candidates noting the steep slopes, bare land and evidence of deforestation. Some answers were spoilt by vagueness, such as saying less vegetation rather than lack of it and slopes, rather than steep slopes. There was also reference to climate/weather and bad farming techniques, neither of which could be seen in the photograph. There was some confusion between landslides (mass movement) and soil erosion.

Question 4

Most candidates correctly answered 15% in **part (a)**. In **part (b)** there were many accurately drawn pie graphs but some did more than required by plotting the percentages for the other years and there was some invalid shading. A common error was to confuse 20% with 20 degrees.

In **part (c)** many were able to select the correct material from Fig. 9 but variable wind was often not developed to variable supply. Some included irrelevant material about the effect on other energy resources which was not information obtained 'using Fig. 9 only'. Many candidates scored marks for the bird deaths and no air pollution but other effects were stated too vaguely; for example, candidates mentioned noise but did not link it to the environment by adding that it would frighten animals.

Question 5

This question proved to be a very good discriminator between candidates. **Part (a)** was usually quite well answered, although all options were chosen by some and some failed to gain any marks. Lines 4 and 5 were confusing to the weaker candidates.

The response to **part (b)** varied with many very poor answers which gave vague statements such as "in the sea". There was a real lack of use of geographical terms in describing location. Good answers referred to the names of specific plates, oceans/seas, and relative distances from plate boundaries, but these were not very common. A few noticed the linear nature of the distribution. Some did not understand the demands of the question, as they described the effects of each type of earthquake.

Part (c) was often answered well, although some linked the earthquakes to the moment when the plates hit each other. Relatively few answers went beyond noting the converging plates. Subduction was sometimes described, although it was often confused.

Question 6

Part (a) was well-answered, although candidates should be encouraged to draw vertical lines with a ruler when completing proportional bar graphs. Some overlapped the segments by starting all at 0. However, the majority completed the task accurately.

Part (b) proved to be a very efficient discriminator. Although the bullet points in the question ensured that the answer was accessible to all, a considerable number gained no marks because they wrote theoretically about the industry with no real reference to Fig. 11 and Table 2. Some candidates wrote about all the manufacturing Centres and others described possible advantages and disadvantages of the industry to the area rather than the advantages and disadvantages of the location for the industry. The best answers were from candidates who dealt systematically with the question, using the bullet point prompts.

GEOGRAPHY

Paper 0460/04
Alternative to Coursework

General comments

Most candidates found this examination quite challenging and less accessible than previous sessions; for a change the physical geography question on rivers appeared to be tackled more effectively than the question on urban areas and traffic flows. There were some very good performances from individual candidates with a number scoring over 40/60 marks; the number scoring more than 50/60 was less than in previous sessions although those scoring less than 20/60 were about the same.

The overall range of marks went from 3 to 54/60 – down on previous years - with weaker candidates scoring on the practical questions, such as drawing graphs, and those of higher ability scoring well on the more challenging sections requiring explanation and judgement.

There is less general advice to be given for areas for improvement with this paper as with others. As there are no choices to make, it is difficult to miss sections out. There were no reports of time issues as the booklet format does not allow or encourage over-writing of sub-sections – though several candidates wrote lengthy answers all over the paper and on additional sheets. Most points for teachers to bear in mind, when preparing candidates for future Paper 4 questions, relate to misunderstanding or ignoring command words although there were some topics this year which were universally not well answered. These included sampling techniques (as mentioned in previous reports), measuring techniques – both traffic and rivers, processes of erosion and investigating human impacts on rivers.

Command words tell the candidate exactly what is required. Too often they appear to be ignored as irrelevant. For example **Question 1 (b) (iii)** asked candidates to *Describe the pattern of the total number....* Most candidates wrote about the total at the different times of the day instead of the total given at the end of the table on the insert sheet. In **Question 2 (e)** some candidates wrote about floods as an impact of the river on people – the question asks about the impact of people on the river.

Comments on specific questions

Question 1

(a) (i) This was not done well because most candidates just rewrote the information provided. Some read "each pair" as a requirement to discuss how all 4 pairs would carry out their counting at each different site. The best answers showed practical awareness in having one candidate on each side of the road, each counting cars in or out, and recording these as a tally to total for the 10 minutes.

(ii) There were some weak answers here – just stating that it is more reliable, accurate or representative does not really explain why 10 minutes was chosen. Examiners were looking for practical responses relating to the time that candidates could pay attention or not get bored plus the fact that 10 minutes would be a reasonable time to gain an estimate of traffic flow and could be multiplied easily to estimate flow per hour.

(b) (i) The bar graphs were accurately drawn with the correct shading although some candidates created their own shading or did not shade. A small number drew their own graphs below Fig. 1 ignoring the axes provided. In general the 175 bar was the one that was the least accurately drawn.

(ii) Almost all candidates correctly listed the roads in the right order. A few gave site numbers which could not be credited as the table clearly states "Name of road".

(iii) Too many candidates gave a history of all traffic flows in and out of individual roads at the three times of the surveys instead of just referring to the totals at the end of the table and describing how the pattern varied overall. The best candidates did recognise that Kingsway Road was busiest and quoted figures and also, in general, more people were leaving the centre than going in except for Parkway. A number focused on patterns in relation to compass directions which was inappropriate to the total of traffic flow in and out of the town centre and more appropriate to (iv) which did relate to directions.

(iv) Most candidates agreed with the Hypothesis and could relate the traffic flow to either compass direction e.g. more traffic flowing in the South and West, or to pull factors such as the major city or the railway station which would again influence traffic flow in certain directions. A number wrote about single streets and compared the flow in and out along that street which was not credited as the hypothesis was about flows from the town centre only.

(c) (i) Apart from a very small number of candidates, the flow arrows were completed for full marks by virtually all candidates and shaded correctly. A surprising number put the direction of flow on the wrong end but that was not penalised in the mark scheme.

(ii) The vast majority recognised the contrasting flow in and out along Independence Way for full marks. A number listed other streets and some wrote answers that referred to when there was less traffic rather than more traffic flows. Some just "lifted" and listed the data off the resource without any judgements about more or less traffic at certain times so gained no marks.

(iii) Most candidates did agree that the Hypothesis was correct and then pursued two different routes to justify it both of which were acceptable. Some explained why the traffic would vary at different times e.g. rush hours to work/home in the morning/evening. Others supported their decision by using the data to agree that there was more or less traffic at certain times. A few mixed both approaches which was acceptable.

(d) (i) There were some sensible suggestions to improve the data collection. Examples included increasing the frequency of surveys during a day, carrying out the survey on other days/weekends, using more candidates to minimize errors at each site, surveying the smaller roads too. Impractical suggestions included asking drivers where they were going and other questionnaire-style ideas.

(ii) Candidates scored quite well here. The popular suggestions included types of vehicles, pollution – both noise and air- and number of people in cars. Less acceptable ideas included questionnaires, the colour of vehicles and the age/gender of the people driving.

Question 2

(a) In stating the factors the candidate needed to give some idea of why they would be considered so simple ideas such as width of river, depth of river, distance between sites did not indicate why these are important. Aspects of danger, safety, and accessibility were expected answers along with issues of obstruction, human influence and equal distances between the sites. Just listing where a village or road is was not enough to gain credit here.

(b) (i) This was well done though a number of candidates just listed equipment without explaining how it would be used in the measuring of velocity. Most responses included good practical suggestions with some references to the calculations shown on Fig. 5 as required.

(ii) Very few candidates did not gain all three marks for the calculation. A small number did not do the first division correctly which affected the following answers; some did not include the unit metres/second in the final answer which was a requirement for credit.

(iii) This was well plotted by almost all candidates. It is good practice to number the sites 5 and 6 on the graph which some did not do but were not penalised on this occasion. Almost all drew acceptable lines which was a requirement in the mark scheme.

(iv) This was well done. Most candidates took the overall trend and agreed with the hypotheses with many quoting the speeds at sites 1 and 6 as supporting evidence. Quite a few spotted the anomaly of Site 3 whether they agreed with the hypothesis or, on this basis, decided to disagree.

(c) (i) This was not done well. Candidates seem to understand a sampling technique as a practical way of getting more bedload and suggested various kinds of nets and other apparatus to do this. A few mentioned random or systematic techniques for one mark but failed to give any detail as to how this technique would work. A few just referred to scooping out by hand anywhere some more bedload was found. Systematic and random sampling techniques are probably areas that come up every exam session and need to be better understood.

(ii) Given the Insert provided the equipment to measure the long axis and the roundness of pebbles, it was surprising how many candidates invented their own ways of doing this e.g. putting a string around the pebble or feeling it with their hands for roundness. Those that suggested using the ruler to measure the calliper gap and comparing the pebble to the roundness chart gained appropriate credit.

(iii) Most candidates realised that the bedload decreased in size and that became rounder/smoother with distance from the source. A few just stated that the hypothesis was correct and that the shape and size did change but did not identify the changes.

(iv) Examiners were looking for references to increased velocity and processes of erosion such as attrition and hydraulic action that would break pebbles down and smooth them. Candidates tried just to list all types of erosion and did not refer to increasing velocity as a factor. Few could describe attrition in geographical terms e.g. banging into other rocks and breaking up

(d) Improvements to the data collection methods were well done. Ideas such as increasing the number of sites, having more along the whole river, increasing the number of samples of bedload, more candidates to minimize errors were all acceptable. Vague suggestions such as *use better equipment* could not gain credit.

(e) Too many candidates misread this as the impact of a river on people and launched into answers relating to flood impacts and measuring various aspects of flooding. Pollution was a common answer in terms of water, litter, factory dumping however candidates spent too long describing the impact rather than how they would investigate it. Some candidates described water use for irrigation or suggested investigating dams but could not put forward a realistic way of investigating the influence. It should be noted that a dam or irrigation alone is not the impact – reducing velocity or volume is the impact and too many did not specify the impact but focused on the cause.

GEOGRAPHY

Paper 0460/05

Computer Based Alternative to Coursework

General comments

Generally candidates coped well with this examination/simulation but performance obviously varied between centres. As in previous sessions, candidates seemed to find the questions which involved matching up, labelling and completing graphs relatively easy (the Computer marked sections). However, with the answers that required a description or an explanation (the Examiner marked sections) more detail, depth and use of data was often required.

The simulation was based on farming. Two hypotheses were investigated. The first related to farming activities and how they varied with height and steepness of land; the second related to how intensive the farming was.

There was a close correlation between marks gained on this paper and the marks that the same candidates gained on Paper 4. This examination paper proved to be more popular this session.

Comments on specific questions

Question 1

This question involved thinking about the human and physical factors that influenced farming. Most candidates found it easy to choose the correct table (A) but some found it hard to suggest another human and physical factor (such as labour and soils).

Question 2

This question required the candidates to describe three ways that technology could affect farming. Most candidates did not find it very easy to describe the ways (such as using machinery means that less labour is needed, using HYV's means that crop yields are higher and using pesticides means that less crops are lost). Some candidates lost marks as they just named, rather than described, the ways.

Question 3

This question was to get the candidates to match up the different farming types with their definitions. This was well answered with most candidates gaining 3 marks (for matching arable with growing crops, commercial with producing farm products to sell, intensive with farms with a high level of input and pastoral with rearing animals).

Question 4

This question involved the matching up of inputs, processes and outputs in a farming system. This was well answered with most candidates correctly matching up irrigating as a process, machinery and fertiliser as inputs.

Question 5

This question was to study the climate graph for the area and identify when and why irrigation would take place. Surprisingly, most candidates found this difficult (many saying January or October, rather than July, as their answer) presumably by looking at the temperature line, rather than the rainfall bars. Most were then unable to explain their answer correctly. The candidates needed to explain that July was the month when irrigation was needed due to it having the lowest rainfall (4 mm) and the hottest temperatures (29 degrees C), so that evaporation rates would be high.

Question 6

This question was to suggest solutions to faming problems. Most candidates answered this quite well by giving suggestions such as add fertiliser for infertile soil and adding pesticide for the problem of pests and diseases. However, many found it difficult to suggest a solution for steep slopes (terracing).

Question 7

This question focussed on getting candidates to suggest ways that farmers benefit from the use of glasshouses. The candidates found this question reasonably accessible. Most candidates knew that glasshouses provided shelter from strong winds or cold temperatures and meant that watering could be controlled.

Question 8

This question was to work out the land use for barley and potatoes. Most candidates found this easy and gained 2 marks (14.1/14.2 for barley and 8.6/8.7 for potatoes).

Question 9

In this question asked candidates needed to complete the bar graph for the data from the previous question. Most candidates again found this easy, gaining 2 marks for producing two correct sized bars (14.0/14.5 for barley and 8.5/9.0 for potatoes).

Question 10

This question required candidates to measure the distances to the markets for tomatoes. Most candidates found this easy and gained full marks. Most candidates correctly measured 1400 km for Berlin, 620 km for Madrid and 680 km for Rome. (There was a tolerance of +/- 20 for this answer).

Question 11

This question was concerned with working out the missing heights and land uses from the land use map of the farm. Most candidates found this question quite easy. Marks were gained for potatoes (point 1), 120 metres (point 4), a figure between 131 and 139 metres and olives (point 7).

Question 12

This question was to describe how a clinometer would be used to measure a slope angle. Most candidates found this difficult but there were variations between centres. Clearly, if candidates had used a clinometer, then their answers were better. Candidates needed to refer to using two ranging poles, making sure that they pointed the clinometer to the same point on the pole and reading and recording the angle.

Question 13

This question involved writing a conclusion to the first hypothesis. Most candidates correctly accepted the hypothesis that farming activities did vary with height and steepness of land. Most were also able to give reasons for their decision (such as the highest land and the steepest slopes were used for sheep). However, some did not include data to exemplify their answer (such as the highest land was 800 to 900 metres and the steepest slopes were 14 degrees and 29 degrees).

Question 14

This question dealt with measuring the field sizes for onions and potatoes. Some candidates found this difficult, yet others did well, scoring 2 marks. The correct field size for onions was between 2.8 and 3.4 hectares and the correct field size for potatoes was between 2.0 and 2.5 hectares.

Question 15

This question was to identify the correct points on the scatter graph for potatoes and onions. Most candidates found the question easy and gained 2 marks (for saying A was potatoes and B was onions).

Question 16

With this question candidates were asked to mark on a best fit line on to the scatter graph and describe the relationship shown. Some candidates found it difficult to correctly put the best fit line in the correct place (from F to between A and tomatoes) and some candidates did not attempt it. Most candidates were able to see the relationship (correctly writing that as the field size increased, the man hours decreased).

Question 17

This question involved writing a conclusion to the second hypothesis. Most candidates correctly rejected the hypothesis that farming was more intensive in larger fields. Most were also able to give reasons for their decision (such as the largest fields had the least intensive land uses and the least man hours). However, some did not include data in their answer (such as the largest fields used for sheep and barley, were 5.8 and 4.9 hectares and had the least man hours of 9 and 10).

Question 18

This question involved choosing the most suitable questions to ask two farmers. Most candidates found this task easy and correctly chose B, E, F and H.

Question 19

This question involved the suggestion of two more questions to ask the farmers. Responses to this question varied. Some candidates chose valid questions (such as 'Do you use chemicals on your farm?' or 'Do you use irrigation?'). However, other candidates wrote questions already given in **Question 18**, or wrote vague questions).

Question 20

This question involved thinking about how the candidates could have improved the investigation. Most candidates found this a little difficult and few gained full marks. However, good answers included investigating more than two farms, taking soil samples and investigating more sample sites (every 50 metres rather than every 100).