

GEOGRAPHY

Paper 0460/11

Paper 11

General comments

The paper was regarded as being appropriate for the ability range of candidates and it achieved a high degree of differentiation. **Question 1** was the most popular, most candidates attempted it. **Question 4** was the least popular. Excellent answers were seen to all questions and, whatever questions candidates chose, there were plenty of questions where for A and A* grade candidates were able to show their abilities. In all questions 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. Examiners continue to be impressed with the high quality of geographical learning which is taking place in many Centres throughout the world, and once again commented on significant improvements in the standard of work from many Centres. In general candidates' answers were focused, and written in complete sentences, showing good progression of ideas. Specialist geographical terms were used where appropriate. However many candidates lost marks in case studies, where answers were typically too short (often shorter than other answers within the same question) and lacked the development of ideas or necessary detail required. However candidates did choose a pleasing variety of examples for their case studies, generally using them to answer the questions in a relevant way to score some marks.

There remain many weak candidates who struggle to cope with the demands of the paper, perhaps through lack of effort, ability or linguistic problems which they experience. The detailed comments on questions below highlight the strengths and weaknesses of candidates. Careful consideration of these comments and the advice therein should be invaluable in preparing candidates for future examinations.

The following items of general advice, which have been repeated before in this report, need to be given to future candidates who should:

- make the choice of questions with care, ensuring that for each question they choose they have a named case study about which they can write in detail and 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.
- consider carefully their answers to the case studies and ensure that the focus of each response is correct, rather than including all facts about the chosen topic or area, developing each point fully rather than writing extensive lists of simple, basic points. It is better to fully develop three ideas rather than write extensive lists consisting of numerous simple points.
- study the resources such as maps, graphs, diagrams and extracts carefully, using appropriate facts and statistics derived from resources to back up an answer and interpreting them by making appropriate comments, rather than just copying parts of them.

Comments on specific questions

Question 1

- (a) (i) Confusion in reading the two different vertical scales made this quite hard for many candidates who had the decimal point misplaced by reading the left-hand axis.
- (ii) The majority of candidates knew that natural population growth had something to do with the birth and death rates but large numbers were unsure exactly how to calculate it and few scored both marks. Some multiplied, others divided or added the numbers. Some used the correct numbers but forgot to say that the answer was `per 1000` (or calculate it as a percentage).
- (iii) Many candidates gave correct answers in all three sections by referring to the differences in birth and death rates. Other candidates lost these simple marks by referring to increases or decreases in either or both rates or gave irrelevant explanation.
- (iv) There were some excellent answers to this perhaps unexpected question, with some good references to HIV/AIDS, drought, war and issues relating to poor diet/obesity/heart problems in MEDCs. In contrast many weaker candidates simply gave reasons why LEDCs have a low life expectancy, rather than focusing on life expectancy declining as the question asked.
- (b) (i) This was generally answered well and many candidates gained the full three marks. Some missed out by just repeating the headline or referring to rewards (financial or otherwise) without linking their comments with how the people could obtain them.
- (ii) This differentiated well and there were some excellent, detailed answers showing a good understanding of the problems of under-population, especially regarding lack of workforce, slow economic growth and the need for migrants. Many candidates produced a complex web of interlinked ideas here, developing their points well. Many effectively linked the closure of businesses/less industrial output to a small domestic market, or sometimes an insufficient workforce. There was however some confusion of under population with an ageing population and the consequent increase in dependency ratio.
- (c) A wide range of interesting case studies was used, some being appropriate choices, however candidates who chose MEDCs which generally do not have a high rate of population growth (eg China, UK, France, Russia, USA and Japan), found it difficult to score maximum marks as all they could refer to was international migration. Some even referred to internal migration, which has little impact on the population growth rate of a country. Those who tended to score higher marks selected an LEDC with a high growth rate and explained why there was a high birth rate and a falling death rate. Place specific details were often missing however, which prevented candidates gaining the full seven marks.

Question 2

- (a) (i) Generally well answered but a significant number did not realise that an urban settlement IS a town or city but would describe it as an area in a town or city. Some candidates repeated the word urban.
- (ii) A straightforward question yet large numbers of candidates gave vague answers without demonstrating geographical skills, such as distance and direction. There were also too many answers where candidates were satisfied with vague answers using the word `near`.
- (iii) This proved to be quite problematic for many candidates. They commonly quoted land uses rather than functions. Tourism and fishing were the most popular correct answers, however there were many guesses, for example a nuclear power station, or agriculture. `Residential` was not an acceptable function as a settlement, by definition, is residential.
- (iv) Whilst there were some noteworthy exceptions most candidates did not answer this well. The best answers tended to be from those candidates who chose to explain the tourist function, though few got beyond the location being adjacent to the sea and a beach. Many candidates discussed activities that could be done in Nice (i.e. what the functions consisted of), or how they would be carried out, which was irrelevant.

- (b)(i)** Generally correct, most candidates knew the terms used and recognised the three settlement patterns, though some wrongly used the word *clustered* for X and *sparse* for Z.
- (ii)** This was also well answered. Many candidates were able to develop their responses well while weaker ones were able to make relevant lists using the details from the map they were given to identify issues relating to fertile soils, avoiding floods and the road junction/network.
- (c)** Few candidates actually named rural areas in LEDCs but most could give generic reasons for rural-urban migration in named countries. Where candidates had clearly studied a named village or rural area, the answers were of a higher quality with many relevant developed points, some of which were place specific to gain full marks. A few candidates mistakenly wrote about movement within a city (e.g. from shanty towns in Nairobi or about migration from an LEDC country to an MEDC country. Candidates need to be aware that in this type of question higher marks will always be obtained by developing the ideas rather than producing lists of basic points (e.g. to obtain better health care, better jobs, better education, better housing etc.).

Question 3

- (a)(i)** Generally correct.
- (ii)** Most candidates recognised the significance of Sri Lanka's location closer to the earthquake's epicentre than India, along with the `shelter/protection afforded to Malaysia by Indonesia, though `B` proved a little bit more challenging than `A`. Some candidates ignored map evidence and referred to ideas such as population density.
- (iii)** Whilst there were some full and accurate responses, this was generally poorly answered by many candidates who only scored one mark for the idea of movement. Some candidates were confused and referred to volcanic eruptions.
- (b)(i)** The uncertain nature of the relationship shown by the graph led to several different answers which could all be acceptable. By far the most candidates identified a positive relationship and referred to a pair of data to justify it. This approach could only score a maximum of two marks. Relatively few candidates ventured `no relationship`, or a `positive relationship with exceptions`, giving access to the full three marks, however very few used the data fully and accurately enough for full credit to be awarded.
- (ii)** Many different valid ideas were suggested, although some candidates were distracted by concepts of distance from epicentre and the scale of earthquake. The most common correct suggestions were quality of buildings, level of preparation and population density. A common misconception was that warning could be given of an impending earthquake to allow evacuation of an area.
- (iii)** Many candidates gained high marks by listing the damage done by earthquakes, although some did not realise that the word "other" meant `do not write about deaths`. Many referred to effects related to damage to buildings, utilities and infrastructure. Better answers also included the effects of disease, costs to rebuild and food shortages.
- (c)** Many candidates made generic statements, divorced from a real example, though examples such as Kobe, Indonesia or San Francisco were used, and most could provide basic reasons at least for why people stayed there. Whilst some candidates were able to develop their ideas there was hardly any place specific information provided. A few candidates wrote extensively about the attractions of areas with volcanoes, which is not what this questions asked. The most frequently offered response was indeed because of fertile soil for farmland, where the candidates were obviously thinking of mineral rich soils which occur in an area which has experienced a volcanic eruption. Once again there were many invalid references to prediction and evacuation.

Question 4

- (a)(i)** Only a minority of candidates gave good definitions of the term `ecosystem`, many simply referring to plants and/or animals. An ecosystem is defined as the biotic (living) and abiotic (non-living) things in an area, interacting with each other.
- (ii)** Most candidates located the tropical rainforest on or near the Equator but surprisingly few used degrees of latitude or referred to one or more continents for a second mark.

- (iii) This was answered successfully by candidates who ignored the temptation to continue with an answer about the ecosystem. Simple ideas relating to high temperatures, evaporation and condensation were sufficient to score maximum marks. However, most candidates restricted their ideas to temperatures and evaporation/transpiration though some developed further ideas by reference to condensation and/or high humidity.
- (iv) Candidates often failed to explain the effects of climate and merely described the vegetation without any reasoning, though the well prepared candidates gave well rehearsed answers describing characteristics and linking them explicitly to climatic features as required. Consequently average marks were low on this section. The most common correct ideas related to reaching for sunlight and broad leaves or drip tips, however there were many misconceptions.
- (b)(i) Candidates scored well on this section, despite the tendency of many of them to begin with the death of the higher level consumers and then work back to the effect of deforestation on producers. Some weaker candidates, however, missed the basic point that the food chain will be broken, in contrast others showed an excellent understanding and used terms like herbivores or carnivores and/or producers and consumers with confidence.
- (ii) Answers to this section were varied and sometimes quite vague. Whilst there were candidates who showed an excellent understanding of the impacts of deforestation, others were confused as to its effects on rivers, and some did not refer to rivers at all. Candidates scored most commonly through ideas such as soil erosion, siltation and flooding, or conversely, less transpiration, lower rainfall and rivers drying up.
- (c) **Tropical deserts** – despite being made **bold** was often ignored, and the candidates carried on writing about rainforests! Many who wrote about “desserts” frequently got no further than ‘hot and dry’, then they turned their attention to cactus plants! Few candidates had a problem with naming a valid example, however the mechanics of desert climates were not well understood by many candidates, so there were few comprehensive answers. Whilst there were notable exceptions most candidates only described the climate of a desert (often with a description of its fauna and flora which was not relevant) and few offered valid explanations of the climatic characteristics (high pressure, descending air, distance from the ocean etc.).

Question 5

- (a)(i) Most candidates knew what renewable energy meant although some tried to define by simple giving examples.
- (ii) This was generally well answered and many candidates were able to score full marks by referring to advantages such as the fact that renewable energy will not run out and that it is ‘environmentally friendly’. The idea of cost is not simple here - the running costs and maintenance costs are low while the initial set up costs tend to be high, therefore ‘it is cheap’ was not a valid response.
- (iii) It was very unusual for candidates not to score the full marks as most identified the types of renewable energy being generated in the photographs correctly.
- (iv) This differentiated well. Whilst some candidates struggled to articulate appropriate ideas, others wrote effectively about limiting site (or weather related), and/or difficulties in relation to the expense of development. Some candidates rightly referred to the fact that newer energy supplies cannot yet meet demand but many only rephrased the question ‘only provides a small proportion of the world’s energy’ thus did not gain credit. There were many misconceptions from weak candidates, typically that renewable were not ‘powerful’ or ‘efficient’ enough.
- (b)(i) Generally well answered, many candidates coring the full three marks by referring to the lack of availability of electricity, the abundance of dung, wood and charcoal along with cost issues, although it was not always clear by “free” whether candidates meant the fuels were freely available or free of cost.
- (ii) There were many very good answers here. The problems were well understood, both for people and the environment, especially those associated with deforestation. A common misconception from weaker candidates was that charcoal was mined, another was that animals had to be killed to obtain their dung, and once obtained this dung was an ‘unhygienic’ fuel with which to cook. Many

candidates felt the need to refer to global environmental problems, such as acid rain and global warming, despite the reference to `local` effects in the questions. Whilst it is appreciated that there may well be local effects of global problems, candidates would be better advised to avoid referring to issues such as this if the focus of the question is local.

- (c) A wide range of examples and types of power station was used, and the quality of answers was wide ranging. HEP was most commonly used but all many candidates did was refer to the need to `be near water`. Some muddled HEP with tidal power stations, though in many cases the reference to water was so simplistic that it was difficult to tell. Thermal or nuclear power stations offered better opportunities to explain locational factors, and some excellent answers were seen, however only from a small minority of candidates. Unfortunately a high proportion of answers gave no example and read as location theory, which only gained limited credit. Sometimes candidates who did name an example gave a detailed description about the station – often with dimensions/costs and its impacts on local people and environment - without explaining the factors which influenced its location as required.

Question 6

- (a) (i) Generally correct though some candidates clearly had not even referred to Fig. 10, giving answers such as `breathing` or `burning fossil fuels`.
- (ii) Generally well answered although too many "lost" the second mark by listing a whole range of road vehicles rather than giving examples of different types of transport such as road vehicles, trains and aircraft.
- (iii) Whilst some candidates did not use the terms `more` or `increase in` when referring to vehicles, industries and electricity consumption (to explain *increases* in carbon dioxide levels) most did realise that this was required and scored well on this question.
- (iv) There were some excellent responses here, also quite a lot of confusion. As many wrote about the ozone layer and how we are making holes in it as those who wrote about global warming. Some superb answers were seen, with the process correctly explained and correct terms used (short wave/long wave radiation, etc.). Often a useful diagram was incorporated, fully labelled to enhance the written answer. The one problem was the frequent confusion with ozone layer depletion, a completely separate issue with different causes and mechanics. A very prevalent source of confusion.
- (b) (i) Almost all candidates agreed that MEDCs are more responsible for global warming than LEDCs but, despite the fact that they had been asked to study Fig. 11, few used data from the map to support this assertion. Perhaps many candidates had not seen maps of the style of Fig. 11 before, nevertheless the use of the percentage figures on the map did make the resource easy to interpret for those candidates who attempted to use it as instructed. Many wrote at length about why MEDCs were responsible, offering nothing more than a repetition of the ideas expressed in (a) (iii).
- (ii) Many candidates found this question difficult and there were very few outstanding answers. Most candidates were able to score one or two marks by reference ideas such as to our dependence on fossil fuels, the fact that we could not give up our cars and electrical devices and/or the lack of awareness of the problems being caused by their use. A small number of well prepared candidates explained why global agreements to reduce emissions of carbon dioxide are hard to establish and difficult to police, and indeed politically and economically unlikely, but mature answers such as this were not common. Many simply explained why we are emitting so much carbon dioxide, once again repeating answers to (a) (iii) or wrote about the shortcomings of renewable energy.
- (c) This differentiated well, and answers ranged from the excellent to the dramatic with absolutely no substance. Most candidates scored some marks and there were some comprehensive, place specific answers scoring full marks. Quite a few examples were provided such as Antarctica, the Maldives and the Himalayas. Whilst there were still candidates who included irrelevant material such as the impacts of ozone depletion, there were many who developed and exemplified relevant impacts such as ice melting, sea level rising, low coastal areas flooding, with the consequent risks to people and the natural environment. Some Centres concentrated on the increased risk of drought which are faced, for example in sub-Saharan Africa, although this idea was typically less well developed. Many candidates described types of climatic change (heatwaves, droughts,

increased number and strength of tropical storms, etc.) without linking them to a cause (e.g. the change in distribution of wind belts, ocean currents etc.). Common misconceptions were that polar bears `live in Antarctica` and that the `poles` were melting, rather than the ice.

GEOGRAPHY

Paper 0460/12

Paper 12

General comments

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- study the resources such as maps, graphs, diagrams and extracts carefully, using appropriate facts and statistics derived from resources to back up an answer and interpreting them by making appropriate comments, rather than just copying parts of them.



Comments on specific questions

Question 1

- (a) (i) This was generally well answered, and most candidates remembered the 'per 1000'.
- (ii) The majority of candidates knew that natural population growth had something to do with birth and death rates but large numbers were unsure exactly how to calculate it and few scored both marks. Some multiplied, others divided or added the numbers and some even added up all the figures from the regions shown on the graph before attempting a calculation. Some used the correct numbers but forgot to say that the answer was 'per 1000' (or calculate it as a percentage).
- (iii) Most candidates interpreted the graph correctly here and scored full marks.
- (iv) There were some excellent answers to this question, with some good references to issues such as family planning, low infant mortality rates, the emancipation of women and the materialistic nature of European and American societies. Even weaker candidates were able to score by making one or two simple points, usually relating to contraception, though very brief statements without an explicit link to birth rates (eg 'good health care', 'people are educated') did not gain credit.
- (b) (i) This was generally answered well and many candidates gained the full three marks, though some candidates experienced difficulty with their clarity of expression, with regard to dependency for example, and a minority misinterpreted the question and explained why there is an ageing population in Europe.
- (ii) This differentiated well and there were some excellent, detailed answers showing a good understanding of the benefits of migration for countries receiving the migrants, especially the provision of a workforce which may have specific skills, or may simply be prepared to work hard for low wages, filling the 'dirty jobs' which the indigenous population do not want to do. Many candidates produced a complex web of interlinked ideas here, developing their points well. Many effectively linked the provision of a workforce to increased production, tax revenues and consequently government investment for the benefit of the country as a whole, and/or the increased size of the domestic market which may in turn stimulate the economy. Weaker candidates made basic statements relating to issues such as employment, the creation of a more diverse society and Chinese restaurants or takeaways. There were only a few candidates who wrote about the advantages for the migrants rather than the country as a whole.
- (c) A wide range of interesting case studies was used, many being appropriate choices, however candidates who chose a country generally wrote more effective answers than those who chose a smaller area such as a city. Clearly there are variations in population density within a city and its environs, yet there is far more scope when explaining variation in population density across a country. Some excellent responses were seen from candidates who referred to their own country (eg New Zealand), clearly describing the main variations in density and explaining them by referring to factors such as climate, relief and employment opportunities to score maximum marks. Many candidate also chose Brazil and produced excellent accounts, the key to a good answer here was the choice of a country where variations in population density were large and the reasons for them varied. Most candidates scored marks, weaker candidates simply describing variations or explaining in very simplistic terms by reference to the existence or absence of urban areas. As always when population density questions are set, there were candidates whose answer focused entirely on migration. Some candidates completely misunderstood the question and wrote about birth control and China's one child policy.

Question 2

- (a) (i) Generally well answered with most candidates knowing the term 'dispersed' or being able to work it out using the map.
- (ii) Most could focus clearly on the significance of the road and gain one mark, however the existence of the river to the north was seen by many as a water supply rather than an obstacle to expansion in a northerly direction.

- (iii) This was well answered. Many candidates were able to identify the nucleated settlement pattern and explain the growth of settlement Z by using the details from the map they were given to identify issues relating to relief and accessibility.
 - (iv) This was generally well answered, with issues such as employment, education, food production and health care being explored by many candidates. Both pushes and pulls were accepted, however candidates needed to write more than 'to get an improved quality of life/standard of living/living conditions' which was considered to be too vague. A minority of candidates lost marks by explaining why people move to rural areas in MEDCs and some were clearly writing about why people want to move away from shanty towns/squatter settlements – whilst some of these may be on the rural-urban fringe they are not located in rural areas.
- (b)(i) Generally correct, most candidates were able to identify the market, port and industrial land use, though some suggested that A was residential and B industrial.
- (ii) Whilst there were some noteworthy exceptions most candidates did not answer this well. Many reasons were inevitably speculative in nature, though they showed good geographical understanding. The best answers tended to be from those candidates who chose to explain the market land use, with some good references to central location and ease of access enabling a large catchment. Some candidates included irrelevant description of activities that were being carried out in the photographs (i.e. what the land use consisted of), rather than suggesting reasons for its development there.
- (c) This differentiated well with some top quality answers often based on case studies of the candidate's own urban area, full of appropriate place specific references. The majority of candidates who did write about the impacts on the environment tended to focus on urban sprawl and industrial growth, which offered plenty of scope for developed ideas relating to the atmosphere, rivers and ecosystems. There were some irrelevant answers about the impacts of growth of the chosen area on people and the general problems faced by large cities, (eg New York, London).

Question 3

- (a)(i) This proved difficult for candidates, as many used one of the two words, 'natural' or 'hazard' as part of their definition which is not good practice. A simple response such as 'a dangerous event resulting from the earth's forces' was all that was required but many did not gain the mark available.
- (ii) Generally well answered with most candidates scoring both marks.
 - (iii) Most candidates used the evidence in Table 1 to make a valid comparison of the impacts of droughts and earthquakes though many answers were disjointed and unnecessarily lengthy. Some candidates wrote about one hazard only without including the required comparative element in their answers. Whilst there were many full and accurate responses, some candidates simply referred to the index numbers (eg 'The size of the area affected by an earthquake is 1 but the size of the area affected by a drought is 4') which did not gain any credit. A number did not read the question properly and compared two other hazards.
 - (iv) Many different valid ideas were suggested, the most common correct suggestions being quality of buildings, education relating to precautions (eg earthquake drills), ability to predict/evacuate and quality of response procedures/medical care. Whilst the task was understood by all candidates, weaker answers were characterized by a lack of precision. For example 'LEDCs don't have the money to do anything' or 'LEDCs can prepare people better for hazards' were too vague for credit.
- (b)(i) Whilst there were some full and accurate responses, this was generally poorly answered by many candidates who only scored one mark for the idea of movement. There were many different ways used to describe plate movement, which were accepted, however candidates should be aware that it is the plates which are moving not their boundaries.

- (ii) Most candidates could provide basic reasons at least for why people stayed in areas which are at risk from earthquakes, and some were able to develop their ideas. A few candidates wrote extensively about the attractions of areas with volcanoes, which is not what this question asked. The most frequently offered response was indeed because of fertile soil for farmland, where the candidates were obviously thinking of mineral rich soils which occur in an area which has experienced a volcanic eruption. A common misconception was that warning could be given of an impending earthquake to allow evacuation of an area.

Earthquakes cannot be predicted to the extent that that the people can be evacuated before they occur.

- (c) Although a small minority wrongly selected a case study of a volcanic eruption, there were many excellent case studies used here, well prepared candidates developing their ideas and including place specific details. Kobe was the most popular choice and many candidates had learned all the details of the amount of deaths, injuries and destruction, even the exact time in the morning it took place on the 17th January 1995. Weaker candidates were able to score by listing the damage done by their chosen earthquake. Many referred to effects related to deaths/injuries and damage caused to buildings, utilities and infrastructure. Better answers also included the effects of disease, costs to rebuild and food shortages, though the nature of the levels marking scheme rewarded fully only those candidates who were able to develop the points they made in the context of their chosen example.

Question 4

- (a) (i) Generally well answered.
- (ii) Clearly some candidates had been involved in collecting weather data and could describe exactly how cloud cover is estimated, others had no idea, some even suggesting that it should be done by using a sunshine recorder.
- (iii) Generally this was well answered and most candidates were able to name at least two of the required weather instruments.
- (iv) Many candidates could describe the features of a maximum-minimum thermometer and explain how the instrument worked (often along with a labelled diagram) but could not describe **how the candidate might use it** to obtain the readings, which is what this question asked.
- (b) (i) Most candidates scored well on this section, and gave appropriate differences between the two cloud types using evidence from Fig. 5.
- (ii) This was answered successfully by those candidates who ignored the temptation to refer to the tropical rainforest rather than the rainfall. Simple ideas relating to high temperatures, evaporation/transpiration and rising air were stated by many candidates, whilst those who gave more developed answers including further ideas such as by reference to condensation and saturation were able to gain full marks.
- (c) Many candidates chose the Amazon here and there were some excellent responses from those candidates who were able to develop their ideas and focus on the 'impacts of human activities' on the 'natural environment' of an area of 'tropical rainforest', although many did not include any place specific ideas. Inevitably weaker candidates either wrote about the activities rather than their impacts, and/or wrote about impacts on people, and/or gave details about global impacts (especially global warming) rather than impacts on the rainforest.

Question 5

- (a) (i) Most candidates identified Quebec and gained the mark.
- (ii) Again generally well answered with the majority gaining full marks, however a few candidates went on to explain why they thought these differences were occurring which was not required.

- (iii) As with previous comparison questions there were some very good responses but many candidates either did not compare, simply quoted figures without actually using them to compare the importance of different methods or included irrelevant explanation at the expense of what was required. Many generally started off well (e.g. 'Ontario uses more nuclear than Quebec') but then drifted into a meaningless list of types of energy generation, along with a repetition of the statistics, without any attempts at comparison.
 - (iv) This differentiated well, with some excellent responses, though many answers, despite often being lengthy and repetitive, did little more than recognise the importance of water (rainfall) and/or more rivers. Some muddled HEP with tidal power stations, though in many cases the reference to water was so simplistic that it was difficult to tell.
- (b)(i) It was very unusual for candidates not to score the full marks as most identified the types of renewable energy being generated in the photographs correctly.
- (ii) This was generally well answered and many candidates were able to score at least three marks by referring to advantages of renewable energy sources, such as the fact that renewable energy will not run out and that it is 'environmentally friendly', not adding to the problem of global warming. The idea of cost was relevant but it is not simple here - the running costs and maintenance costs of many renewable energy sources are indeed low, however the initial set up costs tend to be high, therefore the simplistic response 'it is cheap' was not valid unless elaborated in an appropriate way.
- (c) Whilst the expectation here was for candidates to select case studies from sub-Saharan African countries, places as far apart as Siberia and the Amazon were accepted as examples. There were many very good answers and consequently many high scoring responses, though few gained the full seven marks as most answers lacked a place specific element. Many problems were well understood, both for people and the natural environment, especially those associated with deforestation and the impacts of wood burning on the health of the people who have to breathe in the smoke. It is a pity that so many candidates felt the need to refer to global environmental problems, such as acid rain and global warming, despite the reference to 'local' effects in the questions. Whilst it is appreciated that there may well be local effects of global problems, candidates would be better advised to avoid referring to issues such as this if the focus of the question is local and concentrate on developing the points which they make about local issues.

Question 6

- (a)(i) Many candidates got this correct, though a common incorrect answer was the predictable 55%. Other candidates had no idea how to read the triangular graph and gave odd figures with no indication as to how they had arrived at them.
 - (ii) Generally well answered although a minority of candidates opted for USA in both sections.
 - (iii) Most candidates gained at least one mark for referring to the fact that many people are employed in agriculture or lack the education/skills to be able to secure employment in the other sectors, whilst other wrote in detail to gain full credit – generally the question was well answered and awareness of the issues involved from many candidates was impressive.
- (b)(i) Most candidates gained the full three marks. Clearly the key terms are well known and the candidates could select at least an appropriate raw material and a process from Fig. 8, however some simply stated 'clinker' as a process.
- (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 cement factory within the area. Others focused too narrowly on the availability (or reduced cost) of cement in the area, a credit worthy idea but not sufficient to score all the available marks. Some candidates gave vague responses such as better standard of living/quality of life, which need greater precision to be awarded credit.

- (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 entirely on environmental problems as a result of quarrying for the limestone and clay. The requirement to focus on 'natural environment' was ignored by too many candidates, who referred to problems for the local people such as noise and traffic congestion.
- (c) Here there were some excellent place-specific answers from case studies such as Silicon Valley and the M4 corridor, the best candidates developing several ideas fully in relation to their chosen case studies, and including place specific details for full marks. Many other answers were too vague/general and did not develop explanations of the factors which attracted high technology industry to the area chosen. Some candidates fully described the 'scenic, peaceful, parkland landscapes required to calm and appease the fevered brains of the ultra-skilled people needed to make these companies successful', a relevant factor of course, however this alone is unlikely to attract any industry unless other advantages are present – many candidates who wrote so profusely about these attractive landscapes unfortunately mentioned little else. As the question asked specifically about high technology 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.

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Paper 0460/02

Paper 2

General comments

Overall, candidates found the paper slightly more difficult than last year, with the later parts of the mapwork question proving to be difficult for many candidates. **Questions 2, 4** and the earlier parts of **Question 6** proved relatively easy and candidates often scored full marks on these. **Questions 3 and 5** and the last part of **Question 6** proved more difficult. As in previous years, candidate found those questions relating to physical geography in general, and relief and drainage in particular, more difficult. Candidates need to be fully aware of the differences between physical features and human features. Graph interpretation skills were very good.

Comments on specific questions

Question 1

- (a) This question tested candidates' ability to locate features on the map and to identify them using the key. Candidates found (ii) the sugar factory, (iv) the bridge and (v) the River Mapou relatively easy to identify. However, (i) the dam, (iii) the cane tracks and (vi) the sugar and riverine trees proved more difficult. Candidates need to be aware that on some occasions, a map key shows two different features on the same line. This was the case in part (vi), where line of trees and riverine trees are shown on the same line. Candidates should be made aware that in situations like this, there are two different features with different symbols.
- (b) Candidates are becoming more familiar with questions where they are required to mark features on a topographic profile. Some candidates produced exceptionally accurate answers where the distances had clearly been measured very carefully, either with a ruler or using the edge of a sheet of paper. These candidates labelled the points as shown in the example on Fig. 2 for the River Terre Glaise, using a vertical arrow with its point exactly on the profile. Less well-prepared candidates failed to appreciate the difference between the profile and a map, and sketched the river and the road meandering across Fig. 2.
- (c) This proved difficult for many candidates. Examiners expected measurements of the distance to be between 2200 and 2250 metres and measurements of the bearing to be between 54 and 56 degrees. More correct answers were given for (i) than for (ii).
- (d) Less than half of the candidates were able to give an accurate six figure grid reference. Examiners gave credit for answers of 082808 and 082809, allowing some tolerance on the sixth figure only. Please note that in the syllabus there are full instructions about giving accurate grid references.
- (e) Only the better prepared candidates scored four marks for this part of the question. Examiners gave credit to candidates who referred to the meanders, narrow channel, steep gradient, lakes, braiding, tributaries, waterfalls and the widening in the east. Where candidates described the valley rather than the river, no credit was given, hence *steep sided* did not gain any credit. Weak candidates described human features and land use along the river bank and gained no credit. No credit was given for *rapids*. It may have been that candidates mis-read the key which shows rapids and waterfall on the same line but with different symbols. Perhaps generously, Examiners accepted *oxbow lakes* for lakes.
- (f) Only the most able candidates were able to score marks on this question which required comments on the relief of the two types of area. For scrub and scattered trees, Examiners accepted steep slopes, hills/mountains/uplands and in valleys. *Sloping* was not accepted for steep, as sloping land can be gently sloping. For sugar, gentle slopes and lower ground were accepted.

Question 2

- (a) Only a very small number of candidates failed to give the correct number, i.e. 2.
- (b) Again, candidates found this easy, correctly ticking small shops and primary Schools.
- (c) Examiners accepted answers between 1791 and 1810, with most candidates answering either 1800 or 1810.
- (d) Almost all candidates were able to identify Wisbech as being highest in the hierarchy of settlements. They were less successful in giving an accurate reason, i.e. it has the biggest population, or most bigger shops, or the most primary Schools, or the most services. To gain this mark, candidates needed to say, e.g., the biggest population and not just a large population.
- (e) As in previous years, candidates demonstrated good graph skills. The majority of candidates correctly identified the scatter graph with only a few calling it a line graph. Most were able to note the positive relationship between the variables and were able to plot accurately the position of Doddington.

Question 3

- (a) Candidates were reasonably successful in describing the physical features of the photograph. They referred to features such as the upland area, U shaped valley, straight valley, steep sides, bare rock, grass, small number of trees and the small, meandering river. As is often the case, some candidates included irrelevant information about agriculture and settlement. They need to be aware that in geography questions there are often specific references to either physical or human features and they need to be aware of the difference between the two.
- (b) This part of the question proved to be more difficult. Many candidates wrote about the advantages and disadvantages of the dam scheme *for the area* rather than the advantages and disadvantages *of the area* for the dam scheme. Those candidates who interpreted the question correctly quoted advantages such as the shape of the valley providing a good area to contain water and to provide a good dam site, the steep slopes to provide rapid run off or the fact that area was uninhabited and the scheme would not flood settlements.

Candidates were rather more successful in giving disadvantages, quoting the loss of agricultural land, loss of habitats, visual pollution and the small size of the river providing the source of water.

Question 4

- (a) This was very well-answered with the vast majority of candidates able to distinguish the physical and human inputs.
- (b) Candidates were quite successful in interpreting the rainfall and land use information from the map. They were generally aware that sheep farming took place in the driest area and that fruit and dairying took place close to urban areas. However, many answered that cattle farming would take place in the wettest area, rather than the correct answer, coffee. In part (ii) which tested knowledge and understanding rather than analysis, most candidates associated extensive farming with a *large* farm size. However, they were often less successful in linking it with *low* capital input per hectare and *high* output per farm worker.

Question 5

- (a) Most candidates were able to identify at least one advantage or disadvantage of the proposed new road and bridge, however few scored all four marks available. For the advantages, they frequently referred to the shorter or faster route and the fact that traffic congestion in the town would be reduced. For disadvantages, they noted that the scheme would be expensive to construct, it could damage the conservation area, it might be considered to cause visual pollution, there may be problems on the bridge in high winds and that there might be a loss of trade in the town which was by-passed. When answering this type of question, candidates need to concentrate on the evidence provided for them. For example, credit could be gained for referring to damage to the conservation area shown in the diagram but not just for referring the damage to wildlife in general.

- (b) Only about half the candidates correctly identified the feature as a spit, a feature named in the syllabus. Some candidates were fully aware of its formation, correctly describing the process and effect of longshore drift at the bend in the coastline. Some candidates effectively added labels to the diagram to explain the process. There was a lot of misunderstanding from candidates who related the formation of the feature to the action of the wind alone, or to the action of the river.

Question 6

- (a) Most candidates scored full marks for this part of the question, usually quoting Simonstown and Mossel Bay.
- (b) Most candidates realised that Crossroads and Khayelitsha might be dangerous for tourists to visit because of crime or conflict.
- (c) Candidates found this part of the question more difficult and full marks were only scored by a small number of candidates. It was possible to score full marks by just referring to the text provided or just to the climatic information provided, although most candidates referred to both. However the references needed to refer to specific advantages of the area for tourism such as the natural beauty of the mountains, the Nature Reserves, the mountains for hiking or the lakes for canoeing. Candidates were often rather vague in giving the climatic information and often failed to indicate the month or season to which they were referring. For example, *hot temperatures* was not given credit (because the winters are not hot) but *hot summers* or *hot from October to March* was given credit. Other marks were scored for reference to the dry summers, high sunshine totals and temperatures not too hot to be oppressive.



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Paper 0460/03
Coursework

General comments

As is usual, the number of entries for the November session of the examination was much smaller than that for April. As a result, there were very few new or different useful points to emerge from the limited entry. These are given below.

One important point to note is that the quality of internal assessment was very high in this session. Only a little minor adjustment for one Centre was needed. Moderators in Centres are to be congratulated on the care that has been taken to achieve this very high standard.

In this session, almost all Centres sent in all the correct paperwork which helped Moderators enormously. A few went well beyond this and were extremely helpful. One Centre sent a copy of the mark scheme with each study, with annotations indicating page numbers where creditworthy work had been identified. This was useful, and although Centres do not need to think that it is a requirement, any notes indicating how marks have been arrived at are always welcome.

The selection of work submitted for moderation was sensible in most cases, with an attempt to cover the range of marks. One or two had bunching near the top or towards the bottom. One Centre had a number of candidates on the same mark point, but sent in no work from a fairly large mark range. In some of these cases there was a mark range covering quite a big proportion of candidates with no sample representing it. It is helpful if this can be avoided.

Individual Candidate Record Cards for selected candidates were sent in all cases. This is most helpful and avoids the need for reminder requests.

In a few cases no copy of an outline of the work undertaken by candidates was provided. It is helpful to External Moderators if they can read an outline of what has been carried out by candidates, and why, before considering the outcomes in the samples provided.

All Centres included the Coursework Assessment Summary Forms which was a great help to Moderators, as it is essential to see the range and distribution of marks in a Centre.

Points that are relevant only to individual Centres are sent on the Centre Copy of reports that will be received.

As is often the case, some candidates indicated enjoyment of the work they had undertaken. This is always good to see, and hopefully, this will apply to candidates undertaking work for forthcoming sessions.

At the same time as the smaller entry of studies to be moderated was coming in at this time of year, proposals for the coursework in 2011 were arriving in large numbers too. It is worth noting that a few Centres have been planning coursework along the existing lines of recent years involving two studies. It might be worth this opportunity of reminding those with responsibility for planning the future coursework of the changes that will come into effect for the 2011 sessions.

Only one assignment of up to 2000 words will be required from each candidate. The assignment should be based on an inquiry that is common to all candidates. The assignment can be on either Physical or Human Geography, or a combination of both, provided that the study covers topics listed in the syllabus. Internal assessment should be carried out using the mark scheme printed on page 31 of the 2011 Syllabus. This will be used by all Centres as a common yardstick throughout the world, and will also be used by CIE Moderators in their assessment. Adapted mark schemes should no longer be used. All candidates will be assessed by the same, consistent mark scheme. Other information on the structure of Paper 3 can be found between pages 26 and 32 of the 2011 Syllabus.

Please do seek help if any uncertainties remain.



GEOGRAPHY

Paper 0460/04
Alternative to Coursework

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. There were some excellent performances from individual candidates with a substantial number scoring over 40/60 marks and a significant minority gaining more than 50/60 marks. Few scored less than 25/60.

The overall range of marks went from 3 to 57/60 – a wider range than 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 although weaker candidates did score marks in these sections too.

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, and there were no reports of time issues as the booklet format does not allow or encourage over-writing of sub-sections. Most points for teachers to bear in mind, when preparing candidates for future Paper 4 questions, relate to misunderstanding or ignoring command words and the use of equipment in fieldwork.

Centres need to realise that, although this is an Alternative to Coursework examination, candidates will still be expected to show that they know how fieldwork equipment is used even if they have only limited opportunity within the Centre to use it. **Question 1 (a) (i)** required candidates to refer to the tape, quadrat and ruler in explaining their use; similarly **Question 1(b) (i)** required candidates to refer to the equipment shown in the diagrams. Candidates who answered these questions without referring to the equipment gained limited marks.

Comments on specific questions

Question 1

- (a) (i)** This was not done well by many candidates. The question was “How were the results obtained?” This required candidates to refer to the equipment such as the tape, the quadrat, the ruler and to describe how each was used. Too many described the results in Table 1 – not how they were obtained. A number thought the quadrat had 100 squares in it instead of the 25 shown. Others thought the average height was measured with the ruler – not the heights which were then totalled and averaged. Some candidates made no reference to any equipment despite it being illustrated on Fig. 1. The best candidates referred to how the equipment was used to get the results as required. Some very weak candidates did not attempt this question.
- (ii)** Almost all candidates gained three marks here. Some plotted the left point in the wrong place and others devised their own shading scheme rather than that given but, overall, the kite diagram was well done by all abilities.
- (iii)** Nearly all candidates could plot the 4 bars accurately for 2 marks. As with (ii) several devised their own shading system or gave none at all however, as there was no credit for shading on this occasion, that did not count against them. A few plotted 5 and 17 on the line above.
- (iv)** Candidates need to realize that, when asked about the conclusion to a hypothesis, they should state clearly whether they agree or not with it, not just repeat the hypothesis word for word. Most candidates did consider this hypothesis correct and gave sound evidence e.g. the lack of vegetation in the Centre, the decreasing bare ground away from the Centre. Candidates need to

beware of just quoting figures from the graph without identifying the patterns of decrease/increase that the hypothesis refers to. A few gave evidence without stating their decision on the hypothesis.

- (b)(i)** It was surprising how many variations candidates produced in using the equipment provided. Credit was awarded for referring to the equipment with marks for hammering the drainpipe into the ground; pouring a set amount of water into the jug then timing, with the stopwatch, the infiltrating water as it soaked into the ground. While many candidates described this sequence, it was surprising how many endeavoured to take soil out of the ground, put it in the drainpipe then put the jug under the pipe to catch the percolating water. Other answers including using the hammer to flatten the ground or smash the drainpipe and mixing the soil with the water - none of which were creditworthy.
- (ii)** Almost all candidates could plot these points well and join them up sensibly. A number gave oversized squares and a few shaded squares above 38 which were too inaccurate. Almost all plotted the 30 point accurately for at least 1 mark.
- (iii)** Candidates needed to read the question carefully here. It was about the relationship between bare ground and infiltration time – a number gave the relationship between low vegetation and infiltration time. Some confused infiltration time with rate; this answer required recognition of a positive relationship between bare ground and infiltration time but if the infiltration time is longer as here then it is a slow infiltration rate. Candidates occasionally confused the two. Most, however, did state that as percentage of bare ground increased, the infiltration time was longer or slower.
- (iv)** Examiners were looking for some realisation that the long infiltration time was related to bare ground being compressed or walked upon/trampled by walkers on the path. One mark was reserved for this. Few candidates related this cause with many referring to lots of bare ground or less vegetation being virtual repeats of several earlier answers.
- (c)** Candidates did need to look carefully at the map to attempt this successfully. Many noted that A was close to the car park and B and C further away but not all linked this to the number of visitors and their impact or lack of it on different results. Examiners were looking for awareness that B had the same vegetation as A but may have fewer visitors so less erosion, quicker infiltration for example. Candidates noted the mixed woodland at C but not all could suggest why this would give different results from A or B other than stating the vegetation would be higher and it was a long way for people to walk.
- (d)** Too many candidates described what the side-headings were instead of answering the questions as to how these suggestions might improve their investigations. Most candidates understood that it was useful to know how many walkers were there and why they were there. Not many referred to different weather conditions or holiday patterns for repeating the investigation; a few referred to seasons but not why this might affect results.
- (e)** This was well done. Candidates came up with many suggestions to protect the natural environment often relating this to the context of their own country e.g. creating game reserves, limiting access with tarred roads, guides, walkways, bridges and fences. Educating tourists was a popular idea as was the more punitive uses of laws and fines. Simple ideas such as stop dropping litter needed elaboration which was not always provided.

Question 2

- (a)** Most candidates gained two marks here but a significant number did not attempt this. The mark scheme gave a generous allowance to the NE and SW sections of between 30 to 60 degrees and most candidates put their plots within this. In general R5 and O5 were well plotted though some candidates just put the street reference without a plot. A small number did not appear to know the eight-point compass regarding directions.



- (b)(i)** The vast majority did put the descriptions in the correct order; a few gave the reverse order.
- (ii)** As with (i) some candidates gave the reverse sequence for no marks.
- (iii)** This was not done well because many candidates just repeated what had already been done e.g. streets chosen, survey sheet created. The best answers referred to deciding on the need for groups; agreeing on a score based on subjectivity and the time of day/week to do the investigation. There were very few references to safety aspects such as pairing up, surveying in daylight. Far too many saw this as a “questionnaire” survey and wrote about sampling and asking people questions.
- (c)** Quite a pleasing number of candidates were able to work backwards from the results sheet and came up with a design that included the categories of land-use, a scoring system from 0-3 and the total environmental score. Almost all listed the categories but just stated “score” or “total” without detail; some did not suggest totalling any scores. A few named a street in the space on the design given and gave it scores.
- (d)(i)** This was done well by almost all candidates. A few plotted 17 at 17.5 and the median was sometimes wrongly circled but overall most gained three marks here.
- (ii)** Most candidates gave the rankings in the correct order; some stated the median score and some did this wrong if they had given an incorrect median for the residential category in (i).
- (iii)** Most candidates correctly agreed with the hypothesis but then went on to describe the reasons for different scores from knowledge instead of using evidence from Fig. 9 as requested consequently they just scored 1 mark for agreement.
- (iv)** Keeping and maintain shopping areas to attract customers was a popular choice for a high number of candidates, however just stating noise pollution or air pollution as a reason for a low industry score was not enough. Candidates needed to suggest the source of each e.g. heavy lorries, machinery, factory processes.
- (e)(i)** A surprising number of candidates did not attempt this graph. Those that did plotted all three points accurately though a small number managed to get one or two in the wrong places. A few joined the points together!
- (iii)** This graph could be answered in two ways so there were no marks for accepting or rejecting the hypothesis. At the broad scale it could be said that with two scores of 20 close and far from the Centre, the quality was broadly the same so the hypothesis should be rejected. Alternatively at the detailed scale the fluctuations from 6-20 justify the hypothesis stating that quality varied. Many stated there was no clear pattern or correlation for which credit was given. The request for evidence does need data from the graph and not all candidates supported their general judgements with this.
- (f)** Candidates struggled to get four marks here due to lack of detail in their answers. They recognised that judgements would be subjective and a few gave examples that would cause differences of opinion such as litter and noise descriptors. A small number suggested “air pollution” should have been included although that might not have been practical. Many stated that four categories of land-use was not enough without saying why or suggesting others. The best answers referred to the possibility of land-uses being mixed or specific detail, being possible within the descriptors e.g. light/heavy industry, different types of space or residence. Some suggested land-uses like Schools, offices should be included.