GEOGRAPHY

Paper 0460/01

Paper 1

General comments

The paper produced a high degree of differentiation, with a wide range of marks achieved (zero to full marks). There were plenty of opportunities for A and A* grade candidates to demonstrate their abilities, however the resources and structured tasks provided all candidates with the opportunity to achieve positively to some extent, as candidates were able to access information from the diagrams, maps, photos and tables provided. Examiners commented on the good geographical knowledge, understanding and skills demonstrated; indeed many noted the year-on-year improvement in the general standard of work, in particular the quality of case studies and the use of appropriate subject-specific terminology. There are always going to be exceptions, but many candidates and their teachers are to be congratulated on their excellent preparation.

Whilst there were many Centres which produced high scoring candidates and very impressive geography, there were others where performance was generally weak and where candidates, for a variety of reasons, seemed poorly prepared. Numbers entering for IGCSE Geography continue to increase and there were many Centres entering candidates for the first time for this examination. Clearly the quality of answers varies between Centres and individuals, and generalisations are sometimes dangerous to make and difficult to substantiate, however it is worth pointing out that some new Centres were conspicuous by entries from many candidates who struggled to cope with the demands of the paper. Clearly experience brings about improvement, and teachers from new Centres are urged to study previous Examiners' reports in order to obtain advice previously acted upon by experienced Centres, whose candidates are now produce such impressive geography. These include general advice relating to developing answers rather than writing simple points, taking note of command words in questions and writing detailed, place-specific case studies in order to derive full benefit from the levels of response mark schemes now being used, which are designed to credit quality, not quantity alone. The examples which follow later in the detailed comments about the questions serve to illustrate these issues.

However, as always in reports such as this, it is useful to emphasise the general advice, given in previous Examiners' reports which should be given to candidates:

(a) Choose the three questions with care, ensuring that for each of the chosen questions you are confident that you have a case study about which you can write in detail. Answer the three chosen questions in order, starting with the one which you are most confident with, and finishing with the one which you are least confident with, rather than automatically answering them in numerical order.

(It is interesting to note that few candidates adopt this approach, numerical order of questions is the approach favoured by almost all candidates).

(b) Read the entire question carefully before beginning an answer. Decide which section requires which information, thereby avoiding repetition of answers and the time that is wasted.

(c) Take careful note of the command words so that answers are always relevant to the question. Highlighting command words on the question paper is a useful strategy, however candidates must be familiar with their meanings, something which can only be achieved by the use of past questions and mark schemes in preparation for the examination.

(d) Use the mark allocation as a guide to the amount of detail or number of responses required. Be aware of timing and do not devote too much time to the first chosen question, or include too much detail in sections which are only worth a small number of marks. The inclusion of irrelevant materials is self-penalising, in terms of the time which is wasted. The case studies are often used as an opportunity to 'write as much as I know about….' and this is not helpful to candidates. At best they waste valuable time, at worst they overlook what the real task is and their marks suffer.

(e) Aim to develop each idea so that answers do not emerge as a list of simple points, particularly in case studies where place-specific information and details should be included wherever possible to give case studies authenticity.

(f) Use resources such as maps, graphs and photographs carefully in order to make use of the detail they include, and do not merely copy out parts of resources. Wherever possible use statistics to back up an answer, but aim to interpret them and add comment rather than simply listing figures read from a table or graph.

In terms of their administration of the examination, Centres should take careful note of the following points:

(a) Invigilators must remind candidates to write the numbers of their chosen three questions on their first answer sheet on the cover of the answer booklet which they use. This is a useful time to remind candidates only to answer three questions, rather than all six. There are too many candidates who do not follow this simple instruction and answer all six questions. They cannot benefit from such an approach as time will not be sufficient to write good quality answers to questions.

(b) There should be a margin of at least 2 centimetres on the left and the right side of each page. Apart from the numbers of the questions and sub-sections candidates should not write in these margins.

(c) Every part of every question chosen should be clearly indicated in the left hand margin.

(d) At least one line should be left between each part of a question, and at least three lines between each question.

(e) All sheets should be loosely tied together, with the sheets assembled in the correct order. Sheets should not be submitted loose, nor should they be tied or stapled together so tightly that they are impossible to turn over in order to read all parts.

(f) All sheets should be numbered by the candidate and placed in the correct order.

(g) Narrow lined paper, or exceptionally thin paper, should not be used.

Comments on specific questions

Question 1

(a) (i) Most candidates were correct, the most common correct answer being 'in the north of Mali', however some candidates wrote NE, NW or just Timbuktu or another named location.

(ii) Most common correct answers referred to cities, airport and rivers, but some candidates referred to annual rainfall figures or gave the location as in the SW.

(iii) There was a mixture of generic possibilities and others specific to Mali and the map. Ideas relating to climate, rivers and water supply were often well developed to gain all three marks. Other candidates focused on potential differences in population density resulting from differences in economic development. A few candidates focused incorrectly on population growth rates, but most of those who lost marks did so due by writing such brief statements that they failed really to offer any reasoning for differences in population density, doing little other than repeating the simple ideas they expressed in (ii).

(b) (i) The majority of candidates used birth and death rates to work out the natural growth rate of 27.72, and many were able to go beyond that, considering net migration to secure the full three marks. A number used addition or division to produce wrong answers, or lost marks by either not calculating accurately or using statistics for the wrong year.

(ii) This was very well answered with many candidates scoring three or four marks, by reference to a variety of reasons to explain high birth rates in LEDCs.

(iii) Most candidates recognised an overall decrease in life expectancy but some did not notice that this actually followed an increase in the years up to 2002. The question differentiated well, some candidates illustrated their descriptive comments by the use of statistics and linked their reasoning to each trend to score full marks, whilst others merely lifted figures without interpreting them. Others did not state any trends, making any explanation difficult, and others lost marks by explaining why life expectancy was low, without suggesting reasons why it had changed.

(c) Not all responses included both an origin and a destination of migrants, some failed to include either, and some quoted an example of internal migration. The most common correct examples were textbook examples such as Mexicans to California/USA and Turks to Germany. Some of those candidates who used up-to-date examples, particularly ones which were pertinent to their part of the world, produced first class responses. These included migrations such as Sudan to Kenya, Rwanda to a named neighbouring country, Sierra Leone to Nigeria, Zimbabwe to South Africa and Poland to the UK. Pulls and pushes varied from basic Level 1 lists which often repeated simple pulls and pushes in reverse (e.g. more work, better quality of life, better health care) to well developed and illustrated statements, many of which were place specific (e.g. many migrants from Poland come to the UK to earn higher wages as they can earn four times as much for working as unskilled labourers on farms in the Fens in the UK than they can doing highly skilled work as engineers in Warsaw).

There were some candidates who included irrelevant information about the problems faced by migrants or the impact of migration on the host country. Whilst candidates do not lose marks for including irrelevant details, they do lose time and often neglect to develop the relevant points fully at the expense of including detail for which they will not earn marks.

Question 2

(a) (i) Almost all candidates knew Central Business District, there were just a few incorrect answers or omissions.

(ii) Usually candidates scored two marks, but some made incorrect statements that they are both near the CBD or that that are both in a rural area. Not all candidates identified the shopping centres which they were writing about when describing the difference and wrote vague statements such as 'One is near the motorway and the other is not' which could not be credited.

(iii) Generally answered well, but some of the reasons were very vague, simply making statements about the location showing nothing more than map skills, rather than including reasoning and showing understanding. There were some good responses relating to issues such as the cost of land, congestion in the CBD, and attempts to avoid competition and/or secure a large market area.

(b) (i) Only a few confused Photographs A and C, most used the evidence in the hierarchy diagram well to link each photograph to the correct type of settlement. Some wasted time by giving reasons.

(ii) By no means all candidates realised what is meant by a hierarchy, but there were some good answers, referring to order of importance of settlements in an area and the resulting difference in number, type and order of services, along with their spheres of influence. Weak candidates merely copied a list of the services from Fig. 4 without demonstrating any understanding of the concept of a settlement hierarchy.

(iii) There was great variation in the standard of responses, with some gaining maximum marks and making reference to geographical ideas such as spheres of influence, orders of services and convenience/specialist/comparison goods. In contrast, others referred to relevant simple issues such as price or quality, however such 'non geographical' responses rarely scored more than two marks.

(c) With a few exceptions this was very poorly answered and there was much confusion about 'urban sprawl'. There were many irrelevant answers about inner city areas, for example textbook case studies of the London Docklands and many answers were about the general problems faced by large cities, (e.g. New York). The majority of candidates did not really discuss urban sprawl but gave details of urban development/growth and problems of growth. The problems of shanty towns were commonly tackled, however it was rare for candidates to discuss these in the context of urban sprawl. Some candidates could define urban sprawl clearly, and even give reasons for its occurring in a named city, but then failed to write about its impacts in any detail.

Question 3

(a) (i) Many answers were within the limits allowed, however some candidates gave the average monthly precipitation rather than an annual figure, whilst others used data from the graph for temperature.

(ii) Although many candidates gave correct answers, or at least used the correct method even if they read the graph incorrectly, a surprising number of candidates were not familiar with a 'range of temperature' or did not know how to calculate it, many wrongly adding up the temperature for each month and dividing by 12. As in (i), some answers used the wrong data, in this case the precipitation.

(iii) Most candidates could make at least one point about the location of the Mojave Desert, often by reference to its south westerly location in the USA or by reference to one or more of the states it straddles. In this type of question the use of distance and direction from other features is effective (e.g. the Mexican border), in contrast vague statements like 'near to' are not helpful, and in a geography paper 'above', 'below', 'left' and 'right' will never be credited in this context.

(iv) As always when this question is set, there was a relatively small number of excellent answers showing superb knowledge and understanding, yet from most candidates answers were weak. The majority either failed to offer a response or failed to gain any credit when they did as they simply made descriptive points about deserts ('It is dry because there is no rain' being typical of such responses, but the question demands candidates to explain why this is the case. There were some references to rain shadow, but this was rarely developed sufficiently to gain more than one mark. A few mentioned high pressure or offshore winds or distance from the sea, but there were few comprehensive answers.

(b) (i) Generally candidates are now using photographs well, this was true for many in this question, although as always there were irrelevant comments, in this case about rocks, mountains and dunes.

(ii) For many candidates this was a repeat of their previous answer, with simple description of the plants and no reference to adaptations to the climate, or they simply described the climate without considering the vegetation. However, well prepared candidates were about to write at length and in complex detail about the mechanisms used by desert vegetation to tolerate the aridity and produced excellent answers.

(c) Most candidates opted to write about the rain forest, typically the Amazon, although there were a few about other areas of rain forest including Malaysia and Kalimantan, and answers about areas such as the Sahel. Almost all distinguished between 'how' and 'why' and most candidates who chose rain forests were able to gain some credit, though for many their brief lists (e.g. for farming, for mining, killed animals) did not enable them to progress past Level 1. Some who chose deserts wrongly described why a desert was a difficult area for people to live in, rather than referring to threats to it posed by people.

Those who achieved answers at Level 2 and beyond tried to expand their points and make links, which is a good strategy to use to convert Level 1 statements to Level 2 (e.g. The habitat of species of animals has been destroyed by deforestation which has caused the species to be threatened by extinction). Some candidates could show that their answer was place-specific, typically by reference to features such as the Trans-Amazonian Highway.

Question 4

(a) (i) Generally candidates gave acceptable answers here, though from weaker candidates they were neither accurate nor clear.

(ii) This was well answered by almost all candidates.

(iii) Although some candidates struggled with part C, 'plates sliding past each other', most were able to score at least two marks.

(iv) This differentiated well; weaker candidates could do little more than repeat their answer to (i), however well prepared candidates gave sophisticated and detailed answers, showing an excellent understanding of the processes leading to the formation of fold mountains. Whilst many used diagrams, they served to do little more than repeat what was in the written text. Fully annotated diagrams alone would be an effective way to answer questions such as this, though of course the annotation should be sufficient to explain the relevant processes.

(b) As in (a) (iv) many diagrams were used here, though not always productively. However, both parts of this question were generally well answered, with many candidates showing a full and accurate understanding of processes occurring at constructive and destructive margins. Few candidates confused the answers for A and B; clearly they had made use of the resource supplied.

(c) Volcanic eruptions were the most popular choice, especially Mt St Helens and Mount Merapi, and about earthquakes many answers used Kobe or San Francisco. Few candidates chose drought or flooding, but these included some good answers on flooding in Bangladesh and on drought in the Sahel. Although there were some extremely thoughtful answers, all too often most or all of the answer was about the causes and/or effects of the hazard(s) and there were few reasons why the people live there which was the focus of the question.

Question 5

(a) (i) Occasionally omitted and often badly phrased, but usually candidates knew that pastoral farming was associated with animals and they gained credit.

(ii) Almost all candidates could handle this simple skill of interpretation from the New Zealand maps and the question caused few problems.

(iii) Whilst weaker candidates tended to write discrete points about each area, most did at least refer to both areas, so Examiners could credit the points made. In such questions it is far easier and quicker for candidates to make direct comparisons using words such as 'more' or 'less', 'whereas' or 'but' and in so doing more impressive answers are produced, rendering it unnecessary for the Examiner to search the answers to make links for acceptable points.

(iv) This differentiated well and most candidates were able to gain some credit through interpreting the maps, even though many statements were vague and included little development (e.g. warmer/less rainfall/lower in height). More perceptive candidates developed these statements in relation to the suitability of such conditions for rearing of cattle and produced some excellent responses.

(b) (i) The skill of describing a distribution was well handled by most candidates, with most making reference to the coasts and the main cities.

(ii) This was more challenging, but well done by many candidates who referred to reasons such as proximity to raw materials (i.e. the grazing areas shown on the maps), main markets (i.e. the cities) and export routes (i.e. the ports). Whilst many candidates gained some credit, they could have gained more had they been prepared to develop their simple points (e.g. they are near to the grazing areas so that meat can be delivered fresh to the processing plants; they are near to the ports so that the cost of exporting finished products is reduced as a long overland journey is not required).

(c) This case study was one of the weakest for most candidates. Despite the clear instruction some answered all options, and even those which did focus on one of the three choices tended to look at a large area and answer in generic terms (e.g. agriculture in the Netherlands, industry in China). In this type of question the choice of a large area at the country scale is unwise and should be avoided. If choices had been more specific and small scale here (preferably an area familiar to candidates), answers would probably have been better; indeed those few answers that were seen which gained full marks were of this type (e.g. rice farming in the Ganges Valley, chemical manufacturing in Cubatao, High Aswan Dam Scheme on the Nile). Generally answers on agriculture were the best, those on industry particularly referring all too often to pollution with little qualification, and those on energy ignoring local impacts at the expense of global issues.

Question 6

(a) (i) The simple graph skill was handled well by most candidates.

(ii) Virtually all candidates identified the positive correlation and many chose correct figures for Ethiopia and Portugal to back it up. Some recognised that the relationship was not perfect, recognising the anomaly of China. A few did not mention the relationship, simply quoting figures to no effect, whilst some referred to the anomaly and stated that because of this there was no relationship at all.

(iii) Most candidates could suggest at least one reason for differences in access to safe water, though weaker candidates referred to the relative availability of money and/or technology in MEDC/LEDC without suggesting how this might impact on safe water supply. Those who were successful considered issues such as the use of the money/technology to set up an efficient water supply infrastructure, purify water and treat used water. Issues such as the population density, the amount of precipitation and the presence of an aquifer (or river) were referred to by some candidates, with different degrees of understanding. Clearly being next to a river is of little help if that river is heavily polluted and the country does not have the capacity to clean it up. Similarly, a location close to the ocean is only significant if the technology is available to desalinate the sea water.

(iv) This question had been well rehearsed by many candidates and most were able to make some relevant comments about issues such as the health and hygiene gains from clean water and the increased work/agricultural output and/or reduced cost of medical care. Some mentioned the likely reduction of specific diseases, such as cholera, such references are credited by Examiners as the candidate has developed the idea.

(b) (i) Candidates were able to list reasons for the shortages of water in Portugal, but sometimes did not give three. Some expanded on dry weather/low rainfall/drought as if they were separate points.

(ii) This differentiated well and there were excellent answers which focused on a range of issues including more effective storage and distribution of water, conservation of supplies and seeking extra supplies, for example by desalination or transfer of water from other regions or countries. Weaker candidates tended to focus on the issue of reducing wastage alone, specifying a number of simple measures which could be used. However to score more than two marks they needed to consider a wider range of methods.

(c) Candidates usually scored best when writing about their own country, since their statements tended to be developed enough for Level 2 and include an element of place specific detail. There were some excellent examples from Centres in many countries. Candidates in local schools gained marks with the utmost simplicity for accounts of Mombasa or Mumbai, for example. Well learned textbook case studies such as the Costa del Sol did not have the same immediacy or ‘presence’ but deservedly earned full credit. At the other end of the scale ‘good beaches’, ‘nightlife’ and ‘warm weather’ paled into insignificance and the marks reflected this.

In countries there are tourist destinations of a variety of different types, either coastal, mountain or urban. For the purposes of case studies such as this coastal and mountain destinations work well as they have both physical and human attractions, and as such there are issues relating to impacts of the activity on the natural environment.

GEOGRAPHY

Paper 0460/02

Paper 2

General

The paper differentiated well between candidates of differing abilities, producing a very wide spread of marks, not only for the paper as a whole but for all the individual questions. The paper was of similar difficulty to that of previous years.

It is not possible to single out any one whole question which was easier or more difficult than others except, perhaps, for Question 4, which was often the lowest scoring question on a script. If there were problems with individual questions they were Centre specific. Parts of questions which were difficult for many were **1(b)**, **1(f)** (relief) and **4(c)** but the reason for the difficulty was not the question itself but lack of knowledge.

One problem in this examination was caused by a widespread lack of knowledge of the meaning of the term 'relief' in its geographical sense.

The range of marks seen was from 2 to 59, with a good spread of marks. Few scored less than 20, so the weaker candidates had opportunity to show their skills. Compared with last year there were fewer marks above 50, although maximum marks were regularly awarded for all questions except **Question 1**.

The standard of written English was good, with only a few experiencing problems in expressing their ideas accurately. Scripts were very neat and legible in general. Very few scripts were not completed in the time available.

Many maps and photographs were again sent back to Cambridge with the scripts, thereby depriving the Centres of valuable resources. Centres are strongly advised to inform their Examinations Officer that the **maps and photographs should be retained,** for later use in learning activities with subsequent examination classes.

Question 1

(a) This allowed many candidates to make a confident start to the paper and many scored full marks. The main errors were answering 'Camp Fouqueneaux in **(i),** 'culvert' or simply 'main road' in **(iii)** and occasionally omitting 'technical' in **(iv).**

(b) It was clear that many candidates were unfamiliar with describing road patterns, as they used words such as 'nucleated' and 'linear', which describe settlement patterns instead. Some descriptions, such as 'planned', 'systematic' and 'regular' were insufficient, rather than incorrect.

(c) (i) Only about a quarter of candidates measured the distance correctly and, as usual, the correct figures were spoilt by too many or too few noughts. Candidates should be taught to mark the distance on the edge of a piece of paper and to use the scale line, rather than to measure with a ruler and try to do a mathematical conversion. Plain paper is now included in the Additional Materials listed for the paper and candidates should be given a sheet in the examination, for the very purpose of assisting in tasks such as this (or indeed to help in questions with cross sections, which are set from time to time).

(ii) Some candidates knew how to give a bearing correctly but were too imprecise, giving 60º or 65º. Others gave answers of 27º or thereabouts, which is 90º minus the correct answer.

(d) Many gave an incorrect grid reference; as usual the main error was to exaggerate the 3rd or 6th figure. Some had no idea what the question required. Guidance on teaching six figure grid references is provided in the syllabus.

(e) This was generally well answered, with the identification of flat and sloping land being the most difficult. Despite instructions in the question, many candidates invalidated a correct answer with a double entry.

(f) Most candidates gained maximum marks for their descriptions of land use but even those who knew the geographical meaning of 'relief' found it difficult to score the maximum mark. This was mainly because they concentrated only on one element of relief: the slope. Few mentioned height or landforms. Some incorrectly called the 500m high ground a 'mountain'. Others referred irrelevantly to contour spacing. Many thought that relief included drainage, mentioning the river but not its valley. Others continued to describe land use features or climate, vegetation and even services, whilst a surprisingly high number interpreted 'relief' as help.

Question 2

This question differentiated very well, with able candidates making good use of the resource material but some answers were spoilt by incompleteness.

a) (i) There was a tendency to deal with only one hemisphere.

(ii) Candidates did not generally mention sea or water temperature and there were also some vague answers, such as 'ideal conditions'.

(iii) Many referred to only one ocean current, rather than those affecting the east and the west coast. Inexplicably, some wrote about the south coast of Africa. Others did not link their reasoning to the relevant coast.

(b) For place A there was considerable confusion between water being clear and being clean, as many wrote irrelevantly about pollution. Again some answers were too vague for reward, such as, 'because of the depth' and 'salt content not ideal'. Many wrote about wind, without relating it to wave action, whilst others gave explanations for the reasons in detail, often incorrectly in the case of low wave action. Many also gave only one reason for each of places A and B.

Question 3

Although there were some excellent photograph descriptions, particularly of the relief and settlement, many candidates did not know what 'relief' and 'agriculture' included. Some candidates wrote about population, not settlement. Many used the term dispersed to mean that the two villages were separated by distance. A remarkable number of candidates thought that the slopes were gentle, the sky was fog, the settlement was linear and that forestry was an important agricultural occupation. Weaker candidates included much irrelevant information and many were very imaginative or speculative, 'seeing' everything from post offices and religious buildings at the nucleus of the settlements to agriculture involving rice, tea, coffee or sugar plantations. There was much reference to 'greenery' and vegetation. Many candidates surmised as to why the area was suited to a certain type of agriculture or crop, often with the frequent misconception that a forested area indicates fertile soil. Some recognised the terraces and noted the presence of grass but very few gave anything more that was creditworthy about the agriculture.

In answering photograph questions, candidates should concentrate on describing what they can see in the photograph rather than guessing interpretations.

Question 4

(a) Accurate measurements proved too difficult for about 75% of the candidates.

(b) Many wrote excellent answers by linking the information in Fig. 7 with that on the map, Fig. 8. Weak answers were also common due to a failure to make those necessary links. Others made assumptions for which there was no evidence on the resource; the commonest of these were using San Francisco Bay for exporting, the sea for water supply or waste disposal.

(c) Very few gained marks in this part of the question. Few linked the lack of importance of raw materials to low bulk, high value or the low cost of transport. Some candidates believed that raw materials have to be unprocessed materials directly from primary industry as they declared that high-tech industries do not use raw materials but use components. Others concentrated on 'local' and reasoned that it was because they were imported 'easily'.

Question 5

Good candidates from Centres in which this topic had been well taught easily gained full marks. It was clear that some candidates were unfamiliar with these weather instruments, recordings and interpretation of the readings.

(a) (i) Most candidates answered correctly but a few failed to complete the graph and others failed to plot the temperature for 30th July.

(ii) This was usually answered correctly.

(iii) Only about half the candidates knew millibars. Many offered pascals or megabytes.

(b) (i) Many omitted the units, ºC, from their answers**.**

(ii) This was correctly answered by over half the candidates.

(iii) Fewer than half the candidates answered correctly. Again units were often omitted from the answers.

Question 6

This question produced the full range of marks. There was evidence that candidates did not think carefully enough at the outset about *the most appropriate type of graph* for each set of data. There were many wrong choices. For **(a)** and **(b)** bar and line graphs were often used, but in reverse order. A line graph was often chosen for **(c)** by candidates who had the demographic transition model in mind. Those who correctly chose scatter graphs often had countries on the X axis. Many drew excellent and unnecessarily detailed triangular graphs for **(d)**. Age – sex pyramids were drawn for line, scatter and triangular graphs, whilst a triangle divided horizontally into three parts was often drawn for the triangular graph.

GEOGRAPHY

Paper 0460/04

Alternative to Coursework

General comments

Most candidates found this examination slightly more challenging than previous sessions, probably due to the universal difficulty that questions on weather pose where weather instruments have not been used a great deal in the field. This was particularly the case with the opening sections of **Question 1**. Overall, however, there were still some excellent performances from individual candidates and some Centres did extremely well. Experienced Examiners suggested that there was some overall improvement in responses to weather questions so Centres should be congratulated on that. The range of marks went from 3 to 52/60 with weaker candidate 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 were no reports of time issues as the booklet format does not allow or encourage over-writing of sub-sections. Most points raised, for teachers to bear in mind when preparing candidates for future Paper 4 questions, relate to misunderstanding or ignoring command words.

Command words are intended to tell the candidate exactly what is required. Too often they appear to be ignored as irrelevant. For example **Question 1(f)** required candidates to "Critically evaluate..." but many just described what the candidates had done. **Question 2(f)** stated "You must refer to both questionnaires…**"** but almost all candidates just referred to one.

Comments on specific questions

Question 1

(a) (i) This was not done well. Candidates tended to focus on the month of November instead of the explanation as to why the recordings were taken in calm, stable conditions. References to examples of other weather conditions, such as wind and rain affecting temperature and relative humidity, were few and far between.

(ii) Many candidates could refer to heat from within the building warming the outside temperature; others mentioned the effects of blocking wind/sunlight and possible cooler areas. Very few referred to relative humidity as required in the question.

(b) (i) Candidates could describe where the Stevenson screen was located e.g. on grass, away from buildings, but they failed to suggest reasons why it was located there, other than away from interference by students!

(ii) It was apparent that many candidates were not familiar with how to read a Six's thermometer. Even given a tolerance of 12/13°C and 1-2°C on the maximum and minimum temperatures, too many looked elsewhere for their answers including –25°C and 40°C (the thermometer extremes) to variations of the current temperature positions. Many did, however, gain a mark for recognising the present temperature of 3°C.

(c) (i) This was attempted quite well. Most candidates realised that waist heights could vary, candidates could make errors, body heat may influence the reading and those who had experienced digital thermometers clearly had experience with flat batteries!

(ii) Again candidates scored well, with many referring to working out an average temperature to be more representative. However a significant minority just wrote, "to be more accurate" which is far too vague for credit.

(d) Candidates scored well here with a fairly straightforward exercise which allowed many varieties of answer. The key to success was to describe the changes in the average temperature through the days. Many did this, although figures as evidence were surprisingly sparse (although it was not compulsory to provide them). Poor answers were seen where candidates just referred to the temperature "going up, going down" and using the Site data instead of the average data, as stated in the question.

(e) (i) Excellent plotting of points by almost all candidates. Most also drew acceptable best-fit lines though it should be noted that, if straight, they should reach each axis on the right and left sides. A curved best-fit line was perfectly acceptable providing the judgement went at a reasonable location between the points. A number drew lines from the origin which was clearly incorrect while others simply joined the plots up, which could not be credited either.

(ii) Most recognised the negative correlation with temperature decreasing with increasing distance. Some referred to site C as an anomaly and most gave data using Sites E and D to support the trend identified.

(f) Some tolerance was given to these calculations given candidates perceived some ambiguity with the sites such as "near water". Most calculated 75% for the "with vegetation" sites and 75.2% or 75.25% (depending on sites chosen) were accepted and common answers. In either case the answer to the question should have been NO, as sites with vegetation were slightly lower than higher in terms of Relative Humidity. If the figures were reversed a positive answer was credited here, as it would be the correct judgement based on incorrect calculations and in that way candidates were not penalised twice.

(g) (i) Most candidates chose YES or TO SOME EXTENT for the temperature trend and gave an acceptable statement supporting the hypothesis. The RH hypothesis proved more difficult. NO or TO SOME EXTENT were accepted as there was a slight change of 0.2% or 0.25% so it could be argued that this was negligible change or evidence of a slight influence of vegetation but it was difficult to justify that such a small change supported the hypothesis with a clear YES given the alternatives.

(ii) The command words "Critically evaluate…" were missed or misunderstood by too many candidates. A number just described what the candidates did. Some just agreed that everything they did was fine. One mark was allowed for a positive statement if explained. The best candidates gave three suggestions with reasons why the investigation was flawed or could have been carried out more effectively.

Question 2

(a) (i) Several varieties of definitions were accepted here, the most common referring to "first hand information", "data collected by the candidates themselves". A few candidates gave examples which were not required here.

(ii) Some read "primary" as industrial activity and suggested coal mining or farming. Questionnaire and interviews were popular answers. Some candidates only listed one and others wrote vague answers such as "tourists, residents" which were not enough to gain the mark.

(b) (i) Most candidates could read the pie chart well. Examiners were looking for comparative statements in the description e.g. Most/more used cars, least used train/buses". Statements such as "many/a lot" were considered too vague. Although there was a Data mark if used, "More than 50%" was not accurate enough as the cars' figure is closer to 75% and the sheet states 71%. Reasons given referred to the convenience and flexibility of a car in inaccessible surroundings but phrases like "comfortable", "easier", "quicker", "cheaper" were not accepted.

(ii) The pictograph was well done by almost all candidates apart from those who ignored the scale and drew in 12 and 4 faces. Some drew in 2 for each row which is difficult to explain. A few ignored it completely.

(c) Candidates realised that the questions were worth asking to assess the impact of the tourists on the environment or the local economy but very few saw the questions as important for future management of the area e.g. provision of more/better accommodation or facilities or to plan for managing aspects such as litter at camp sites.

(d) The bar graph was completed well by almost all candidates though there was an incredible variety of vertical scales, a number of which must have made it difficult for the candidates to plot the bars! The width of bars also varied. A case could be made both for including and for excluding skiing from the bar chart and Examiners were able to credit both approaches. A few horizontal bar graphs were seen which were acceptable but a small number did attempt to draw a line graph which was not acceptable. Some candidates stated percentage by the y axis then plotted number or a mixture of percentage and number on the graphs.

(e) (i) This question had mixed responses. The majority of candidates judged that the Gender percentages, while not equal, were fairly close and could be representative. Many ignored the Age issue or thought it was representative because it asked somebody in each age group, ignoring the disparity of the sample in each group which made it unrepresentative. The few candidates that referred to reliability wrote about whether people would tell the truth, especially the younger generation, which was not acceptable.

(ii) Change of use during the year was mostly linked to weather and reference to ski-ing during the winter and cycling/trekking during the summer although the latter can continue during the year. Some reference was made to holiday periods and access during the day. References to seeing wildlife were vague especially those that thought people would not visit in winter due to hibernation. Sunrise and sunsets were common reasons given for variation in the day, which again were dubious, and it was not accepted that people did not come at night because “they could not see the scenery”!

(f) Answers to this question were generally very pleasing. Most candidates agreed with the hypothesis and could support it with valid statements and data taken from the residents’ questionnaire. This gave many five marks but a sixth was reserved for using the other questionnaire of tourists as the question required evidence from both questionnaires. Few used the second questionnaire; those that did used evidence of the tourists’ use of accommodation, referring to the benefits brought to the settlement such as jobs in the hotels.

(g) Answers to this question were disappointing. While quite a number could refer to traffic counts or observation and use of questionnaires (again) there were very few candidates who grasped the scale of the exercise and suggested practical techniques for assessing the increase in litter, noise and traffic. One key to a successful answer was to record such items in and out of the tourist season and to choose sensible locations. The question was about the settlement but too many referred to the National Park and suggested groups at each entrance! The use of CCTV cameras, following tourists around and asking them if they dropped litter were some of the more unrealistic methods suggested. Choosing a few sites, splitting into groups, recording litter with quadrats, or traffic counts, or using bi-polar surveys and at different times of the day/season were rarely suggested. The best answers focused on small-scale group work exercises that could demonstrate some increase that was likely to be due to tourism.

GEOGRAPHY

Paper 0460/05

Computer Based Alternative to Coursework

General comments

Generally candidates coped well with this examination but performance obviously varied between Centres. There was a larger range of marks this time, showing better differentiation, which was pleasing. 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 were required and these proved more challenging.

The examination was based on coastal processes and landforms. Two hypotheses were investigated. The first related to wave frequency, beach angle and beach material; the second related to rock type and cliffs. It is hoped that Centres will find the paper useful later, not only for practice for future candidates taking Paper 5 but also for general class work, since the resources in the Information File provide unusual virtual fieldwork opportunities. This particularly applies to the resources for **Question 4**, mentioned below.

Comments on specific questions

Question 1

This question was aimed at identifying coastal processes. Some candidates answered this well, gaining three marks for the five correct processes - weathering, mass movement, corrosion (or solution), hydraulic action and corrasion (or abrasion). However, a common mistake made by some candidates was to muddle up two of the answers.

Question 2

This question steered the candidates to think about the dangers involved in fieldwork. Most candidates understood the danger of overhanging cliffs and gained one mark for suggesting keeping away from the cliffs and not standing under them. However, candidates found the danger from the tide more difficult to answer. The best candidates suggested checking tide times before completing fieldwork.

Question 3

This question was to identify the terms for the parts of waves. This was quite well answered, with most candidates choosing the four correct answers for the labels (trough, wave height, wave length and crest). However, some candidates muddled up the crest and trough labels, so only gained one mark.

Question 4

This question was to count and record the number of waves seen at Location C. As it was not easy to identify the exact number of waves, which was judged to be 12, a wide tolerance of 11 to 16 waves was allowed. Most candidates managed to count the number of waves correctly, taking note only of the waves with a definite swash. Although for the question it was necessary only to count the waves at Location C, video footage was also provided, for completeness, for the other two locations.

Question 5

This question was to complete the bar graph for the wave frequency data. Most candidates drew a correct sized bar and labelled the axes correctly (beach location for X and number of waves per minute for Y).

Question 6

This question was to check the candidates' understanding of types of waves. Some candidates gained full marks for correctly identifying that destructive waves were more frequent with a stronger backwash, with Location C therefore having destructive waves. However, some candidates found this difficult.

Question 7

For this question candidates had to think about measuring the beach profile and the equipment used. The quality of answers was Centre specific. Some candidates correctly identified the three correct pieces of equipment (clinometer, ranging poles and tape measure), but most only gained one or two marks because they incorrectly thought that callipers or a quadrat should be used. When it came to the use of the equipment, few candidates had a full understanding of how to use the equipment properly (the tape measure was for measuring the distance of the profile, the ranging poles were used to mark off the different sections of the profile and the clinometer was used to measure the angle between the poles). So, again most candidates gained only one or two marks.

Question 8

This question was to work out the average beach angle for location A. It was well answered and almost all candidates worked out the correct answer of 3.2º.

Question 9

This question was to complete a scatter graph for the beach angles for Location C. Most candidates plotted the points correctly at 5º, 9º and 10º, gaining two marks. However, some candidates did not gain the mark for the X axis label (distance from the sea in metres), as they forgot to include the units (metres).

Question 10

This question was to compare the beach profiles. Most candidates correctly identified that location A had the widest beach of 15 metres and the lowest average angle of 3.2º.

Question 11

This question was concerned with selecting beach samples. A few candidates understood the need for comparison or a representative sample but many candidates wrote about accuracy, so did not gain credit. Few candidates correctly chose the quadrat to select the beach sample or understood that it was to make the sample fair or not biased. Many candidates seemed to think that the question was asking about measuring (rather than selecting) the beach samples and so wrote down callipers for their answer.

Question 12

This question was to work out the average beach material size at Location C. Most candidates were able to do this correctly (with an answer between 95 mm and 96 mm). However, some candidates did not type in the given data correctly, so their average was incorrect.

Question 13

This question was to classify the beach material. Some candidates found this task easy, gaining four marks for drawing bars of 0 for sand and shingle, 1 for pebbles, 3 for cobbles and 3 for boulders. However, some candidates found the task difficult.

Question 14

This question was to compare the beach material at Locations A and B. It was quite well answered but some candidates did not include data in their answer so could only get two marks. Most candidates were able to gain one mark for identifying that on both beaches, the size of beach material increased the further you were from the sea. Some candidates also correctly identified that the material at Location B was larger than that on Location A (for example at 3 metres, A had an average of 4.3 mm and B had an average of 12.9 mm). However, some candidates were confused by the different beach widths and did not compare equivalent distances.

Question 15

This question was concerned with writing a conclusion to the first part of the investigation. The responses varied, but on the whole candidates seemed to have a reasonable grasp of the investigation and supported the hypothesis. A pleasing number of candidates correctly referred to Location C having the most waves (12 per minute), with the steepest beach (8º) and the largest pebbles (an average of 81.7 mm at 3 metres). However, weaker answers did not include data (so their marks were limited to 2), or were very vague.

Question 16

This question was concerned with the process of attrition (the smashing together of pebbles against each other, leading to wearing away of the material). Only a few candidates correctly named the process (many just said 'erosion'). Also, few candidates were able to explain it (many just said that it was the force of the water or the pebbles being thrown against the cliff).

Question 17

This question was concerned with identifying coastal landforms. Many candidates correctly identified the features (arch, wave cut notch, stack and cave) and so gained two marks. A few candidates seemed to get the cave and wave cut notch muddled up.

Question 18

This question involved putting some sketches of coastal landforms in the correct sequence. Almost all candidates put the sketches in the correct order and so gained two marks.

Question 19

This question required an explanation of the sequence of coastal landforms. Most candidates scored highly on this question and clearly the sequence was well known. A few candidates gained low marks as they wrote a very brief, vague explanation.

Question 20

This question involved a comparison between the cliffs at Location A and B. Responses were varied. Some candidates gained full marks for identifying Cliff A being not very steep, grey, lower, and very resistant (with Cliff B being the opposite), but some candidates muddled up the resistance to erosion.

Question 21

This question concerned the reason for the building of a concrete wall. The majority of candidates chose the correct answer (to prevent the erosion of the cliffs) but some candidates incorrectly thought that it was for safety or to keep the shingle away from the cliffs.

Question 22

This question was concerned with writing a conclusion to the second part of the investigation. The responses to this hypothesis also varied but there were fewer candidates who gained high marks. The key to high marks was the understanding of different resistance to erosion of the two rock types. Where candidates understood this, they usually scored full marks. A good answer supported the hypothesis and linked this to the fact that because Cliff B was made of chalk which was more resistant to erosion, the Cliff was higher and steeper than Cliff A (which was made of sand and clay).

Question 23

This question was asking for improvements to the investigation. The question was usually well answered with most candidates scoring one or two marks. Popular answers included repeating the investigation on other beaches (to see if the same conclusions are made), and repeating the investigation at another time of year (to see if the same results are obtained).

Question 24

This question focused on the human impacts on the coast. The responses to this question varied. Some candidates gained full marks for explaining three ways such as building groynes, which encourage deposition and so increase the size of beaches, people dropping litter which harms wildlife and building hotels which destroys the natural beauty of the coast. However, some candidates just gave their answer as a list, without any explanation (such as 'building on the coast'), so lost marks.