

GEOGRAPHY

Paper 0460/01

Paper 1

General comments

The paper was considered to be appropriate for the ability range of candidates and, given the wide range of marks achieved, it produced a high degree of differentiation. 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. There were many Centres from which scripts were seen which demonstrated examples of good practice throughout, and there were many candidates who scored consistently well across their chosen questions. Pleasingly, where appropriate, candidates are moving away from brief answers, they are writing in sentences and trying to develop their answers fully. Brief points, adopting the notion of one mark for each point, are becoming less evident than in the past. The use of long lists of undeveloped bullet points, although still evident from some Centres, is now far less common, as more Centres grasp that quality not quantity is rewarded in those questions requiring extended writing. The use of levels of response marking in the final part of each question (usually requiring a single case study), which was introduced for the first time in this examination, prevents basic statements from gaining full marks and rewards detailed and place-specific answers. Indeed, it has to be said that from some Centres the case studies used this year were very impressive.

Levels of response marking will be used for **Section (c)** of each question in future examinations and candidates should be familiarised with how it operates. In the section of this report which refers to specific questions examples of the levels of response mark schemes for each case study question are included for reference. Please note that it is the quality of the response which determines which level an answer achieves rather than the quantity of statements contained within it. However once assigned to a level the mark achieved within that level is determined by the number of points made.

Levels 1 and 2 are distinguished by whether statements are simple (Level 1) or developed/elaborated (Level 2). A candidate can immediately enter Level 2 by making developed points, without making any Level 1 statements. In order to achieve Level 3, a candidate must have already reached the top end of Level 2 – in addition his/her answer should have a clear example for 6 marks, and if the answer is place-specific as well all 7 marks can be achieved.

Whilst there were many Centres which produced high scoring candidates and very impressive geography, there were others where candidates appeared to lack motivation and failed to make any sustained effort. Great extremes of performance were evident, with the many candidates who produced excellent work providing a stark contrast with those producing very weak scripts. A significant minority of candidates seemed poorly prepared and there were some Centres where candidates had been entered who appeared very weak, with exceptionally poor linguistic skills, and very limited geographical knowledge and understanding. Far too many candidates from such Centres failed to make a meaningful attempt at the paper overall, with a series of rushed and superficial answers, or simply did not attempt many parts of questions, except for those testing simple skills and those which directly used the photographs, graphs and other resources provided. This was especially so where responses required extended writing, particularly the case studies. Weak candidates need to be at least trained to make general points and develop them, even where they have not revised or retained the name of an example.

Whilst clearly there was immense variation in quality both between and within Centres, excellent responses were seen to all parts of all questions, and many Examiners commented on the continued improvement in the quality of case study materials being used. Centres are becoming more and more familiar with the need for candidates, wherever possible, to have knowledge of appropriate case studies to back up their generic knowledge and understanding. The syllabus is constructed in such a way that, wherever a Centre is located, there are likely to be opportunities to make use of local case study materials in many parts of the course. Centres are encouraged to further develop their use of appropriate local case studies, or at least examples from their own country or continent, and attempt to reduce further the dependence on textbook examples.

There were few rubric offences, although a number of candidates, almost exclusively weaker candidates, answered all six questions very superficially rather than selecting three. Clearly this is to their disadvantage. Time management was good for the majority of candidates, though some candidates spent too much time on one or both of their first two questions at the expense of the third question, this was not such a significant problem as it has been in some previous examinations. The standard of English was generally good, but a few candidates wrote in laboured English and this may have contributed to their struggling to answer three questions in the time allowed. As usual, many candidates could have obtained higher marks if they had read the question more carefully. Some still have difficulty writing comparative answers and in avoiding irrelevancies.

The most popular question was **Question 1**, followed by **Questions 3, 5 and 6**.

The following advice, amended from previous Examiner's reports 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.
- (b) Read the entire question carefully before beginning an answer. Decide which section requires which information, thereby avoiding repetition of answer and the time that is wasted.
- (c) Take careful note of the command words so that answers are always relevant to the question.
- (d) Use the mark allocation as a guide to the amount of detail or number of responses required. Be aware of timing 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.
- (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.
- (g) It is important for candidates to be able to distinguish between people and the natural environment and to focus on the aspect about which the question is asking. Several questions this year asked about one or the other and many candidates wrote about both.

Centres should take careful note of the following points:

- (a) The front page should show full details of the candidates along with an indication of the three questions answered.
- (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**Section A****Question 1**

This was by far the most popular question. Whilst there were many excellent responses, it also produced some which were very disappointing. In (a)(iii) part **A** proved challenging and there were many overlong answers to (a)(iii) part **B** and (b)(ii).

- (a)(i) Generally very good definitions of “death rate” from most candidates. A simple but not common mistake was to omit the “per 1000” part of the answer.
- (ii) Usually both areas were correctly identified, and in so doing candidates demonstrated their understanding of how birth and death rates can be used to work out population growth.
- (iii) In part **A** only a few candidates were able to offer valid reasons for the higher death rates in Western Europe and North America and often this was limited to a reference to a larger ageing population. There were few comments on the influences of sedentary life styles, stress, over eating and obesity, or the effects of activities such as smoking on cancer rates. Clearly most had been told the reasons for high death rates in some LEDCs and assumed that Western Europe and North America were part of this group. This was especially true among African and Asian Centres.

However B produced very detailed answers with most candidates familiar with the different factors which contributed to the differences in birth rates.

- (b)(i) The interpretation of population pyramids has improved with practice in recent years and candidates usually highlighted the changes across the 25 year period very well and were able to back up their observations with derived statistics. Most candidates tried to use statistics though the figures were sometimes incorrect, with the ‘thousand’ left off the figures, or candidates quoted figures but without making clear which year they were referring to, or to which gender they related.
- (ii) There is still some confusion about the effects of an ageing population, as some candidates seem to think that the results are the same as overpopulation. However, there were some excellent answers on the potential effects of an increasing dependency ratio on the working population and a country as a whole. Although there were some excellent answers, some candidates wrote at length about the provisions needed for elderly people and failed to mention any other consequences.
- (c) This was very well answered by some candidates with the use of detailed case studies – often based on the candidates’ own experiences of living in an overpopulated country or area. There are still the weaker candidates who generalise about the lack of various services and amenities after they have named a well-known overpopulated area, but, in the main, the bulk of the answers were specific and developed to gain high marks. Weaker candidates made no reference to an area studied or did not develop points which is necessary to access full marks. The most popular choice was China, but the answers often included the reasons for overpopulation and vast details about the One Child Policy which were not relevant.

The following extract from the mark scheme illustrates how levels of response marking was used to assess the quality of answers. Note how statements need to be developed to reach Level 2 and place specific information is required to reach Level 3:

Level 1 (1-4 marks)

*Statements including limited detail describing problems caused by overpopulation.
(e.g. people do not have enough resources, lack of work, inadequate food supplies, poor access to education, poor access to health care, overcrowded housing, traffic congestion, atmospheric pollution, inadequate water supply/sanitation, overuse of agricultural land/overgrazing, deforestation/loss of natural vegetation etc.)*

Level 2 (3-5 marks)

More developed statements describing problems caused by overpopulation. (e.g. lack of work which leads to poverty, inadequate food supplies which cause death, starvation/malnutrition, poor access to education so people remain unqualified, poor access to health care leads to high death rates, overcrowded housing with inadequate basic amenities etc.)

Level 3 (6-7 marks)

Uses named example (e.g. Bangladesh). Comprehensive and accurate statements including some place specific reference. (e.g. traffic congestion as there are far too many vehicles on the roads especially in cities such as Dhaka, overuse of agricultural land on flood plains of Brahmaputra/Ganges leads to loss of soil fertility/lower yields, widespread deforestation for firewood on slopes of Himalayas etc.)

Question 2

- (a)(i)** Mostly correct but some very weak candidates merely repeated the word 'residential'.
- (ii)** Locations of the industrial areas were usually accurately described in relation to the river, railways, residential and commercial areas. Some irrelevant reasoning was included by candidates in this part.
- (iii)** Many candidates scored 2 or 3 marks by referring to issues relating to transport, often developing them fully. The availability of nearby labour supplies and the facility of waste disposal in the river were also suggested by candidates, as was the potential of the river being used as a power supply or source of water for cooling or use in processing.
- (b)(i)** There were many examples of very good interpretation of the line graph, with accurate figures of population growth over the time period, including references to the changes in the rate of growth as indicated by the different gradients of the line. Some candidates limited their marks by not including statistics and a common error was to think that each centimetre represented 1 year not 5 years – hence the candidates wrote that it 'increased by 1 million every year'.
- (ii)** The reasons why many people live in squatter settlements is well understood, with the inability of the local government to cope with the large number of people in terms of house provision and also the sorry state of the poor, unemployed people who are unable to break out of the cycle of poverty being well developed by many candidates. Some wasted time by explaining the reasons for rural to urban migration and the general problems of life in slums.
- (iii)** While some weak candidates selected Method B and then simply repeated the bullet point list of improvements, or made a weak general comment, there were many very good answers which either developed each improvement by explaining how it helped and/or compared the two methods and made valid judgements on their likely success.
- (c)** Although many of the responses were of a reasonable standard, some were about rural to urban migration rather than international migration. Answers ranged from a bullet list of general push and pull factors to very detailed case study accounts of migration between countries – Mexico to the USA and Turkey to Germany were popular choices and there were some excellent examples used relating to the country in which the candidate's school was located (perhaps citing personal experience), for example answers from African Centres describing recent migrations such as Rwanda, Zimbabwe, and Mozambique.

The majority of candidates needed to elaborate on each of their ideas so that they gained the higher marks for Level 2 and possibly Level 3 by including place-specific references.

The following extract from the mark scheme illustrates how levels of response marking assess the quality of answers. Note how statements need to be developed to reach Level 3. Note how place-specific information is required to reach Level 3:

Level 1 (1 – 4 marks)

Statements including limited detail which explain reasons for international migration. (e.g. more jobs, better services, more schools, more hospitals, not enough food, to escape persecution)

Level 2 (3 to 5 marks)

More developed statements which explain reasons for international migration. (e.g. more jobs in cities where they can work in factories, greater access to hospitals/clinics for improved health care, can buy food from shops rather than rely on unproductive farmland, to escape from persecution of religious minorities.)

Level 3 (6 - 7 marks)

Uses named example.

Comprehensive, accurate and place specific statements.

(e.g. Turkey to Germany – few manufacturing jobs in Turkey as it was largely dependent on agriculture, movement to German cities such as Cologne to rebuild after World War 2, greater access to schools/hospitals/clinics in cities like Dusseldorf rather than rural Turkey, unproductive farmland in areas such as Anatolia as a result of poor agricultural techniques)

Question 3

This was by far the more popular of the two physical questions.

- (a)(i)** Some candidates failed to restrict their counting to the fault line itself and included all the earthquakes shown on the map.
- (ii)** This question demonstrated the need to practise map skills, as far too many candidates failed to use the compass direction and the scale accurately. A surprisingly large number of candidates reversed their compass direction and gave north west as an answer.
- (iii)** Well answered by many candidates, with an explanation based on plate movement which creates friction and then causes the earthquake when the pressure is suddenly released. However, in contrast, there was some confusion about the type of plate margin and some very vague and unscientific answers.
- (b)(i)** Some candidates made good use of the photographs both in this section and in (b)(iii). Others completely ignored the photographs in favour of very general points.
- (ii)** A number of very well prepared candidates were able to give details about how buildings could be earthquake-proofed though others were far too general with undeveloped reference to 'earthquake proof' or 'stronger' buildings. Many answers concentrated on drills, hiding under desks and preparing emergency rations. There were many false statements about prediction, warnings and evacuation prior to an earthquake occurring.
- (iii)** Answers were often well developed to cover a range of creditable reasons for staying in areas affected by different natural hazards. They included the family attachment to the area, the financial problems of moving and the economic benefits of volcanic areas in particular.

- (c) This was often the weakest of the case studies used by the candidates as they clearly identified the effects of their chosen hazard but failed to link the effects closely enough to the feature of the event. Consequently only the very best candidates achieved Level 2 and beyond. By far the most popular choice was a volcanic eruption, with the most frequently used examples being Mt St Helens, Mt Merapi, and Mt Pinatubo. Answers about the two latter examples tended to be more accurate. Candidates often ignored the instructions about 'effects on people', but did try to give both long and short term effects.

Many of the best answers were about tropical storms, with Hurricane Katrina being popular, but with some very good use of local examples from candidates in Asia. A few chose drought in the Sahel and these usually gained good marks. Candidates choosing a tropical storm or an example of drought usually related them significantly better to effects on people. However, failure to develop points was still a problem, but less obvious than in **Question 2**.

The following extract from the mark scheme illustrates how levels of response marking was used to assess the quality of answers. Note how statements need to be developed to reach Level 2 and place specific information is required to reach Level 3:

Level 1 (1-4 marks)

*Statements including limited detail describing long or short term impacts of a volcanic eruption, tropical storm or drought.
(e.g. people killed, housing destroyed, roads and railways damaged, jobs lost etc.)*

Level 2 (3-5 marks)

*More developed statements describing long or short term impacts of a volcanic eruption, tropical storm or drought.
(e.g. people killed by hot lava/suffocation by toxic fumes, housing buried by lava/layers of dust, communications disrupted by lava covering roads/railways, devastation of lumbering industry by destruction of forests etc.)*

Level 3 (6-7 marks)

*Uses named example (e.g. Mt St Helens volcanic eruption).
Comprehensive and accurate statements including some place-specific reference.
(e.g. 61 deaths/suffocation by toxic fumes, logging camps destroyed, communications disrupted by floodwaters washing away roads/railway bridges, every tree within 250 km sq blast zone destroyed, all fish including those in a hatchery on Toutle river destroyed, Spirit Lake filled in therefore number of tourists reduced etc.)*

Question 4

This was the least popular question, however it displayed the greatest variation in marks - a story of extremes - done really well or very badly. It was a pleasure to see when students had been well taught and had excellent fluvial knowledge and understanding, and could apply it.

- (a)(i) Despite the wide tolerance allowed some candidates failed to measure accurately, misused the scale provided or gave answers in kilometres. Nevertheless many answers were correct.
- (ii) A and B were usually correctly identified, although a common error was to identify the mouth as either an estuary or delta.
- (iii) Answers were often very good or totally irrelevant. Good answers identified the different colour of the old course and the straight nature of the new one, but often it was mentioned in isolation with no reference to reasons why the course may have been changed.

- (iv) Again either candidates scored full marks or did very badly, many confusing transport and erosional processes. Those who were well prepared were generally able to name and describe the processes accurately.
- (b)(i) A few excellent answers, but there was often no attempt at comparison or the only noted difference was in the number of distributaries. The reference by many to “tributaries” rather than “distributaries” suggests that candidates need to be more familiar with this aspect of river processes and landforms.
- (ii) The attempts to describe the formation of deltas varied from the very impressive (usually supported with labelled diagrams) to the extremely vague and/or totally inaccurate. It was rare to see an answer which gained full marks; many explanations were simplistic and restricted to deposition caused by rivers slowing down. Generally any diagrams included were poor and did little to enhance written text.
- (c) This differentiated well, whilst there were a few high quality answers, very few candidates were able to describe the flood prevention strategies used in a particular river basin and many digressed into explaining why flooding occurred. Most answers went little further than to name the measures taken, like dams and raised embankments, without going on to explain how they prevented flooding, and place specific details were rarely seen.

The following extract from the mark scheme illustrates how levels of response marking was used to assess the quality of answers. Note how statements need to be developed to reach Level 2 and place-specific information is required to reach Level 3:

Level 1 (1-4 marks)

*Statements including limited detail describing what can be done to reduce flooding.
(e.g. build higher banks, plant trees in drainage basin, build dams/reservoirs along course of river, straighten river etc.)*

Level 2 (3-5 marks)

*More developed statements describing what can be done to reduce flooding.
(e.g. build higher banks so the river will have a greater capacity, raise banks especially in areas where river flows at a higher level than flood plain, plant trees so flow will not be so flashy/so less water will get to river as more evapo-transpiration occurs; build dams to regulate flow of water, straighten river so water is removed from drainage basin more quickly etc.)*

Level 3 (6-7 marks)

*Uses named example (e.g. River Mississippi)
Comprehensive and accurate statements including some place-specific reference.
(e.g. built high levees so the river will have a greater capacity, raised banks protecting cities like Memphis where river flows at a higher level than flood plain, planting trees in Tennessee Valley so flow will not be so flashy/so less water will get to river as more evapo-transpiration occurs; much straightening of river/meanders cut off between New Orleans and Memphis etc.)*

Question 5

This was a popular and sometimes high scoring question, however poorly prepared candidates wrote weak answers in parts **(b)** and **(c)**.

- (a)(i)** Most candidates gave the correct answer.
- (ii)** Well answered generally, though some candidates give the UK rather than Japan.
- (iii)** Many candidates were well aware of the reasons for fewer people in MEDCs being employed in manufacturing, including the impact of mechanisation and the global competition from manufacturers, particularly those based in LEDCs.
- (iv)** Many answers failed to develop the information on the diagram, but others wrote thoughtful answers. The main problem here was that candidates did not expand on the ideas of the resource but simply copied them. In addition many thought that the shops lost trade because they could no longer obtain products from the factory.
- (b)(i)** Some candidates struggled to write down the definitions, in particular they had difficulty explaining processes, even though it was obvious that they were familiar with the terms. Some illustrated their answers by examples.
- (ii)** This differentiated well. There were some unsuitable examples, usually farming. In contrast there were some very good answers using local manufacturing industries, or on steelmaking, the car industry and the textile industry. It was encouraging to see the answers which contained details of the actual raw materials, processes and outputs of the selected industry rather than those which copied ideas straight from Fig. 8, though weak candidates did little more than this.
- (c)** There was some confusion over the nature of high technology industries – many suggesting that car manufacture was an example. However, some candidates made good use of well known examples of case studies related to the M4 Corridor, Silicon Glen or California, and developed the factors to pick up good marks. Some wrote in general terms about industrial areas they had studied, with little specific detail.

The following extract from the mark scheme illustrates how levels of response marking was used to assess the quality of answers. Note how statements need to be developed to reach Level 2 and place specific information is required to reach Level 3:

Level 1 (1-4 marks)

Statements including limited detail explaining why high technology industries were attracted (e.g. large workforce, good transport links, accessible, near airport, near motorway, cheap land etc.)

Level 2 (3-5 marks)

More developed statements explaining why high technology industries were attracted (e.g. skilled, highly qualified workforce, workers can be paid low wages, good motorway links for access to markets, proximity to international airport for international business, large areas of attractive, greenfield sites to attract potential workers etc.)

Level 3 (6-7 marks)

*Uses named example (e.g. Malaysia).
Comprehensive and accurate statements including some place specific reference.
(e.g. skilled, highly qualified workforce, workers can be paid low wages, good motorway links for access to markets, proximity to Kuala Lumpur international airport, government investment into planned high tech industrial areas such as at Penang (Silicon Island), government 'technology action plan' put emphasis on technology etc.)*

Question 6

This was another popular question which differentiated well, producing a number of excellent answers.

- (a)(i)** The simple and regular mistake was to miss out the word 'thousands'. Candidates who suggested there were only four hotel rooms in Havana were clearly mechanically reading the figure from the graph, without thinking about the answer which they gave.
- (ii)** Very few candidates got this wrong, which was encouraging as there were a number of graphs to be considered.
- (iii)** Some candidates failed to note that the emphasis of this question was on the problems caused to people and wrote generally about problems associated with tourism, or with particular reference to the natural environment. However, the majority of candidates did as required and covered problems related to trespass, intrusion, various aspects of pollution, loss of land, and social issues. In this type of question candidates need to write more than a series of words (such as 'pollution', 'overcrowding' and 'affects the culture') in order to convey their understanding of the impacts on the people.
- (iv)** There was no confusion here, as candidates covered ideas such as employment, income and improvements in infrastructure to score well. In this question, in particular, many candidates gained credit for sound developments of ideas.
- (b)(i)** Despite some excellent developed answers about the impacts of tourist development on coral, there were many disappointing answers here, as many candidates were unable to expand on the ideas in Fig. 10 and some failed to stress specific types of damage done to the natural environment, giving vague, generalised references to 'damages the natural environment', or the just copied the headlines, or repeated an idea (typically 'loss of habitat') three times. In addition, some weak candidates referred to the impacts of the three developments on people rather than the natural environment.
- (ii)** It was encouraging to see that understanding of sustainable development has vastly improved and there were some excellent responses, referring to ecotourism, limiting developments and involving local people. There were some Centres where the concept was not well understood however, and in this question it was sometimes confused with the ways of promoting tourism in general.
- (c)** A significant number of students could refer to their own location for case study material, often producing excellent responses. In contrast those who wrote about traffic in a city rarely made much reference to the natural environment. The best answers seemed to use case studies relating to agriculture or energy provision, but these were only effective when the candidates restricted themselves to one named area and wrote with place-specific detail about issues such as habitat loss, soil erosion and loss of species. Many candidates who wrote about the impacts of commercial agriculture showed detailed knowledge of eutrophication and produced excellent answers. Too often however, answers started well with references to a particular area and then went off on tangents to include ideas which were not relevant, including references to people and unrelated accounts of the impacts of global warming.

The following extract from the mark scheme illustrates how levels of response marking was used to assess the quality of answers. Note how statements need to be developed to reach Level 2 and place-specific information is required to reach Level 3:

Level 1 (1-4 marks)

Statements including limited detail describing the impacts of human activity on the natural environment.

(e.g. kills animals, causes floods, washes soil away, makes the land bare, causes air pollution, causes global warming etc.)

Level 2 (3-5 marks)

*More developed statements which describe the impacts of the chosen human activity on the natural environment e.g. ranching in Amazonia.
(e.g. kills animals threatening species with extinction, impacts on food chain, loss of habitat, reduces interception increasing run off; causes floods as soil is washed into rivers, reduces soil fertility, causes global warming due to increase in greenhouse gases etc.)*

Level 3 (6-7 marks)

*Uses named example (e.g. ranching in Amazonia).
Comprehensive and accurate statements including some place specific reference.
(e.g. 1000 s of species in the state of Mata Grosso are threatened with extinction, impacts on food chain, loss of habitat in marshy areas alongside river Amazon, reduces interception increasing run off; causes floods as soil is washed into river Amazon and its tributaries, reduces soil fertility etc.)*

GEOGRAPHY

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Paper 2

General comments

The response to the paper was generally very good, with encouraging numbers of candidates scoring more than 50 marks out of 60 for the paper. It was pleasing to see a good response to those aspects of the survey map question which dealt with measurements and interpretation of relief. Candidates also demonstrated good skills in interpreting the graph in **Question 2** and the photographs in **Question 3**. Candidates coped well with **Questions 1 to 4** but, as expected, the weaker candidates found **Questions 5 and 6** more difficult. Full marks were very common for **Questions 2, 3 and 4**.

Comments on specific questions

Question 1

- (a) This part of the question was intended to provide all candidates with a relatively straightforward start to the paper and to test their skills of locating features on the map and using the key. As expected, many candidates scored 7 or 8 marks out of 8. One point to note is that on many maps, the key lists two features on one line. This was so in part **(viii)** where the correct answer was *riverine trees* but many candidates incorrectly answered *line of trees* which was on the same line in the key.
- (b) The vast majority of candidates were able to identify an area where coral was absent from the coastline. They either noted that this was at the river mouths or bays or named a specific area. However in part **(ii)**, few candidates could suggest a valid reason for the absence of coral, often suggesting human activity as the cause. Only a few stated correctly that this was due to fresh water, or silt-laden water, brought down by the rivers.
- (c) Weaker candidates found this a more difficult part of the question. Perhaps surprisingly, candidates fared best at identifying the highest point on the road (the col close to the reservoirs). Many correctly identified the road passing cultivation and other plantation close to Yemen but the area of flood plain caused difficulty for many candidates. Examiners accepted large areas of the flood plains of the Feeder St Martin and Rivulet du Boucan, however many candidates identified a point just east of the bridge over the Feeder St Martin, which was not accepted.
- (d) Many candidates found it easy to give advantages of the coast for tourism, either referring to the beaches and coral or to existing features of infrastructure such as hotels and roads. Weaker candidates suggested advantages *to* the area *of* tourism rather than advantages *of* the area *for* tourism.
- (e) Answers to this part of the question were very encouraging particularly in part **(iv)**, where many candidates noted the flat land at the tower, gentle lower slopes and steep upper slopes. Some candidates failed to score the mark in part **(ii)** by failing to give the correct units (metres) when giving the height above sea level of the summit. The correct use of units is a skill which is tested in Paper 2.

Question 2

- (a) Virtually all candidates coped well with this part of the question. The use of the correct key in the completion of the choropleth map was most encouraging. In part **(iii)** some candidates referred to the information at "the top of the map" or "the bottom of the map"; this did not gain credit. The very best answers noted the east-west differences as well as the north-south differences in population growth rates.

- (b) Candidates found this slightly more difficult than part (a) but it was well-answered. The plotting of the position of Tamil Nadu on the graph was done well by almost all. Some were confused to be presented with a scatter graph in Fig. 4 where there was no relationship between the variables.

Question 3

- (a) Candidates frequently scored full marks for this part of the question. They noted that the sea could be used for transport, water supply or waste disposal, that there was a large site on flat land, that the housing could be used by workers at the factory and that the rural setting with hills and mountains provided a pleasant environment for the workforce. Some candidates even noticed that the wind farm just visible in the distance could be a power supply.
- (b) Here again candidates demonstrated good skills of photograph interpretation. The Examiners accepted a wide variety of valid descriptive points regarding site and buildings and these are listed in the mark scheme.

Question 4

- (a) The majority of candidates scored full marks for this part of the question, noting that the severely damaged rainforest was in the centre of the island, that the lightly damaged areas were in the north and that Gouyave was in the moderately damaged area.
- (b) Candidates scored freely on this section, quoting a variety of evidence for effects on human activities on the island. These included damage to towns, roads, crops and tourist developments.
- (c) Candidates often found this section a problem. Many were clearly unaware of the correct method of naming wind directions, i.e. the direction from which the wind is coming. Frequently, candidates correctly gave the reason for the choice of wind direction as the severe damage in the south east or the coastal erosion in the south east, but preceded this by saying, incorrectly, that the wind direction was north west.

Question 5

- (a) This part of the question was generally well-answered. Candidates noted the lower temperatures of La Sierra and the warmer temperatures of La Costa and El Oriente. Candidates were also able to give the reason for the differences as either distance from the sea or altitude. Occasionally latitude was given as an incorrect answer.
- (b) Most candidates were able to score full marks by noting such features as the denser network in La Costa, the east–west roads to the coast, the roads linking to the Pan-American Highway in La Sierra.
- (c) The most common difficulties in exploiting oil in El Oriente quoted by candidates were the high temperatures, rainfall and humidity, causing difficult working conditions, the rainforest being expensive to clear and causing transport difficulties, the sparse population leading to a lack of labour, the lack of roads and the mountain barrier to coastal outlets. Occasionally candidates lost marks through giving evidence from Fig. 6, e.g. high rainfall, but not explaining why this would cause difficulty. Candidates were able to suggest various difficulties which could be created by economic development in El Oriente, these were usually effects on the vegetation, wild animals or traditional culture of the area.

Question 6

- (a) Most candidates noted that the wooded hill had become an island or that its vegetation had changed. However some candidates clearly found Figs 7 and 8 difficult to interpret.
- (b) Answers to this part of the question were disappointing and it was common for candidates to fail to score any marks. Common errors included giving advantages *to* the area of water supply rather than advantages *of* the area *for* water supply and giving irrelevant comparisons of Figs 7 and 8. Correct responses given by candidates included the steep slopes for runoff, the valley for a reservoir, the sparse population allowing for expansion of the lake and the lack of urbanisation or industry to pollute the water.

- (c) The most common suggestions of effects of changes quoted by candidates involved the loss of the farmland, the flooding of the road and the flooding of the farm. Less frequently, candidates noted that much upland pasture was now occupied by evergreen forest, that the forest was now used for recreation and that the enlarged lake could be used for water sports. Then effects of these changes were discussed in detail.

GEOGRAPHY

Paper 0460/04

Alternative to Coursework

General comments

It was pleasing to see a higher level of achievement from a greater proportion of candidates for the component this session. Generally the response to each question was equally good with the geographical terminology and presented data clearly understood by the majority of candidates. However, it is essential that candidates are aware of the importance of following command words to gain access to all the available marks.

The Examiners unanimously commented upon the lack of quoted data, i.e. facts and figures, to support statements as being the single most limiting factor restricting the scores of candidates. The other aspect which Examiners mentioned this session was the vague nature of many answers. Marks cannot be awarded for just the use of the word 'accurate' or 'reliable' and often the lack of specific detail again limited marks. However, generally it was felt that candidates fulfilled the question requirements well and showed a good grasp of the geographical characteristics of the CBD and the dynamics of a beach and its material.

Comments on specific questions

Question 1

- (a) This question assessed the candidates' knowledge of CBD characteristics linked to the value of the land. The major effect was identified as an increased height to buildings as the value of the land increased. The most common reasons being cited as the need to maximise space and to keep the footprint of the building smaller to reduce the cost of the land. This was stated with varying success and many candidates were unable to express these ideas coherently.
- (b) The term 'pilot survey' was clearly understood by several Centres, where obviously it had been taught in preparation for this examination. A significant number were under the misapprehension that it involved an aerial view from a high vantage point rather than a preliminary survey.
- (c) A pleasing number of correct answers were drawn and shaded appropriately for the two sites, although candidates struggled more to describe any pattern of width or height. The most common correct statements outlined the main road having taller buildings and the buildings becoming smaller away from the main road/ towards the sea. The more able identified site G as an anomaly to gain the three available marks. The width of buildings did not follow a clear pattern and only the most able recognised this fact.
- (d) Although many candidates recognised recording the first floor as being more practical, fairer and easier, many suggested incorrectly that the ground floor represented the function of the whole building so failed to gain this mark. The functions of the CBD were well understood with very few candidates suggesting incorrectly 'general stores' or 'low cost housing' and equally the commercial nature of the CBD was well known. In (iii) the command word to 'compare' was critical to the success of this question. The instruction was to compare the functions of sites E and A and although clear descriptions of the various functions were often given, the Examiners were looking for direct comparisons of both their divergent overall functions and the more individual function differences of hotels etc.
- (e) The best responses to this question were clearly from Centres who had undertaken such counts. Their descriptions of the data collection methods were precise and specific with a definite location and method e.g. along the main road using a tally system to count the cars passing the students in a five minute time period. This would easily gain the three marks but too often Examiners reported that vague ideas dominated responses.

- (f) There was variable success in completing the isoline correctly. This should be an equidistance from the 40 and 60 thousand US\$/m² lines and through the 50 value at site A. The shading of land over 60 thousand US\$/m² was more successfully completed.
- (g) This question differentiated the candidates well. Heeding the command words directed the more able candidates to achieve good marks, but this question highlighted the importance of that action. The candidates were required to comment on the hypothesis and suggest a location for the centre of the town and then support their decision with the data. Usually the value of the land was the most quoted figure, but also the width and height of site A buildings were commonly given. As suggested earlier in the report, a disappointing proportion of candidates' marks were limited by their lack of quoted facts and figures.

Question 2

This question assessed the candidates' knowledge and understanding of wave terminology and introduced the topic of coastal dynamics.

- (a) The majority of candidates placed the four labels correctly and defined a destructive wave in terms of a strong backwash and a weaker swash.
- (b) Many candidates were familiar with the term 'systematic sampling' and were able to outline the advantages as reduction in bias or faster or a larger sample area. Again, Examiners commented on the vague nature of some responses which limited access to marks. In (ii) it was disappointing to note how few photographs were annotated. This is a common feature of coursework and the skill of identifying the pertinent features of an image with an arrow and label should be introduced as part of the preparation for this component. Candidates who labelled the seaweed, litter and larger beach material gained the three marks.
- (c) The photographs were included to prompt candidates to think about changes in material size and Table 3 provided data evidence of such spatial change. The plotting of the figures was generally accurately completed and the differences described appropriately in (ii). However, many candidates did not return to the stem of the question before responding to (iii) and therefore did not identify the suggestion that larger material was indeed found at the back of the beach and then quote facts and figures from Table 3 and the photograph to support their decision. This is a definite area for practice which would lead to a significant improvement in the marks of candidates.
- (d) The majority of candidates answered this question very well and commented on the likely source of 'other material' as from tourists or locals, the stream, wind or the waves and many gained full marks here.
- (e) Again this question was completed at a higher level by those Centres who had undertaken practical data collection along a transect line. The question demanded precise wording of instructions and a basic understanding of how the grading/rating method worked to gain the marks. Evidence of that understanding came in (ii) when the description of the data collection findings showed that a greater amount of 'other material' had accumulated at the edges of the beach and less material was found in the wider, central area of the beach nearer to the hotel. The acceptable reasons included the idea that the hotel would employ cleaners and some understanding of longshore drift or the wind blowing material to the eastern or western fringes of the beach. If candidates clearly understood the data and had identified the above pattern, then most continued to attempt a valid explanation.
- (f) The concluding section required candidates to evaluate the data collection methods used in the beach investigation. This is an essential component of fieldwork and the key to success is for candidates to express their ideas with clarity and specific detail. The use of such expressions as 'the use of the transect line was good because it was an accurate method' did not gain the mark whereas 'the use of the transect line was good because it removed student bias' fulfilled the mark scheme as a specific comment of evaluation. Many candidates gained two or three marks here but again candidates who had undertaken any type of data collection were more successful and hence it remains an important component to preparation for this paper.

GEOGRAPHY

Paper 0460/05

Computer Based Alternative to Coursework

General comments

Generally candidates coped well with this examination. Candidates seemed to find the questions which involved matching up, labelling and completing graphs relatively easy (the Computer marked sections). However, with the answers that required a description or an explanation (the Examiner marked sections) more detail, depth and use of data was often required.

The simulation was based on weather patterns in a rainforest. It included a study of the variations in clouds, temperature and rainfall in a rainforest environment. A brief study was also made on the vegetation.

Comments on specific questions

Question 1

This question was aimed at 'setting the scene' for the location of the simulation. Candidates answered the parts of the question relating to sites A and B quite well but less than half chose the correct advantages for sites C and D. The main error was getting the two answers mixed up.

Question 2

This question was to get the candidates to think about the reasoning for collecting data. Some candidates answered this well but many wrongly thought that it was to get an average reading.

Question 3

This question was to identify the unit of measurement for cloud cover. This was quite well answered with about two thirds of candidates choosing the correct answer. The most common mistake was thinking the answer was '%'.

Question 4

This question was to get the candidates to think about the method of collecting cloud cover data. Disappointingly, less than half of the candidates gained full marks here. The most common mistake was thinking that the answer was 'to see what the weather will be like later'.

Question 5

This question was to simulate the collection of cloud cover data. Many candidates only gained one mark here as they wrongly estimated the amount of cloud in the two top photos.

Question 6

This question was to identify cloud types. This was well answered and most candidates correctly chose the correct cloud name for each photo.

Questions 7, 8 and 9

These questions were to identify parts of a rain gauge. This question was well answered with most candidates gaining full marks. However, some lost a mark on **Question 9**, by thinking that the collecting container was a measuring cylinder.

Question 10

This question was to simulate the collection of rainfall data. Again, most of the candidates did this and gained full marks.

Question 11

This question was to use and manipulate weather data. Most of the candidates did this very well and gained full marks.

Question 12

This question was to emphasise the need for labelling axes on a graph. Although most candidates were able to correctly label the two axes, many did not include the units of measurement as required (many just put 'time' without saying 'hours', for example) so did not gain the mark.

Question 13

This question was to identify rainfall patterns seen during the day. Almost all candidates recognised the increase in rainfall during the day and many also correctly identified the times of highest and lowest rainfall. However, few candidates identified the anomalies of days 4 and 8.

Question 14

This question was to see if the candidates could identify unexpected results and give reasons for them. Surprisingly, most of the candidates found the identification of the day and rainfall reading difficult. Few gained one mark. Interestingly, most candidates were able to identify the two most likely explanations for the unexpected results.

Question 15

This question was to simulate the collection of temperature data and use and manipulate weather data. Most candidates did this question well and gained two marks here.

Question 16

This question was to simulate the drawing of a graph to represent the data collected. Most candidates were able to correctly complete the graph. Regarding the title, many answers were rather vague such as 'bar graph' or 'temperature graph'. A specific title was needed such as 'mean temperatures in °C in the rainforest'

Question 17

This question was to think about the temperature range. Generally it was not very well done. Most candidates could identify the day with the largest temperature but many found writing a definition and identifying the range difficult.

Question 18

This question was to identify temperature patterns seen during the day. Almost all candidates recognised the increase in temperature up to 14.00 and the decrease beyond that. However, few candidates included data (as the question asked for) and so few gained maximum marks.

Question 19

This question was concerned with identifying the amount of cloud that would be expected to be seen on a typical day in the rainforest. Generally, this was quite well answered but some candidates got photographs 2 and 3 mixed up and so only gained one mark.

Question 20

This question was concerned with identifying the type of rainfall most frequently seen in the rainforest and how it is caused. Disappointingly, many candidates could not correctly identify convectional/convectional rainfall. Incorrect answers included 'heavy', 'tropical' and 'rainforest'. Many candidates could explain the formation of convectional rainfall but some answers required more depth in their explanation.

Question 21

This question was concerned with identifying the main features of a typical tree found in the rainforest. Most candidates answered this quite well, most gaining two marks here.

Question 22

This question was concerned with explaining the adaptations of a typical rainforest tree. Candidates' answers varied greatly. Many candidates found these easy, gaining full marks. Other candidates found this difficult. A common mistake made was that the buttress roots were under the ground.

Question 23

This question was a conclusion to the investigation which included a decision regarding the original hypothesis. The question was answered quite well. Most candidates correctly accepted the hypothesis and were able to explain their decision. However, some answers were rather brief and made no reference to the data. Some candidates wrote quite well about temperatures and rainfall but made no mention of cloud.

Question 24

This question was concerned with identifying the main features of a climate graph for the rainforest. Most candidates answered this well but some made the mistake of thinking that August was the coolest month (by presumably looking at the rainfall bars rather than the temperature line).

Question 25

This question was concerned with identifying the main differences between the weather data that the students had collected and the climate data found on the Internet. Many candidates found this question rather difficult and did not seem sure of the difference between weather and climate. Those that were able to identify the fact that student data was only for 14 days and that climate data was an average over many years gained the first mark but then many repeated the same answer in the next two parts of the question.

Question 26

This question was suggesting possible improvements for the investigation. There was a variety of responses from the candidates and most gained two or three marks. Some answers were good with many ways of improving the investigation such as collecting the data for longer, using electronic devices to read data, collecting humidity data and also collecting data again, to check validity. Some candidates suggested checks that needed to be made when collecting data (like reading the measurements carefully or not spilling the rain when measuring it) but these answers were not valid improvements.