GEOGRAPHY

| Paper 0460/11 |
| Paper 11 |

Key messages

The following items of general advice, which have been provided previously 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 with which they are the most confident, and finishing with the one with which they are least confident (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, photographs, 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.

This was the first year in which candidates used a question and answer booklet to write their answers As this will be the format used in future it is important that candidates are made aware that they should:

- write all their answers in the spaces provided in the booklet and not use additional sheets unless it is absolutely necessary.
- write only on the lines provided, not underneath the final line or elsewhere on the page (e.g. in any area of unused space at the bottom of a page).
- continue any answers which they do not have space for on the lined page(s) at the back of the booklet. If they do this they must indicate that they have done this (e.g. by writing 'continued on Page XX') and carefully write the number of the question at the beginning of the extra part of their answer.

General Comments:

This was the first year in which candidates used a question and answer booklet to write their answers. This format was well received and in the vast majority of cases candidates made effective use of the space provided. Some candidates required space on the extra lined page which was provided for their use and a few used loose sheets of lined paper. There were a few candidates who wrote all their answers on separate paper rather than in the booklet. This was clearly the fault of the invigilators/Supervisors rather than the candidates so the work was marked and candidates were not penalised.

The examination was considered appropriate for the ability range of candidates and a high Level of differentiation was achieved throughout. Many excellent responses to all questions (whichever were opted for) were seen and all candidates, including those who gained A*/A grades, were able to show their Level of ability. Structured questions referring to source materials provided all candidates with opportunities to gain marks, and particularly those worth fewer marks allowed all candidates to achieve positively. Inevitably there

were some candidates who for a variety of reasons performed poorly in the examination (e.g. lack of understanding or linguistic difficulties), however these were relatively few in number.

Many candidates attempted to use geographical terminology appropriately and confidently and were able to recall case studies in detail, particularly when they chose case studies local to them or from within their own country. Many candidates are able to give detailed Level 2 responses and to improve further they should try to also include place specific detail in order to achieve full Level 3 marks. Candidates who tend to list their responses in bullet point form or make simple, brief points are able to gain marks in the Level 1 range. In order to improve their performance they should try to develop each point which they make.

It has become apparent that some candidates are using case study answers, parts of which have been included in previous mark schemes to illustrate place specific details. Some candidates seem to be just learning and repeating the place specific phrases verbatim from the old mark schemes rather than showing their knowledge and understanding of the case study which the question asks for. Whilst reference to previous mark schemes by teachers in their teaching and revision is not a problem it must be remembered that these listed place specific ideas are simply a guide to Examiners. If the case studies are used with candidates the materials should be taught as with any case study and the place specific details (and others) included in context of the example being chosen. On no account should candidates be given a list of place specific phrases and be encouraged to learn them without developing any understanding of the case study.

The following detailed comments for specific questions will focus upon candidates' strengths and weaknesses and are intended to help Centres better prepare their candidates for future examinations.

Comments on specific questions:

Question 1:

This proved to be the most popular choice of question by candidates and was overall well answered.

(a) (i) Most candidates were able to define `densely populated`, many using the information from the map key. Some candidates lost marks by not referring to a unit of area e.g. 'an area where many people live per square kilometre`.

(ii) Predominantly a well answered question with candidates selecting appropriate areas such as: Europe, France, California, North East USA or Japan for **part A**. Examples chosen for **part B** included Indonesia, Eastern China, Japan, India and Singapore. There were some candidates who chose areas that were too big, therefore not all densely populated for example USA or China.

(iii) Slightly more candidates wrote about deserts compared to the Arctic areas, however good answers were seen for both examples. Almost all candidates understood `sparsely populated` and wrote relevant answers. Responses tended to focus upon lack of water in X and low temperature/snow or ice in Y, and difficulties of producing food in both; lack of easy access and lack of resources or employment' were well explained by many candidates too. Some candidates lost marks due to vague answers e.g. `extreme`, `no vegetation` and many candidates made reference to 'hot temperature in the desert', which alone is not a valid reason to explain why the area is sparsely populated.

(b) (i) This question was generally poorly answered by most candidates who made little real use of the photographic evidence provided. Many candidates wrote about 'dry or poor soils' despite the obvious presence of a large river. Those who observed the river and thought about it developed their answers around the possibility of a flood but few candidates included enough information or detail to gain more than one mark.

(ii) Not all candidates read the question carefully enough to identify the key word as `relief` therefore this led to many weak responses with many candidates gaining few marks. Their most common correct responses were 'difficult to build homes and/or roads, steep slopes or hilly'. The candidates who did identify the key to the question (i.e. relief) gained marks for ideas as outlined above plus 'low temperatures` or `wet`, and the `possibility of mud or land slides'. Some candidates gave vague comments about the area being hard to grow crops (despite evidence of successful cultivation in the photograph) and `hard to build` which needed appropriate comments linking with to relief in order to gain a mark.

(iii)   This question was much better answered. Many candidates were able to provide mark scheme points here, with some developing them well in order to gain full marks. Other candidates, whilst recognising key points, made brief statements that were not credited e.g. `there is a river/water`, candidates need to show their understanding by linking this with the theme of the question (i.e. a dense population). For example `there is a river so people can get drinking water or water for irrigating their crops`. Many candidates gained marks for 'fertile soil so crop yield will be high, river is a source of food i.e. fish, water for domestic use, travel by river, use the river for HEP' etc.

(c)   Candidates gave answers relating to migration and growth but the question was, in general, poorly answered by many candidates who did not understand the term `distribution`. There were some good responses referring to Brazil or the USA. Some candidates used Mexico as an example but those responses were usually weak, being largely descriptive and focusing upon where the main cities were. Some UK responses were also seen but they referred to a north south split in population with no real explanation. Candidates would generally have gained higher marks if they had used their own country for this case study. When candidates understood what they had to do they found it straightforward to gain the full 7 marks as answers were inevitably place specific and points made tended to be a blend of description and explanation, therefore writing 3 developed statements was not a problem. It was a pity that so many candidates did not fully understand the demands of the question.

Question 2

This question was the second most popular choice made by candidates and was overall not very well answered.

(a) (i)   It was apparent that not many candidates understood the term 'sphere of influence' as many candidates did not select the correct store i.e. 'General Store'.

(ii)   Most candidates gained 1 mark for comparing the statistics i.e. '56 people visit the large supermarket weekly compared to only 10 visiting the department store.' Not many candidates were able to show their understanding by referring to the 'greater frequency of visits to the supermarket as opposed to the department store', which was required in order to gain the second mark. Some candidates even compared visits to the general store with one of the other stores rather than those required by the question.

(iii)   Mostly simple generalised statements were seen in response to this question with very little geographical terminology used. For example 'you are more likely to buy bread and milk more often than clothes' which although gained a mark for the general idea is somewhat simplistic. Most candidates gained a mark also for the idea of 'people live close by to the general store and will therefore use it more often'. Candidates should be familiar with key terminology pertinent to this question from their lessons such as 'high/low cost items, high/low order services, specialist goods' but these responses were rarely seen.

(iv)   This question was generally well answered and most candidates understood what the question was asking thereby gaining marks most commonly for ideas such as 'easy access, cost of land is lower in rural-urban fringe compared to CBD and less traffic congestion'. Many candidates also tried to write about proximity to customers but this was often poorly expressed and/or explained e.g. 'near to rural areas where there are most customers' rather than 'proximity to urban area for large numbers of customers or customers can access the store from surrounding settlements'. Many candidates also referred to `pleasant scenery` or `close to suppliers`, which did not gain credit.

(b) (i)   The majority of candidates gained a mark for this question with many gaining 2 marks but very few gained the full 3 marks. The first mark was gained for identifying that the 'higher the population the more shops there are' and the second mark was gained for providing a contrasting set of figures e.g. 'towns with 20 000 population has 150 shops whereas a town with 250 000 population has 1800 shops'. Many candidates tried to use one set of figures to illustrate the relationship, which was insufficient. Rarely did any candidate identify an anomaly in their answer to gain the third mark yet there are some obvious ones on the graph or they could simply have stated that 'the relationship is not exact or not a perfect correlation' to gain the final mark.

(ii) This was well answered by many candidates with many gaining at least 1 or 2 marks mostly for; 'shops will be bigger in Y, there will be a wider variety of shops in Y, there will be shopping malls, shops will be selling more specialist items in Y'. Some weaker responses gave generalised statements such as `better quality services, or more or less services', which gained no credit. It was rare to see any reference made to geographical ideas such as `sphere of influence` or `high order goods`. A few candidates also referred to Y as more likely to have pedestrianised areas and having more chain stores.

(c) Understanding of this question was appeared limited and this was not particularly well dealt with by candidates. Candidates did not understand the term 'hierarchy of settlements'. Many candidates wrote about services provided in the settlement or land use in cities and those who did write about the settlements themselves tended to do it at a very basic level, giving examples of settlements of different sizes. Very few showed their understanding of the concept of the settlement hierarchy by linking size of settlements with the frequency of them, which was what they needed to do in order to progress into Level 2. Many candidates gained Level 1 marks for correctly identifying hamlets, villages, towns or cities but rarely did any candidate go beyond this. In order to gain the Level 2 marks candidates needed to develop their ideas e.g. 'there are many more small villages than large cities, there is one large city which is the capital city'. In order to then go on and gain Level 3 marks they could then have named examples of such cities/towns/villages or areas/regions for example; 'there are more small villages, especially in rural areas like Norfolk compared with large cities' or 'there is only one capital city which is London'. Although these responses were rare there were a few case studies relating to Brazil or USA, which gained full marks.

Question 3

This question was probably joint fourth most popular choice by candidates and a wide variety of responses were seen.

(a) (i) Most candidates correctly identified 'humidity'.

(ii) A wide range of responses were seen here with some candidates correctly identifying 'Anemometer' and 'Barometer' and others unable to recall the relevant terms.

(iii) The majority of candidates appeared to recognise that the minimum temperature needed to be subtracted from the maximum temperature thereby showing their understanding of the word `range`. There was however much variation in candidates` ability to take an accurate reading from the thermometer picture. Most candidates were able to gain at least 1 mark for the use of correct formula with many gaining two marks for correctly identifying either the minimum temperature or the maximum temperature with less candidates gaining the full 3 marks.

(iv) The majority of candidates understood the reasoning behind siting the anemometer on the roof and although not all candidates explained it clearly enough for maximum marks most gained at least 2 marks overall. Most common responses were; 'it is higher up, there's nothing in the way to block the wind, the playground will have buildings that will shelter it, it may get damaged in the playground'. Other less frequent responses included; 'the roof is not used for anything else, above trees and/or buildings'.

(b) (i) This question was well answered in the main with the majority of candidates gaining full marks for 'white colour, slatted sides and on legs or raised above the ground'. However, there was some unusual phraseology used to describe the features, especially the slatted sides.

(ii) The majority of candidates scored marks for referring to a 'position in open space/away from trees/buildings or in the middle of a field', which they explained effectively. Other ideas such as 'on grass not concrete and within a fenced compound' were surprisingly not well known and did not feature in many answers, so not many candidates scored the full 5 marks. Typical answers focused on being away from trees/walls/buildings and some were rather repetitive with their reasoning.

(c) Some good answers were seen here as problems were generally well known. Some candidates used Caribbean examples and were clearly writing from experience, thus these answers were impressive. The Hurricane Katrina case study was also quite well used.

Candidates gained Level 1 marks for ideas such as; 'people killed, strong winds destroy houses, have no water to drink'. Level 2 responses included; 'people had to walk long distance to get clean water, damage to crops leads to lack of food'. To gain Level 3 candidates also needed to include place specific information like; 'local groundwater sources are flooded by the Ganges, housing destroyed by strong winds from the Bay of Bengal'.

Question 4

This question was generally well answered and was probably the joint fourth most popular choice by candidates.

(a) (i) The vast majority of candidates correctly identified either 'January, February, March or April'.

(ii) Many candidates gained the full 2 marks here for 'high temperatures/ above 25 degrees/between 26 and 27 degrees and for low temperature range/no variation idea'. However, some candidates did not read the question properly and wrote about rainfall as well as temperature, which meant they usually gained only 1 mark as they did not refer to the low range/lack of seasonal variation.

(iii) This question was generally quite well answered with the influence of high temperature, rainfall and sunlight being well understood. Few candidates made the point that the growing season was all year round. The majority of candidates gained at least 2 marks here.

(iv) This question was also well answered by the majority of candidates with many gaining full marks. Marks were most commonly awarded for; 'huge variety of species, tall/high trees, little undergrowth, lianas, drip tips, buttress roots and emergents'. However, some candidates misunderstood the question and included lots of irrelevant detail about animals, birds and even indigenous tribes, which did not gain any credit.

(b) (i) The majority of candidates gained at least 1 mark on this question with many gaining 2 or 3 marks providing that their answers were specific enough. 'Roads, ranching and timber extraction' were very common correct answers. There were however, too many vague responses like 'farming, wood and building', which showed very little knowledge. Candidates should try to develop these basic ideas more fully for example; 'to build settlements, commercial cultivation, industrial development'.

(ii) This question differentiated well. Some excellent developed responses were seen making reference to the impacts on food chains, soil erosion and flooding. Most candidates could access at least 1 or 2 marks for simple suggestions, usually regarding animals being killed and/or habitats destroyed. Many candidates made reference to global issues and impacts on the atmosphere, which did not gain any credit as the question was asking about impacts on the natural environment of the tropical rainforest not people.

(c) Most candidates were able to describe the characteristics of the climate gaining Level 1 marks for 'hot, dry, no clouds etc.' yet explanations were generally brief or non-existent. A few candidates gained Level 2 for referring to the high diurnal temperature range. Some candidates misunderstood the question and described the climate of the tropical rainforest. Overall this question was not well answered with very few candidates gaining beyond 5 marks.

Question 5

This question was mainly well answered and was the fifth most popular choice by candidates.

(a) (i) Virtually all candidates answered correctly giving responses such as 'malnutrition, starvation, Kwashiorkor, Marasmus, hunger, lose weight' etc.

(ii) Many candidates answered correctly stating 'within the tropics, East Africa, South of Sahara'. Yet some candidates listed countries, which did not gain credit as that is not describing a distribution. The majority of candidates made a good attempt at describing the distribution.

(iii) The vast majority of candidates gained at least 2 marks for answers such as; 'drought, flooding, hurricanes, volcanic eruption, earthquake, pests'.

(iv)   Responses to this question were varied. Most were able to gain 1 or 2 marks for this question yet few gained the full 4 marks. The most common responses made reference to food being stored and imported. Few candidates were able to clearly make the point that there are many subsistence farmers in LEDC's compared with commercial farmers in MEDC's and explain its significance in terms of the impacts of poor harvests. Other examples credited from candidates were 'LEDC's can not afford to buy food, government has/does not have money to invest in agriculture'.

(b) (i)   This question was handled well by most candidates, especially for the first two parts. The final part 'irrigation' proved to be more problematic with fewer candidates gaining a mark here. Candidates gained marks for correctly identifying 'overgrazing makes soil bare/wind/rain removes it/tramples soil; overcultivation removes nutrients from soil/reduces soil fertility; irrigation makes soil salty'.

(ii)   This question was generally less well answered and quite a lot of vague answers were seen as many candidates simply took their ideas from Figure 9 and suggested they should not be done e.g. 'do not overgraze' etc. More specific responses discussed ideas such as 'crop rotation, fallowing and contour ploughing, or referred to the use of fertilizers/natural manure being used' with good development of points made. Many responses referred to irrigating the soil. These did not gain any credit as it was not what the question was looking for.

(c)   This question did not see a strong response from candidates. Irrespective of whether candidates chose good examples or not answers tended to be within the range of Level 1 only as they were often lists of simple ideas. Some responses did not show which were inputs, processes or outputs. There were some good examples used by candidates for example the Canadian Prairies, despite this many candidates simply named a country and described farming in very general terms. Some candidates wrote about subsistence farms for example in the Ganges Valley, which is irrelevant. Candidates should be advised that even in a question like this one, which seems to lend itself to listing, they will not get beyond Level 1 unless they develop points. Good advice would be to choose at least one input, process and output and write about those in detail, for example stating why it is needed /what its purpose is or expressing some other detail about it.

Question 6

This question was the third most popular choice made by candidates.

(a) (i)   The vast majority of candidates were able to define pollution and gained the mark for ideas such as; 'contamination of the natural environment/discharge of harmful products into it or examples of this'.

(ii)   This question was answered effectively yet marks were lost by some candidates who did not give enough precision in their answer for example simply stating 'fumes, oil leaks and noise' all of which are valid providing they were elaborated using `from` for example 'noise from car engines, oil leaks from boats'. Many candidates gained at least 1 mark with many gaining full marks.

(iii)   This was quite well understood and many candidates gained at least 2 marks with many gaining the full 3 marks. Typical responses made reference to it being 'quick/easy to do and relatively cheap'. However, all mark scheme ideas were seen.

(iv)   Global warming and acid rain were the main examples chosen, with global warming being the most common. Global warming responses were generally good, with the majority of candidates gaining at least 3 marks and many gaining the full 4 marks. Some candidates confused global warming and ozone depletion, mixing the two responses and trying to explain that global warming was causing ozone depletion or vice versa. Candidates who chose ozone depletion as their example rarely scored beyond 2 marks. Acid rain responses were generally quite good, with candidates gaining at least 2 or 3 marks. An error made by all candidates was that they would often start writing about the effects of this global problem, which was irrelevant and did not gain credit.

(b) (i) The choice made by candidates between the airport and the incinerator was fairly even, but whatever choice was made candidates were usually able to gain marks. The main ideas discussed were; 'loss of habitat, impacts on food chains and visual impact' etc. Some candidates lost marks as they wrote about impacts on people rather than on the natural environment. Also some candidates who chose the airport lost marks as they wrote about the impacts of a rise in tourism rather than the impact of building a new airport. As is usual in all questions of this type some candidates gave simple statements such as; 'noise` and `pollution` without elaboration, which alone are not worthy of credit.

(ii) This question differentiated well and many varied responses were seen. Most candidates gained marks but few gained high or full marks. A common answer, which was not credited was `build it elsewhere` - candidates needed to think about how the development chosen could be made sustainable so an alternative location was not an option. Candidates gained marks for ideas such as; 'restrict the size of the airport/plane sizes, avoid building runways on parts of dunes/areas where sensitive species are growing, using local labour, use local materials' etc.

(c) Candidates who chose an actual scheme for example the Three Gorges Dam tended to gain higher marks compared with those who opted for a broad approach as the latter tended to make brief and simple points about each form of power. Candidates might benefit in case studies such as this by focusing upon their own country. Many textbook examples were used or quite often it appeared that candidates had little in depth knowledge and understanding and gained Level 1 credit for simple ideas and lists of energy types such as 'tidal power, HEP, wave power, coal mines'. To gain Level 2 candidates needed to describe how those energy supplies were being developed e.g. 'wind power is being developed offshore and in mountainous areas where there is more wind'. To then gain Level 3 marks candidates could then go on to name areas/regions where this is taking place, e.g. 'HEP is being developed in mountainous areas with high precipitation such as the pumped storage scheme at Dinorwic in Snowdonia'.

GEOGRAPHY

| Paper 0460/12 |
| Paper 12 |

Key messages

The following items of general advice, which have been provided previously 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 with which they are the most confident, and finishing with the one with which they are least confident (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, photographs, 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.

This was the first year in which candidates used a question and answer booklet to write their answers. As this will be the format used in future it is important that candidates are made aware that they should:

- write all their answers in the spaces provided in the booklet and not use additional sheets unless it is absolutely necessary.
- write only on the lines provided, not underneath the final line or elsewhere on the page (e.g. in any area of unused space at the bottom of a page).
- continue any answers which they do not have space for on the lined page(s) at the back of the booklet. If they do this they must indicate that they have done this (e.g. by writing 'continued on Page XX') and carefully write the number of the question at the beginning of the extra part of their answer.

General Comments:

This was the first year in which candidates used a question and answer booklet to write their answers. This format was well received and in the vast majority of cases candidates made effective use of the space provided. Some candidates required space on the extra lined page which was provided for their use and a few used loose sheets of lined paper. There were a few candidates who wrote all their answers on separate paper rather than in the booklet.

The examination was considered appropriate for the ability range of candidates and a high level of differentiation was achieved throughout. Many excellent responses to all questions (whichever were opted for) were seen and all candidates, including those who gained A*/A grades, were able to show their level of ability. Structured questions referring to source materials provided all candidates with opportunities to gain marks, and particularly those worth fewer marks allowed all candidates to achieve positively. Inevitably there were some candidates who for a variety of reasons performed poorly in the examination (e.g. lack of understanding or linguistic difficulties), however these were relatively few in number.

www.XtremePapers.net

© 2011

Many candidates attempted to use geographical terminology appropriately and confidently and were able to recall case studies in detail, particularly when they chose case studies local to them or from within their own country. Many candidates are able to give detailed Level 2 responses and to improve further they should try to also include place specific detail in order to achieve full Level 3 marks. Candidates who tend to list their responses in bullet point form or make simple, brief points are able to gain marks in the Level 1 range. In order to improve their performance they should try to develop each point which they make.

It has become apparent that some candidates are using case study answers, parts of which have been included in previous mark schemes to illustrate place specific details. Some candidates seem to be just learning and repeating the place specific phrases verbatim from the old mark schemes rather than showing their knowledge and understanding of the case study which the question asks for. Whilst reference to previous mark schemes by teachers in their teaching and revision is not a problem it must be remembered that these listed place specific ideas are simply a guide to Examiners. If the case studies are used with candidates the materials should be taught as with any case study and the place specific details (and others) included in context of the example being chosen. On no account should candidates be given a list of place specific phrases and be encouraged to learn them without developing any understanding of the case study.

The following detailed comments for individual questions will focus upon candidates' strengths and weaknesses and are intended to help Centres better prepare their candidates for future examinations.

Comments on Specific Questions

Question 1

This was the most popular question, completed by about 95% of candidates and was well answered by many candidates, though the case study caused some problems.

(a) (i) This was generally well answered by most candidates though some defined 'migration' rather than 'migrant' or used the word 'migrate' in their answers which prevented them showing their understanding of the meaning of 'migrant'. The best answers made it very clear that a migrant 'moves home and goes to live in another place' however some weaker candidates who used words like 'travel' and 'goes' were not all able to convey the correct meaning of 'migrant'.

(ii) Most candidates knew that a refugee was a forced migrant, however the term 'asylum seeker' was not so well known. Of course not all candidates would have been familiar with the term 'forced migration', a fact which became apparent when they answered part **(iii)**.

(iii) The term 'forced migration' was not well understood or seen by some candidates. Thus, whilst most candidates did achieve some success with this question they tended to include push and/or pull factors, particularly economic factors, for voluntary migration, therefore losing marks. War and a variety of natural disasters were common correct answers, particularly references to drought and famine.

(iv) The word 'international' was emboldened and so most candidates did refer to this, mentioning language and cultural difficulties plus problems relating to being accepted by the host nation, along with issues relating to employment and accommodation. Several candidates took the question very literally and mentioned factors which would have affected immigrants immediately upon their arrival, such as unpleasant immigration officers and factors such as disliking the food in the new country and not being able to read street signs, find their way about, cope with changing their currency etc.

(b) (i) The majority of candidates gained 3 marks here but some either did not give 'Village' in A, gave 'Village' in B or did not refer to 'Foreign City' in C. A few gave named examples instead of identifying examples from Fig. 2 as the questions asked them to do.

(ii) Most candidates did well on this question and were able to recognise relevant push and pull factors related to the example which they chose. Factors relating to generic or named examples were accepted. Less highly scoring answers either repeated push and pull factors or were not specific enough (e.g. better services rather than health care or education).

(c)   This question did not produce the expected answers from many candidates as they struggled with the concept of 'overpopulation' and tended to write about the problems caused by urban growth rather than overpopulation, many focussing entirely on squatter settlements. Relatively few wrote about the impact of overpopulation upon the natural environment (e.g. desertification, deforestation). The best answers were characterised by a clear understanding of the relationship between population and resources at a national scale. Too many candidates referred to China and its one child policy, however little was mentioned about any problems caused by overpopulation. Indeed many candidates who did focus correctly on problems caused by overpopulation wrote basic ideas with no development, a Level 1 response.

Question 2

This was a popular question with many candidates answering it. There were some excellent overall responses, however it differentiated well overall.

(a) (i)   Well answered by many candidates although it is surprising that some do not seem to have a clear and concise knowledge of key terms – more use could be made of glossaries to improve this. The use of the word 'rural' was not acceptable when defining a 'rural' settlement, nor was an example such as 'village' – candidates need to use words such as 'countryside' to show their understanding of what 'rural' means. Some candidates equated 'rural' to a lower level of development. Whilst this may be true of many LEDCs it does not define the term.

(ii)   Generally well answered with most candidates referring to settlement Y being unlikely to flood but distant from a water supply. Some candidates lost marks by making vague references to 'sloping land' and 'a long way from the river' without elaborating in terms of why this was a disadvantage. Some focused on the permeable rock, which few understood, so giving a range of incorrect ideas.

(iii)   Many candidates scored well on the positive aspects of Area X tending to access marks mainly by reference to water supply, flat land and shelter. Many candidates would have benefitted from elaborating some of the points they made, particularly in relation to transport and proximity to the river which were not always explained fully as advantages.

(b) (i)   Many candidates accurately read the graph to gain some marks, however some did not interpret the graph and make a clear, comparative statement that Lesotho had had the more rapid recent growth.

(ii)   Generally this question was answered well with good references to pressures on jobs, accommodation and specific services. Weaker responses either ignored the reference to 'people' and wrote about the natural environment or needed to elaborate their simple references to 'noise', 'pollution' or 'traffic'.

(iii)   This question was answered less well, and as in the previous part there was some confusion between impacts on people and the natural environment. Many answers did not go much beyond deforestation and air pollution, the best answers went on to develop the impact of these by referring to habitats, food chains and impacts on species. Too many candidates wrote about global issues such as global warming and acid rain at the expense of considering issues relating to the growth of urban areas on the local natural environment, such as the impact of waste disposal on water courses or the impact of extracting ground water on the water table.

(c)   This case study question differentiated well as some candidates gave a simple list of improvements whilst the best answers focused upon a particular shanty town or scheme with clear knowledge of the improvements made, backed up with statistics. There were some excellent, well rehearsed answers using Rio de Janeiro (Rocinha) and some particularly impressive place specific answers relating to Lagos. Self-help schemes provided the candidates with good options to include detail, however many suggestions were somewhat generalised in their accounts. Whilst they included many different points about education, transport, housing etc. many needed to develop some of these or show place specific ideas to achieve Level 2 or 3.

Question 3

A small number of candidates attempted this question. The candidates choosing this question generally knew about the topic(s) but some chose it inadvisably and lacked the knowledge to tackle the question fully.

(a) (i)   Generally well answered though some gave Sunday as the answer. Sunday has the lowest minimum temperature but not the lowest temperature range.

(ii)   Virtually all candidates scored on the first part, but some missed out on the second part by misinterpreting wind direction, not realising that the stated directions were where the winds were coming from not blowing towards.

(iii)   For those candidates that attempted this, most got the marks though a considerable number left it blank.

(iv)   Answers were of variable quality, some superb labelled diagrams, some just showing a straight forward thermometer and others were left blank. Assuming that candidates recalled the correct instrument, at least two marks were usually scored for the U shape, the maximum and minimum marking, however a few candidates drew wet and dry bulb thermometers.

(b) (i)   Reasonably well answered, but some candidates repeated the same response in slightly different ways, particularly with respect to the amount of cloud cover. Few candidates used the term 'oktas' and few named the different types of clouds. As always when a question asks for differences, candidates need to refer to both things they are being asked about or use comparative words such as 'higher'.

(ii)   Generally candidates did not answer this question well and few showed an accurate and in depth knowledge or understanding of the key processes. The most common correct points were a lack of moisture, vegetation and evaporation, however the best answers were able to make reference to distance from the ocean, high atmospheric pressure and descending air logically sequenced. Surprisingly many candidates attempted to explain how rain was formed, typically relief or convectional rainfall, without any attempt to relate their answer to the question asked. Some candidates wrote in great detail about the Hadley Cell but failed to mention other factors.

(c)   Whilst there were some excellent answers making good use of key terms such as annual temperature range and convectional rainfall, many candidates did not perform as well as expected on this question. They tended to focus upon the vegetation response to the climate type rather than writing a detailed description or explanation of the climate itself. Many gained 3 marks for describing the climate at Level 1 (hot, wet and humid) but fewer candidates were able to explain the climate convincingly and/or add accurate statistics. Some candidates followed on from **Question b(ii)** to misread the question and focused on deserts.

Question 4

This was a fairly popular question choice with some high quality responses to almost all parts.

(a) (i)   Generally well answered, most candidates could define the term though some did so by repeating the word 'boundary'.

(ii)   Again most candidates were able to gain both marks here. The specialist terms were well known and only rarely did candidates reverse them.

(iii)   Most candidates appreciated the fact that X is not on a plate boundary. Candidates then needed to develop their answer and explain why that resulted in there being no active volcanoes at that location, however many did not do so.

(iv)   This tended to be either well answered or poorly answered. Many weak answers were about destructive margins/subduction zones, however those candidates who could associate conservative margins with lateral plate movement usually clearly explained the sequence which resulted in an earthquake for full marks. Whilst many candidates did add a diagram few gained credit for it as they merely repeated what they had included in their written text.

(b)(i) This proved to be more difficult than expected with few candidates able to gain all 3 marks – photo interpretation seems to be a weakness of many candidates and few were able to correctly identify 3 features from the photograph. Some did not describe what they could see, instead they wrote about the things they would expect to see as part of an active volcano.

(ii) This was very well answered, candidates seemed to have a good knowledge of the reasons why people continue to live in volcanic regions and there were some well rehearsed, detailed responses. The best answers included the use of key terms and examples (e.g. geothermal energy /sulphur extraction).

(c) Kobe, the recent earthquake/tsunami in Japan and Haiti were very popular case study examples. Most candidates could describe the impacts in excellent detail, many gaining full marks through quoting accurate statistics, place names, precise dates or reference to the intensity on the Richter Scale. A few gave the name of the country rather than a more precise location for the earthquake and so were limited to a mark within Level 2. Errors included the choice of Mt St Helens and other volcanoes. Some candidates spent too long writing about the background and causes which were not asked for in this question. Given the fact that the Kobe earthquake is so well documented it is not surprising that many candidates used it in their answers. It is good to see though, that other candidates are being taught much more up to date examples, which is good practice.

Question 5

This question was one of the least popular questions, though answers were produced which ranged from the very weak through to those of the highest quality.

(a)(i) Most candidates knew the difference between the key terms, though a minority of candidates attempted to distinguish between subsistence and commercial farming simply by reference to the size of the farm.

(ii) Most candidates knew the meaning of 'labour intensive' but found 'irrigation' more difficult to define, possibly because of language difficulties.

(iii) Assuming a knowledge of the words 'input, process and output' the task was straight forward and candidates were able to score the full 3 marks. However some candidates could not distinguish inputs, processes and outputs, and just copied the labels indiscriminately, whilst other misread the question and did not relate their inputs, processes and outputs to the farm shown in figure 7B.

(iv) This question was one of the most poorly answered on the whole paper, many candidates repeated the word climate and failed to look at different elements of climate and few understood the key phrases 'land uses'. From some candidates there was a simple understanding shown of the impact of temperature or rainfall, but many did not develop or exemplify their answers, with some focussing on soil type or relief rather than climate. The best answers suggested specific crops and climatic requirements, and they often exemplified by reference to farming in Britain (e.g. hill sheep farming takes place where the climate was wetter and cooler), or to activities such as rice farming in the tropics. Simple ideas about what a farmer might do if it was cold/rained or was hot/dry were given credit but rarely did any candidate refer to other climatic aspects such as frost free days or the length of the growing season.

(b)(i) Many candidates were able to pick out information from Fig. 8 but the question asked for 'changes' between 1980 and 2010 which was missed by some candidates who referred simple to 2010.

(ii) The candidates who understood what was required here referred to 'more money' and then developed the impact of this on quality of life, for example in terms of healthcare and education for the family etc. In contrast many relied on statements relating to what farming improvements could be afforded (e.g. more crops, fertilisers, machines), rather than exploring the improvements to the farmers' lives. Some answers tended to be more generalised and did not refer to income. The occasional candidate wrote a more sophisticated answer which indicated an "upward" cycle of improvement and development. Other candidates referred to less tangible benefits, such as having the marketing organisation to make decisions and to reduce stress or to fall back on for advice.

(c) Generally answers to this question were well focused, with Sub-Saharan Africa being a popular choice. There were some very good answers where candidates showed a good knowledge of the human and physical causes of food shortage, well backed up with place specific knowledge,

though place specific details were not common. There were some very good explanations of political reasons for food shortage in war torn countries like Sudan and Ethiopia, which often went further than the usual drought and overpopulation answers. Candidates should consider an explanation of difficulties caused by poor farming practices (e.g. overgrazing) as these were not often mentioned.

Question 6

This was the third most popular question and there were many impressive answers, including the case study question.

(a) (i) Most candidates could use the key to correctly identify a resort, though a few wrongly selected Palma which is keyed as 'main city and port' rather than a resort.

(ii) Most candidates could identify a natural and human attraction, however some did not read the question carefully enough as they did not name their chosen attractions.

(iii) Generally well answered, but some candidates wasted time explaining how visitors enjoyed themselves in the hot, dry and sunny climate, giving a list of activities or even mentioning their own holiday there. Whilst a comparison was not required here it was essential for candidates to interpret the information rather than simply quoting statistics for July and August. Whilst it was understandable that candidates from some parts of the world viewed average temperatures of 25C as not being particularly hot, a simple comparison of the monthly figures should have enabled them to arrive at the correct conclusion regarding the attraction of temperatures such as this.

(b) (i) Most candidates were able to access marks here by interpreting Fig. 10 – the most common points were the beauty, uniqueness, and the availability of diving and boat trips.

(ii) Most candidates selected two human activities which threaten the reef and went on to explain their impacts clearly. Some did not gain marks because they simply repeated information from the diagram (e.g. 'damages coral') whilst some did not gain full marks because their explanation was the same for both points (e.g. 'kills species'). Most candidates went beyond such simple repetition and there were some particularly pleasing explanations of eutrophication and impacts on food chains. Despite using 'dredging' or 'intensive' fishing as examples, some candidates did not really understand what actually happened in either case.

(iii) There were some good suggestions relating to all of the offending activities, although a weakness was to be too unrealistic (e.g. ban everything) and some answers did not show much understanding of the reality of the situation e.g. 'put big fences around the reef'. The best answers stated exactly how protection and conservation could be achieved (laws, fines, reserves, restrictions of numbers, zoning, education relating to the impacts etc).

(c) The focus of this question was on the benefits and problems for local people. Whilst it was generally well answered this was missed by some candidates who just wrote about the effects of tourism on the location or the natural environment without linking it to the local people. The best answers gave examples of jobs, referred to the seasonality of the jobs and also wrote about loss of homes for resorts and issues of increasing traffic causing air pollution and breathing problems, smog, and delaying the locals getting to work, some with place specific details. They developed the points (e.g. tourism is seasonal so people will be unemployed during the winter months), and they offered a balanced view between good and bad points. Alpine resorts, resorts/areas in Kenya and Mediterranean resorts, such as Benidorm, were popular case study choices. Some candidates named a large country rather than a smaller area within it or a specific resort so were limited to Level 2.

GEOGRAPHY

```
Paper 0460/13
Paper 13
```

Key messages

The following items of general advice, which have been provided previously 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 with which they are the most confident, and finishing with the one with which they are least confident (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, photographs, 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.

This was the first year in which candidates used a question and answer booklet to write their answers. As this will be the format used in future it is important that candidates are made aware that they should:

- write all their answers in the spaces provided in the booklet and not use additional sheets unless it is absolutely necessary.
- write only on the lines provided, not underneath the final line or elsewhere on the page (e.g. in any area of unused space at the bottom of a page).
- continue any answers which they do not have space for on the lined page(s) at the back of the booklet. If they do this they must indicate that they have done this (e.g. by writing 'continued on Page XX') and carefully write the number of the question at the beginning of the extra part of their answer.

General Comments:

This was the first year in which candidates used a question and answer booklet to write their answers. This format was well received and in the vast majority of cases candidates made effective use of the space provided. Some candidates required space on the extra lined page which was provided for their use and a few used loose sheets of lined paper. There were a few candidates who wrote all their answers on separate paper rather than in the booklet. This was clearly the fault of the invigilators/Supervisors rather than the candidates so the work was marked and candidates were not penalised.

The examination was considered appropriate for the ability range of candidates and a high Level of differentiation was achieved throughout. Many excellent responses to all questions (whichever were opted for) were seen and all candidates, including those who gained A*/A grades, were able to show their Level of ability. Structured questions referring to source materials provided all candidates with opportunities to gain marks, and particularly those worth fewer marks allowed all candidates to achieve positively. Inevitably there

were some candidates who for a variety of reasons performed poorly in the examination (e.g. lack of understanding or linguistic difficulties), however these were relatively few in number.

Many candidates attempted to use geographical terminology appropriately and confidently and were able to recall case studies in detail, particularly when they chose case studies local to them or from within their own country. Many candidates are able to give detailed Level 2 responses and to improve further they should try to also include place specific detail in order to achieve full Level 3 marks. Candidates who tend to list their responses in bullet point form or make simple, brief points are able to gain marks in the Level 1 range. In order to improve their performance they should try to develop each point which they make.

It has become apparent that some candidates are using case study answers, parts of which have been included in previous mark schemes to illustrate place specific details. Some candidates seem to be just learning and repeating the place specific phrases verbatim from the old mark schemes rather than showing their knowledge and understanding of the case study which the question asks for. Whilst reference to previous mark schemes by teachers in their teaching and revision is not a problem it must be remembered that these listed place specific ideas are simply a guide to Examiners. If the case studies are used with candidates the materials should be taught as with any case study and the place specific details (and others) included in context of the example being chosen. On no account should candidates be given a list of place specific phrases and be encouraged to learn them without developing any understanding of the case study.

Comments on specific questions:

Question 1:

This proved to be the most popular choice of question by candidates and was overall generally well answered.

(a) (i)   Many candidates correctly identified the birth rate for Niger as 54 per 1000. Candidates should be reminded to always express their answer as a 'figure per 1000' when responding to questions referring to birth/death/population growth rates.

(ii)   Most candidates knew how to calculate the answer for natural population growth rate (i.e. birth rate minus death rate). Some candidates were able to accurately read the figures from the graph and provide the correct response. As for **(ai)** above candidates should try to express their answer as 'per 1000' in order to gain the full 2 marks.

(iii)   Many good responses seen here with full 3 marks awarded. The most common responses referred to were: better/more medicines used; improved healthcare; better water supply; improved sanitation; improved food supply. The vast majority of candidates gained at least 2 marks. Some candidates misread the question and wrote about birth rate decreasing rather than death rate. Candidates should try to avoid vague statements, such as improved standard of living and explain what it is about their standard of living or quality of life that has improved to gain the marks.

(iv)   On the whole very impressively answered with good references made to awareness campaigns, banning prostitution, sharing needles, screening of blood and testing for AIDS. Candidates should avoid focusing on one aspect such as 'education' and developing this in great detail rather than explaining what else could be done. Also rather than simply stating 'use contraceptives' candidates should be more specific and identify the use of 'condoms' for this question as they are the only means of contraception for preventing the spread of HIV/AIDS. There were some extreme responses given such as 'lock away AIDS victims'/'keep people with AIDS separate from other people' which did not gain any credit nor did simplistic references to 'giving them medicine' or 'vaccinate people against AIDS' as at the moment there is no vaccine or medicine to prevent or cure AIDS.

(b) (i)   This question was well answered by many candidates and good use was made of data from the graph to back up candidates responses. The majority of candidates were able to identify the relationship as a negative one (i.e. the higher the number of births per woman the lower the percentage of girls in secondary education - or vice versa). In order to gain the full 3 marks candidates then needed to give examples using data from the graph to illustrate this relationship e.g. 'in Mali there are 7 births and only 5% of girls in secondary education whereas in Canada there are 1.2 births and 100% of girls in secondary education'.

(ii) Very well answered by most candidates with many detailed responses gaining development marks. Most ideas from the mark scheme were seen with many other relevant points being made by candidates. The most common responses included: 'can get a job and earn more money so that they can improve their quality of life'. 'Educated women will practice family planning and reduce the birth rate and also the spread of HIV/AIDS'. 'They are also more likely to educate their own children and there will be more gender equality'.

(c) The most common case studies used were USA, Germany and UK although there were a few based on local case studies such as Malaysia. Candidates should ensure they write specifically about what the question asks for i.e. 'pull factors' as many candidates not only wrote about pull factors but also wrote extensively about 'push factors', which did not gain any credit. Points needed further development of basic points like' jobs' and 'education' in order to gain Level 2 marks. Place specific detail is required for full Level 3 marks. For example pull factors for Level 1 are simple ideas such as 'to get a job, better education, food'. To gain Level 2 candidates can develop those ideas as follows: 'there are many jobs available in the construction industry or factories, there is greater access to Schools and colleges so that children will be better educated, there is a wide variety of food available to buy from shops rather than relying on unproductive farmland'. To then gain Level 3 candidates need to include some place specific reference e.g. naming universities or colleges or naming a place e.g. 'Jobs in the construction industry available in Dresden after the second world war as Dresden needed rebuilding'. Or 'universities such as Harvard in the USA or Oxford and Cambridge in the UK' depending upon the case study used.

Question 2

This proved to be the second most popular question selected on the paper and responses were varied.

(a) (i) This question was generally well answered with the vast majority of candidates gaining the mark for correctly identifying that 'there was a greater number of shops in settlements of more than 2000 people' or vice versa. Some candidates preferred to express their answer using figures from the graph such as '13 in settlements of more than 2000 but only 4 in settlements with less than 500' both were acceptable responses.

(ii) Most candidates gained at least 1 mark and correctly identified low order services such as newsagent, church, general store, post office, primary school etc. Some examples were too vague for credit such as food shop or school and needed further clarification for development e.g. greengrocers or primary school respectively. Other answers were not credited as they would not usually be found in settlements of this size e.g. secondary school, supermarket or petrol station.

(iii) Many candidates referred to small threshold population or small sphere of influence but the most common response was selling low cost items. Many candidates wrote about poor quality of services in rural settlements. Whilst this may possibly be true in an LEDC it does not apply to such services in an MEDC. The majority of candidates gained at least 1 mark and the question proved to be useful in differentiating candidates.

(b) (i) Many good responses were seen referring to 'small size, little variety, shops selling similar goods in all areas, selling convenience goods' etc. Some responses focused more on poor quality services or goods, of which there is no evidence. Many candidates wrote about not many people living nearby which did not answer the question. It is essential that candidates ensure they are familiar with such key terminology as 'Sphere of Influence' for their examination.

(ii) Many candidates focused upon why LEDCs would not have these services in rural areas giving ideas such as lack of wealth, education etc. which would have been credited had the statements started 'in an LEDC…' however few candidates did this and as lack of wealth or education in rural areas of MEDCs is often not true marks could not be awarded. Responses which gained credit were those which focused on the larger potential market/customers available in an urban area, large sphere of influence, large threshold population needed, high order service, with many candidates actually using the key terminology which is encouraging to see.

(iii) This question was generally well answered with most candidates gaining marks for ideas such as; high rise buildings, high cost of land, traffic congestion, little open space, specialist shops with examples, good accessibility to name just a few. Some vague responses were seen such as 'shops', 'leisure' which did not gain credit. Many candidates gained full marks or at least 3 or 4 marks here.

(c)   Some well developed responses were seen using examples such as Rio de Janeiro, Singapore or Shanghai but these were in the minority. Many responses were vague with many irrelevant ideas, for example writing about the development of shanty towns or migration in general. Some candidates used Liverpool as their case study which was taken from a previous mark scheme. This is a good idea to use past mark schemes but candidates should not rely solely on this for revision or examples as they need to show their understanding within their writing. In many cases it was evident that candidates did not really understand the question or what they were writing about. Once again those who used local examples performed much better as the Shanghai, Singapore, Shenzhen and Kuala Lumpur answers showed. Some candidates who used local examples and included place specific information did not always develop their ideas thoroughly.

Question 3

This question was generally well answered and was the joint fourth most popular choice by candidates.

(a) (i)   The vast majority of candidates correctly answered 'Richter Scale'. A few candidates gave the magnitude of the earthquake.

(ii)   This was well answered with most candidates gaining marks for the number of deaths, people being made homeless, monuments damaged, churches/historic buildings damaged. Most candidates scored at least 1 mark.

(iii)   This question was also generally well answered with most candidates gaining at least 2 marks for the following ideas; 'recording tremors/using seismometers, measuring radon gas, animal behaviour'. Most candidates also gained the mark for the evaluative comment to show that it is difficult to predict earthquakes precisely.

(iv)   Improvements in the quality of candidate's responses compared with previous years were seen as many candidates correctly identified the sequence of events and responses tended to have more geographical terminology as opposed to vague statements like 'plates bumping into each other'. Candidates gained marks for ideas such as 'plates move together/apart/past each other, they stick together, pressure builds up and eventually pressure is suddenly released'. The majority of candidates gained at least 2 marks with many gaining 3 or 4 marks.

(b) (i)   This question was very well answered by most candidates with good understanding shown. Very few candidates gained low marks on this question with many gaining 2 or full marks. The most common responses were; 'hollow concrete blocks will cause less injury if they fall on you, shatterproof glass on windows stops people being cut by it, springs will allow the house to move with the earth, reinforced concrete roof is less likely to collapse'.

(ii)   Many good answers were seen here with many of the mark scheme points appearing regularly for example; 'they have lived there all their lives, close to family and friends, have a job in the area, can not afford to move, willing to take a risk, preparations for earthquakes e.g. drills'. Some candidates responses referred to the advantages of living near volcanoes which were not credited, fortunately not too many did this. A common answer which did not gain credit was 'cheaper land/house' which is not necessarily true.

(c)   Varied answers were seen here and the question differentiated well between candidates. Responses tended to be better on effects than causes no matter which natural hazard was selected. Candidates were more able to effectively explain the causes of hurricanes than droughts but candidates were less confident with explaining causes generally. Candidates were not clear on the meaning of the word 'drought' (i.e. a prolonged period of time without any rain) or its causes and many tended to write about desertification as a cause. The effects were more impressive with many developed responses highlighting the loss of life and property and crops destroyed leading to starvation. Overall, good examples of tropical storms were Hurricane Katrina and those which have affected Bangladesh. Relatively few candidates referred to examples from their own country which may have gained higher marks with more place specific detail. Drought answers tended to be based on the Sahel region. Many responses again provided detailed effects but less detailed ideas for causes, candidates should ensure that they understand the causes of natural hazards as well as focussing simply upon the effects.

Question 4

This was the least selected question by candidates and responses were varied.

(a) (i) This question was answered correctly by the majority of candidates stating 'the material which the river is carrying'.

 (ii) The majority of candidates gained at least one mark for correctly identifying suspension or saltation with many candidates gaining full marks for correctly identifying both. It is pleasing to see that candidates know their key terms and definitions.

 (iii) Many candidates gained 1 mark here for identifying that 'more load will be carried' less candidates identified that 'heavier materials will be carried, a greater amount of traction will occur, materials usually moved by traction may be moved by saltation or that there will be more material in suspension'.

 (iv) The majority of candidates correctly identified two areas with the most common areas being the inside bend of a meander, lower course of a river or mouth or a delta. Candidates often gained 1 mark for one reason as quite often the same reason was given for the two different areas. The most common reason given was the energy of the river decreases causing the particles to be deposited. Other reasons that could have been referred to are; load carried is too heavy for the river, still water, flocculation/salt water makes particles sink'.

(b) (i) Generally this question was well answered. Candidates made good use of the photograph and identified features such as the plunge pool, undercut, overhang etc. Some candidates wrote about vegetation which was irrelevant, some candidates also wrote about a 'steep sided gorge' which was not visible from the photograph and presumably was recalled from memory of what they would expect at or near a waterfall. Candidates should get into the habit of describing what they can see rather than what they expect to see.

 (ii) Many detailed and impressive responses were seen which were often accompanied by labelled diagrams. However, the diagram rarely gained any extra marks as they often repeated what the candidate had already stated previously. Many candidates gained 4 or 5 marks, very few gained less than this. Marks were most commonly awarded for the following ideas; 'the river flows across hard rock which is underlain by soft rock, the soft rock is eroded faster than the hard rock, by hydraulic action, the hard rock is undercut, forming an overhang, the overhang collapses, forming a plunge pool, this process repeats and the waterfall retreats. A few candidates also referred to waterfalls being formed due to geological faults which was also credited.

(c) This response was generally well answered with many detailed examples given. Most common case studies were the Mississippi or the Yangtse. Some candidates used Lynmouth and Boscastle as case studies with limited success as those case studies are better suited to causes and effects rather than prevention. However, some candidates were able to describe some prevention methods from these case studies. Many responses were well developed into Level 2 but quite often place specific detail was omitted which prevented candidates from gaining Level 3 marks. As previously stated the best responses were seen when candidates wrote about rivers local to them either from their country or part of the world rather than from a distant place that they know little about. Some candidates did not develop their responses and gained only Level 1 marks. For example; 'build higher banks' could be developed to say so the river will have a greater capacity to hold more water, or 'build dams' could be developed to regulate the flow of the river. Place specific information could include names of other rivers/tributaries joining the main river or names of towns/cities, dates or figures pertinent to the particular case study selected.

Question 5

Joint fourth most popular choice by candidates and generally well answered.

(a) (i)   The majority of candidates correctly identified 'Marathwada'.

(ii)   Many candidates correctly identified 'rivers and streams' fewer candidates identified 'wells' for the second mark. Some candidates repeated 'tankers' from the first question and some references were made to 'groundwater' which did not gain any credit.

(iii)   This question was generally well answered by the majority of candidates. Most gained at least 2 marks with many gaining the full 3 marks. Most common responses were; 'less rain fallen than water used / not enough rainfall, rivers/lakes will dry out/water is lost, people cannot use river water'. Candidates found the 'evaporation' answer most problematic as many candidates just repeated the word 'evaporation' rather than showing an understanding of what it meant.

(iv)   Most candidates scored at least 2 marks. The most common responses were 'water treatment/purification, conservation'. Some candidates also included ideas such as 'dams/reservoirs, wells, desalination, import water from other countries' a few candidates referred to methods such as 'cloud seeding, water transfer schemes' although these responses were not seen as often as would be expected. Some candidates referred to ideas such as 'tankers, stop deforestation, plant trees' which did not gain any credit.

(b) (i)   This question was well answered by the vast majority of candidates gaining at least 2 marks for the following responses; 'water pumped into treatment works/water pumped from river, water pumped through pipes/by electricity, chemicals added to water, sediment allowed to settle'. The most common error was 'by generator'.

(ii)   Most candidates correctly identified the benefits to people of having 'cleaner/safer/more reliable water supplies' and some responses were developed appropriately for example 'it can be used for drinking or domestic purposes, reduction in death rates as less water borne diseases'. Too many candidates focused on the advantages for agricultural use, which was not credit worthy as treated water is not necessary for irrigation purposes.

(c)   Many candidates achieved some success on this question by referring to obvious causes and effects e.g. 'sewage dumped into river' for Level 1, or 'waste chemicals released from factories' for Level 2 causes. Many effects were given including 'kills fish' for Level 1 or 'food chain disrupted/names of species killed or at risk from extinction' for Level 2. Few candidates really developed their answers fully and place specific detail was limited to merit high Level 3 marks. There were some exceptions with some notable answers using the Gulf of Mexico oil spillage and Exxon Valdez case studies. The best responses again were those from candidates own localities or part of the world as candidates can write with ease as they are more familiar with the location.

Question 6

The third most popular choice by candidates and generally well answered.

(a) (i)   The vast majority of candidates correctly calculated 12 million.

(ii)   This question was also answered correctly by the majority of candidates they correctly identified 'textiles or machinery' for part **A** and 'electronics/telecommunications equipment or computers' for part **B**. The most common errors were choosing 'agriculture' for a manufacturing industry and 'chemicals' for a high technology industry.

(iii)   The vast majority of candidates gained full marks for this question with candidates most commonly identifying; 'GDP increased per person, increase in adult literacy, greater access to safe water, reduction in infant mortality, increase in high technology industries, increase in urban population'. A few candidates gave statistics but did not identify the change (i.e. increase or decrease), some candidates also identified an 'increase in total population' which did not gain credit however, these errors were rare.

(iv) Many candidates gained at least 1 or 2 marks for identifying 'cheap labour and/or land and skilled labour' as reasons for locating in NIC's. Some candidates also referred to 'growing markets/government support/communications and lack of restrictions' therefore scoring full marks.

(b)(i) This question was generally well answered with candidates correctly identifying that there was 'a reduction in primary and secondary industry whilst tertiary increased'. The majority of candidates gained at least 1 or 2 marks with many gaining full marks. However some candidates lost marks by not focussing on the changes and instead describing the situation in each of the stated years. Candidates would be better advised in this type of question to use words like 'reduced' and 'increased' to clearly show the change.

(ii) Fewer candidates scored full marks here although most were able to score at least 1 or 2 marks. Most common responses were for reference to 'education or more skilled, mechanisation, more money to spend on services, import of food supplies or running out of raw materials'. Most of the other mark scheme points were referred to by some candidates with appropriate development. Some candidates were sidetracked by issues relating to improved pay and working conditions, which whilst true, are not reasons to explain the changes in employment structure.

(c) Many candidates were able to gain up to 5 marks here with few gaining full marks. This was largely due to candidates either selecting a high technology industry rather than a manufacturing or processing industry or not naming a precise location. This limited candidates to just 5 marks. Many candidates who selected an appropriate example (e.g. Baltimore, USA) did not locate it precisely and simply gave the name of the country. Many responses were simple Level 1 statements e.g. large workforce available, good transport links. Some candidates developed some of their responses for Level 2 e.g. 'large workforce with engineering skills'. Place specific detail was rarely seen but could have included names of cities/ports/motorways. Some of the better case studies seen were about car assembly, either in Bratislava, Slovakia or Detroit, USA. It was surprising that car assembly examples from South East Asia (i.e. local case studies) were not often seen as answers to this question.

GEOGRAPHY

| Paper 0460/21 |
| Paper 21 |

Key messages

This paper tests those skills defined in detail in the *Study notes for paper 2* on pages 24 – 27 of the syllabus. Candidates are required to be proficient in the technical aspects of survey map reading such as use of the key, scale and grid. They should be able to give bearings and directions. They should be able to describe the physical and human geography of areas of a survey map using the terms defined in the syllabus. Candidates should be proficient in interpreting the geographical information in photographs. They should be able to plot and interpret those types of graph listed in the syllabus and be aware of the uses of the different types of graph. They should be able to interpret tables of geographical data as well as geographical information within passages of text.

General Comments

There were some very good responses to questions across the whole of the paper and many candidates scored well. There were several really excellent scripts which scored over 50 marks and only a few weak ones which scored fewer than 20 marks. Most candidates attempted all the questions and few answer spaces were left blank. Many candidates answered concisely, realising that it is not necessary to write out the question in the answer space and then run out of space. In general, candidates did not need to make use of additional sheets of paper. All the questions were well-answered by some candidates and there were few overall areas of weakness.

Comments on specific questions

Question 1

(a) This part of the question was answered carefully and accurately by most candidates. Marks were occasionally lost when candidates copied an entire list from the map key rather than just the specific symbol given. This was particularly the case in **part (v)** where the answer was *quarry* or *excavation* and not *mining or prospecting trench, mine dump, quarry or excavation*. In **part (iii)**, candidates should have noted that the question was specifically about settlement *pattern*; the answer was *linear* and not *huts* which was frequently given incorrectly.

(b) Many candidates scored well and were confident, both with 4 figure grid references and compass directions. A minority of candidates reversed the grid reference answering 5799 and not 9957.

(c) Most candidates scored well in **part (i)** but in some cases, they tried to answer the question from Fig. 2 and not from the actual map. Examiners accepted a wide range of services or functions including: sports field, police station, post office, district administration office, mission, cemetery, golf course, reservoir/water supply, railway/station. There were some good answers in **part (ii)**, often referring to the route centre, railway, water supply from rivers and dams and services for the surrounding area. Surprisingly few referred to the mining in the area.

(d) Those candidates who understood the meanings of the terms *relief* and *drainage* were able to score good marks. Weaker candidates described all the symbols in the relevant grid squares. Examiners gave credit for points such as steep slopes, small valleys, many valleys, ridge, spur, quoting heights between 1220 – 1403 m, high/upland, small rivers, high drainage density, flow to north and south and dam.

www.XtremePapers.net

© 2011

Question 2

(a)   Most candidates were able to interpret the scales of the population pyramids, answering 1 million in **part (i)** and 6 million in **part (ii)**.

(b)   In **part (i)** most candidates were able to note the large number of young children or to describe the pyramid as having a wide base. In **part (ii)** candidates were expected to describe the *rapid* decrease in numbers with age rather than to simply note a decrease. Many candidates were able to do this.

(c)   Almost all candidates correctly noted that *Bangladesh* had the largest number of 0 – 30 year olds.

(d)   Many candidates answered this accurately and understood the relationship between time and the shape of the pyramids. They noted the smaller numbers of young children compared with the older age groups and said the programme began between 5 and 13 years ago or between 1995 and 2005.

(e)   Some found this more general question difficult and incorrectly used information from the preceding questions to try to answer it. Common correct responses included disease, war and economic fluctuations.

Question 3

(a)   Most candidates scored between 3 and 5 marks; the most common incorrect answers were for the wave-cut platform and bar.

(b)   This was the question that often proved to be the most challenging on the paper. The formation of sand dunes involves an onshore wind picking up sand from a beach at low tide, carrying it inland where deposition and accumulation occur, assisted by vegetation. Many candidates wrongly referred to the action of water or thought that the dunes were erosive features.

Question 4

In general, this question was answered very well with candidates making good use of the photograph and Figs. 5 and 6. Answers were brief but accurate and relevant, reflecting good understanding of the questions and of the processes at work on Heimaey.

(a)   Most candidates were able to note that the size of the town had decreased, the size of the island had increased and that the airstrip had added another runway. Many noted that the harbour entrance had become longer and thinner and that the harbour itself had altered little.

(b)   This was a potentially difficult question but most candidates correctly noted that the camera was pointing north west and placed a letter "L" on Fig. 6 north west of Eldfell and adjacent to the town. They then noted that this area was previously part of the town.

Question 5

(a)   In **part (i)** the drawing of the pie chart was usually accurate and it was almost always correctly labelled. In **part (ii)**, the percentage was usually correctly calculated, Examiners allowing a tolerance – answer within the range of $15 – 18^0$.

(b)   In this question, credit could only be gained for answers using information from Figs. 8 and 9. Some candidates scored very high marks by noting that, for oil/gas, imports could be increased, ships or pipelines were already in place but rising prices and dependence on imports would be a problem. For coal there was a coalfield in Sardinia which could be used but there were environmental concerns about air pollution. For nuclear, it does not produce greenhouse gases and public opinion was now more favourable but there were concerns about a repeat of a Chernobyl-type incident.

www.XtremePapers.net

Question 6

In this question several different types of information were supplied and candidates needed to spend some time studying these before they attempted the question.

(a)   Most candidates noted that the share of the European market was smaller than the share of the Japanese market and that Toyota's share of the European market had increased in every year.

(b)   **Part (i)** was well-answered with most candidates noting Deeside for Stage 2, Kolin for Stage 3 and Zeebrugge for Stage 4. **Part (ii)** was not well-answered. Candidates were expected to note the even distribution (or one per country) of the marketing centres. Many candidates confused the marketing centres with the distribution centres and described these instead. The expected reason for the distribution was better access to markets, the Examiners allowing various expressions for this.

(c)   Because of the command word *suggest*, Examiners allowed a range of correct responses. The most common reason given was to reduce transport costs of importing vehicles from Japan. Other points given credit included: skilled labour, cheap labour, government support, sites available, component supply, effect of EU tariffs, effect of import tariffs and the rich market in Europe.

GEOGRAPHY

```
Paper 0460/22
Paper 22
```

Key messages

This paper tests those skills defined in detail in the *Study notes for paper 2* on pages 24 – 27 of the syllabus. Candidates are required to be proficient in the technical aspects of survey map reading such as use of the key, scale and grid. They should be able to give bearings and directions. They should be able to describe the physical and human geography of areas of a survey map using the terms defined in the syllabus. Candidates should be proficient in interpreting the geographical information in photographs. They should be able to plot and interpret those types of graph listed in the syllabus and be aware of the uses of the different types of graph. They should be able to interpret tables of geographical data as well as geographical information within passages of text.

General Comments

The quality of candidates' scripts was generally very good. Candidates scored high marks across the full range of questions. There was evidence that answers are improving in areas which candidates have often previously found difficult such as grid references, compass bearings and distance measurements. As usual, questions requiring candidates to read and interpret graphs were very well-answered. Almost all candidates completed the paper in the time available. There were specific areas of weakness in **Question 1(e)** and **Question 5(b)** and these are referred to later in this report.

Comments on specific questions

Question 1

(a)   Candidates generally showed that they were able to locate features on the survey map and use the key to interpret them. In **part (ii)** Examiners allowed either dense bush or very dense bush or dam as correct responses. In **part (iii)** candidates sometimes incorrectly answered *bridge* instead of *dip tank*.

(b)   This question was well-answered with many candidates scoring full marks. In **part (i)** the gentle slopes of the area were usually recognised. In **part (ii)** Examiners accepted a wide variety of water sources as correct. In **part (iii)** almost all candidates noticed the 33kV power lines. In **part (iv)** the map showed evidence of huts, staff quarters and buildings but not any built-up areas. In **part (v)** most candidates identified the tarred roads to transport crops away from the orchard or plantation.

(c)   In previous Examiners' reports there have been comments about candidates' inability to give correct grid references, especially the third and sixth figures. It is pleasing to report that this aspect of the mapwork seems to have improved with large numbers of candidates using the method described in the syllabus (page 24) and giving the correct answer of 794673. The majority of candidates were also able to give correct answers for the compass direction (south east) and the compass bearing (213^0).

(d)   Most candidates noticed that the areas of dense bush were on steep slopes but slightly fewer noted that the cultivation was on gentle slopes and the seasonal marsh was next to rivers. Very, very few candidates invalidated their answers by placing more than one tick on each row.

(e) For most candidates this was the weakest part of their mapwork answer. Examiners awarded marks for the north easterly flow of the rivers, the small streams, tributaries, meanders, dendritic pattern, dams, acute angle of tributaries, high drainage density, gentle gradient of the rivers and the fact that they became wider downstream. For many candidates the only mark scored was for identifying the dams. Significant numbers of candidates described the rivers as flowing to the south west and splitting into distributaries. This was an area of weakness even for some able candidates.

Question 2

(a) Most candidates understood the concept of primary, secondary and tertiary industry and quoted appropriate examples. These were often linked, for example forestry, furniture making and furniture shop. Occasionally examples were rather too vague to gain credit, for example *computers* could be secondary or tertiary.

(b) Most candidates scored full marks for correctly plotting the divided bar graph and using the correct key.

(c) The question presented candidates with a style of diagram with which they would almost certainly be unfamiliar. They coped extremely well and the majority scored full marks for plotting the positions of Malaysia and Australia, using the correct method and within the permitted tolerances.

Question 3

(a) Most candidates scored two marks for noting the general increase in population and for noting the increased rate of increase or exponential increase.

(b) The majority of candidates noted that Japan had the largest percentage of over-60s in 2005 and that Indonesia will have the greatest increase in percentage by 2050. Candidates gave a wide variety of problems for governments, created by this ageing population. These included financial pressure, the need to provide more health care, or social care or pensions, the smaller tax base and the smaller economically active population.

(c) Yet again candidates demonstrated excellent graph skills by correctly plotting the position of USA on the scatter graph and identifying the negative correlation (Examiners did give credit for a wide variety of expressions of this point). Most candidates noted that growth would also be affected by birth rates or migration.

Question 4

(a) There was a large range in the quality of answers to this question. The "E" for erosion was expected to be on the outer bank of the meander and the "D" for deposition on the inner bank. Occasionally candidates reversed these. The response for the "F" for flood plain was not as good, with many candidates putting the letter within the river channel rather than on the flat area beyond it. For the future position of the channel, Examiners accepted sketches to the right of and roughly parallel to the existing channel. Some weaker candidates omitted this part of the question.

(b) Answers to this part of the question were better than for **part (a)**, with large numbers of candidates giving the correct responses of boulders, traction, clear (slower was also accepted) and faster.

Question 5

(a) **Question 5** produced a poorer response than the other questions on the paper. The syllabus lists two climates: tropical rainforest and tropical desert, therefore it was disappointing that many candidates thought that the climates represented by Figs. 9A and 9B could lie on the Equator. Similarly, many candidates did not identify the fact the Fig. 9A represented a southern hemisphere area and Fig. 9B represented a northern hemisphere area.

www.XtremePapers.net

(b) In **part (i)** few candidates scored full marks. Candidates sometimes noted that temperatures in summer were hot or high (because northern and southern hemisphere seasons were often confused Examiners accepted identification by the correct month). Few candidates noted that temperatures in winter were cool or warm or mild. Some said that winters were cold which was incorrect. A small number of candidates noticed the relatively small or moderate annual range of temperatures.

Hardly any candidates attempted to describe the annual rainfall as low or said that Fig. 9A represented a dry or desert climate. Further marks were available for noting that rainfall occurred in summer and there was a drought in winter. Candidates often scored these marks because Examiners accepted identification of the time of year by the correct month rather than by naming the season.

Many candidates wrote long accounts describing the changes in temperatures and rainfall as the seasons progressed, using phrases such as "the rainfall decreases in April and increases in September". These accounts generally gained little credit.

Part (ii) tested the candidates' ability to explain the characteristics of the tropical desert climate, in particular the low rainfall. Few marks were scored in this part of the question. Occasionally candidates made valid points such as high pressure, descending air, stable air, offshore winds and distance from the sea. However answers such as "because it is hot" and "because it is on the Equator" indicated that this section of the syllabus is not well-understood.

Question 6

(a) Candidates' ability to measure distance along a curved line was tested here rather than in the more normal place in **Question 1**. Answers of between 9.8 and 10.2 km were accepted, the response being somewhat variable. The skill is described on page 25 of the syllabus. Most candidates knew how to take their distance measurement, e.g. 10 km, and the average speed of 100 km/hour and work out the average journey time, e.g. 6 minutes. Where a candidate had an incorrect answer to **part (i)**, Examiners carried the candidate's answer forward to **part (ii)**, so that they could still score the mark for the average journey time.

(b) This question tested candidates' judgement and decision making skills. A wide variety of correct responses were accepted and most candidates scored well on this part of the question. The most common correct responses were: in **part (i)** the quicker journey time; in **part (ii)** the increased noise; in **part (iii)** the decreased traffic congestion, air and noise pollution (when candidates did not specify a type of pollution the word pollution alone was not given credit); in **part (iv)** the decrease in number of customers; in **part (v)** the fact that a new road on the other side of the town would not benefit the factory; and in **part (vi)** the destruction of woodland and loss of habitats.

GEOGRAPHY

Key messages

This paper tests those skills defined in detail in the *Study notes for paper 2* on pages 24 – 27 of the syllabus. Candidates are required to be proficient in the technical aspects of survey map reading such as use of the key, scale and grid. They should be able to give bearings and directions. They should be able to describe the physical and human geography of areas of a survey map using the terms defined in the syllabus. Candidates should be proficient in interpreting the geographical information in photographs. They should be able to plot and interpret those types of graph listed in the syllabus and be aware of the uses of the different types of graph. They should be able to interpret tables of geographical data as well as geographical information within passages of text.

General Comments

Candidates responded well to this paper, with around 50% of candidates scoring two-thirds or more of the available marks. Many candidates attempted all parts of the questions, and seemed to have sufficient time to do so and to write in some detail where required. The paper contained a good balance of easier and more difficult parts within each question making each question accessible, at least in part, to all candidates.

Candidates are reminded of the need for careful reading of the questions, as comments for **Question 1(f)**, **Question 3 (a)**, **Question 4(a)(i)** and **Question 4(b)** will illustrate.

Comments on specific questions

Question 1

(a)   Many candidates correctly identified all of the features shown on Fig. 1: A - hut, B - school, C - dip tank, D - wide tarred road and E - quarry/excavation. Where more than one answer had been offered, usually as a result of copying the whole line from the key, the first answer was taken. For example "mining or prospecting trench, mine dump, quarry or excavation" for E, did not score.

(b)   Fig. 2 took a slightly smaller area, partly overlapping with Fig. 1. Candidates were asked to comment on aspects of relief and drainage under three headings. For slope they could have noted the degree of slope, being gentle / flat, or its direction, sloping down to the SW. The highest point was marked with a trigonometrical station at 1336.9 m, though answers from 1336 m to 1337 m we accepted to allow for rounding. The stream flow was to the west (or from the east). Candidates were usually correct with the highest point and many wrote that the slope was gentle / flat, though some wrote about height here too. The direction of flow of the stream proved to be more difficult and many thought that the flow was to the east.

(c)   Here most candidates appeared to have correctly located the appropriate grid squares, though many had then written about the types of road rather than their pattern. In **part (i)**, the Examiner was looking for indication of the grid pattern, either by name or through description of the alignment of the roads or the shapes that they delimited. In **part (ii)**, the focus was on the NW corner of the grid square, where words such as curved / concentric / radial / roundabout could have been used to generalise the pattern. In both squares, candidates often restricted themselves to consideration of the more major roads, which made it more difficult to accurately describe the general pattern.

(d)   There were a number of potential sources of water in the area of Fig. 3. Many candidates were able to score 2 marks with reference to water from two of dam, reservoir, lake, river or furrows. Some were distracted by the presence of the sewage tanks, thinking them to be either a source of irrigation water or storage for irrigation run-off.

(e)   Many candidates continued the theme from **part (d)** and began by commenting on the water supply available from rivers and streams in Bulawayo. Good answers went on to mention the mining, the convergence of routes (both road and railway) and the services provided such as schools and hospitals. Some pointed out the gentle slopes and the open landscape, of sparse bush / open grassland, being easy to build on. Weaker answers tended to focus on the physical landscape and its suitability for agriculture.

(f)   Many candidates had correct answers here.   7070 was recreational, 6173 was high density residential, 6267 was industrial and 6778 was low density residential. A few candidates had tried to show all of the land uses in the square rather than just the main one.

(g)   The feature at 675802 was a National Monument: "Mission Tree". Many candidates had the correct answer.

Question 2

(a)   Settlement patterns are usually well understood and candidates had no trouble identifying those shown in Fig. 4: linear (A), nucleated (B) and dispersed (C).

(b)   In **part (i)** the settlement shown in Fig. 5 was above 200 m and below 250 m, and this could be clearly seen on the map in Fig. 5A. Some candidates appear to have tried to answer from Fig. 5B, which was more difficult to interpret due to its 3D perspective. This resulted in a wide variety of answers, using all parts of the scale on the block diagram.

In **part (ii)** the southerly aspect of the settlement could be more clearly seen on the map. The answers given were fairly equally divided among the options available with some candidates perhaps being uncertain of the meaning of the word 'aspect'.

In **part (iii)** many candidates again picked up on the presence of the stream for water supply. Then they went on to write about the possibilities for farming. It was necessary to do more than just copy from the labels on Fig. 5B, rather pointing out that the valley floor was flat or fertile. Similarly mention of the sun's rays needed to be in the context of a sunnier settlement. Marks were also available for gentle slope, above flood danger, close to farmland, sheltered and warmer, though these points were seen less often. Most candidates made a good attempt at this question, with the more developed responses scoring more marks.

Question 3

This question required the candidates to simply describe the features of coastal erosion seen in Photograph A. It was not necessary to explain how they were formed or how they were related to each other. Many candidates showed that they recognised headland, cliff, cave, arch, stack and stump, though only five of these were needed. Some also spotted the notch and the wave-cut platform, in the gap in the centre of the photograph. Those who included details of formation of the features, usually discussed them in sequence and had not always made it clear that each of the features was visible in the photograph. A few candidates wrote more about the processes of erosion.

Those who wrote about processes in **part (a)** often continued here in the same way. The best answers pointed out the bay, the wave-cut platform (which was acceptable provided it had not been mentioned in **part (a)**) and the loose rocks in the foreground of the photograph. Marks were also available for more gentle slope, lower, a comment on the different or darker rock and the absence of cliffs, arches or stacks. Some candidates wrote largely about deposition.

Question 4

(a)   In **part (i)** tropical desert vegetation occurs mainly on the west side of the continents and a good proportion of the candidates had answered correctly here. A few had chosen more than one answer, rather than saying where the desert vegetation mainly occurred.

In **part (ii)** most candidates noted that North Africa's area of tropical desert vegetation is much larger than that of North America. Many then scored a second mark for commenting on the extent of North Africa's desert vegetation and some compared the proportion of the continent involved in each location. Another approach was more locational, such as "North American area is outside of the tropics" or "North African area extends further south. A few candidates mistakenly compared North and South America.

In **part (iii)** it was hoped that candidates would notice that not all of the tropical desert vegetation areas shown on the map were located within the tropical zone. Some did indeed notice this, while others picked up on one of the other words and suggested that it was not all desert or it was not all vegetated.

(b)   Most candidates scored 3 or 4 for their completion of Table 2, and some of those who dropped one mark perhaps failed to notice that the reasons could be used more than once, since it was often the last row in the table that was incorrect. Thus deep roots to use water in the soil most of the year, fleshy stems to store water and both very thin and small thorny leaves and leaves curl inwards to reduce transpiration, were the correct responses.

Question 5

(a)   In **part (i)** almost all candidates managed to correctly complete the graph. Only a very small number made a small error, plotting their point one space to the left of the correct position. In **part (ii)** candidates needed to read both data points for 2003 and subtract to find the difference of 1.79 million. Many had done this correctly. A few had simply given the total of tourists in 2003. **Part (iii)** was done well. The majority of the candidates pointed out that the tourist population grew rapidly while the resident population grew slowly. Many also noted the decrease in tourist visitors after 2003, as compared to the steady growth of the resident population. Another approach for the second mark was to contrast the growth of the tourists with the almost static resident population in the early years.

(b)   In **part (i)** there were a variety of acceptable possibilities for the greatest problem facing developers on Lanzarote, though it was necessary to do more than simply copy phrases from Fig. 8. Ideas such as "no surface water so water supply is difficult" or "barren surface so lack of food" were acceptable though few candidates had sufficiently developed their answer. Candidates found **part (ii)** a little easier. Again it was necessary to write more than just phrases from Fig. 8 but many candidates pointed out the likely destruction of the natural environment and the loss of culture of the islanders. Many realised that Lanzarote could be described as overpopulated and that there was potential for congestion and shortage of water. Pollution had to be coupled with the type, either noise or visual. Some referred back to Fig. 7 and pointed out that the tourist numbers were declining, so there was no need for further construction.

Question 6

(a)   In **part (i)** most candidates successfully used the scale to determine the average size of a commercial farm to be 25 hectares. In **part (ii)** many also realised this made it 25 times larger than the average subsistence farm. Some had subtracted 1 hectare from 25 hectares and so suggested 24 times larger while a few had only considered the linear scale and thus made it 5 times larger.

(b)   In **part (i)** the majority of candidates successfully completed Fig. 10. It did not matter which way up they positioned the bar, provided the shading was indicated correctly. Thus a bar at 95, with subdivision at either 70 or 25, was accepted. Candidates interpreted the graph correctly in **part (ii)**, stating that July was when most workers were needed for harvesting.

For Fig. 10 in **part (iii)**, no process was indicated for August, so candidates had to suggest what work would be done at this time. From the adjacent months, it would be logical to assume that the women would be finishing the harvest, while the men were preparing the land for the next growing season. Collecting seeds and planting were also acceptable answers. Candidates could assign any of these roles to either men or women provided that two different jobs were mentioned. A few candidates simply quoted the numerical data, for August, from Fig. 10.

In **part (iv)** from the given information, a number of candidates realised that a lack of saved seeds would have implications for the harvest of the following year. Others pointed out that people may have died or moved away and so less farming would be taking place. Some answers were more vague suggesting that the land would still be too dry and lacking in nutrients to produce a good crop.

GEOGRAPHY

| Paper 0460/03 |
| Coursework |

General comments

This was the first session for the revised version of the syllabus for Paper 3, Coursework, where candidates reported on just one, rather than two, fieldwork exercises, and the word limit for candidates' reports was increased from 1500 to 2000 words. Moderators report that in many instances, this has led to an increase in the quality of work submitted. Being able to concentrate on one piece of work has allowed candidates to pursue greater depth in their work, and the increased word limit has further allowed them to report more fully on the outcomes of the greater depth of work undertaken. It is pleasing to be able to report on this improvement in the quality of work submitted, as it was one of the aims of the revision. A number of new Centres entered candidates for this component for the first time, and for all of these, the standard achieved was most impressive.

In making such a change to this part of the syllabus there have been a number of adjustments that Centres have needed to make, and it is understandable that not all of these were made smoothly in the first session. One of the most important purposes of this report is to indicate ways in which Centres can modify the approach they take to prepare their candidates for this component, and the change to the syllabus means that there are new avenues opened up in order to do this.

In the past, Centres were asked to submit to Cambridge their proposals for fieldwork, and it now even more important that Centres should do so. Comments from Cambridge have concentrated on ensuring that candidates would have access to the highest marks on each of the assessment criteria of the mark scheme. Once these proposals have been approved, the fieldwork exercises have been allowed to roll forward year on year without the need to resubmit them. Many Centres have taken the change as an opportunity to review the fieldwork exercises that they have undertaken. Typically, they have either chosen one that they did formerly, and given rather more guidance to candidates on how to approach the major elements of the study and achieve greater depth, or have done the same for both of their existing investigations, choosing to use one study for the first year and the other for use in one or more following years. A few Centres have taken a totally new study and submitted that for guidance. In all these instances, candidates have had the opportunity to work in such a way that all the elements used in assessing the work have been addressed sufficiently well. There are still a few Centres that have not submitted proposals to Cambridge at all, or have just continued with one submitted in the past without reviewing it to check if greater depth could be achieved now that they are able to concentrate on just one study. In some cases, this has led to candidates completing a piece of work that does not have sufficient challenge within it, or to attempt an investigation that has not been prepared adequately for candidates to cover all of the assessment criteria in full. Centres that have entered candidates for this component, but not submitted proposals since the introduction of the revised syllabus are encouraged to do so. Comments made by Cambridge are never critical of what is intended and guidance is supportive. Any advice given is always directed at ways in which Centres can be helped to ensure that opportunities for full marks are available for candidates on each of the assessment criteria in relation to the piece of work planned.

It is possible to give general advice about proposals, but for the greatest amount of help possible from Cambridge, it is best to submit a proposal and act on advice on how it can be opened up for candidates to gain full marks. Centres are usually very strong on identifying an interesting area of study, and then determining questions that can be investigated. Background theory is often good, and questions or hypotheses to be investigated, both clear and testable. The best results, for the widest range of candidates, is often achieved if the Centre specifies two closely related questions or hypotheses to investigate, and then allows more able candidates to add a third question or hypothesis, guiding them to ensure that it is closely allied to the questions devised by the Centre. It is within this area that 'Knowledge with understanding' is best demonstrated. In work submitted by candidates, one frequently occurring problem in this area is very lengthy sections, including backgrounds that stray well beyond what is relevant to the question being investigated. Sometimes background theory has been included that is rather dated and perhaps not applicable to locations selected.

www.XtremePapers.net

© 2011

The area that is best prepared by Centres is 'Observation and collection of data'. This is usually written in great detail into proposals. In just a few cases, it is over-prescriptive, giving little opportunity for candidates to show any originality or initiative in data collection. If weaknesses do occur in this area of the proposals, it is usually in relation to how and why sampling might take place, and secondly, justification of the techniques which can be rather thin or neglected.

Moderators are more reluctant to change marks in relation to 'Observation and collection of data' than for any other area of the criteria. This is because teachers have had the opportunity to observe the effort made by individual candidates first hand, and marks awarded may reflect this. There have been instances where a candidate has described, explained and justified the methods very clearly but been awarded only a Level 2 mark, whilst other candidates from the same Centre have not reported on collection fully, but have been awarded maximum marks. Moderators can only judge by what candidates have written in their reports, it would be useful in relation to this criterion, that if there are other factors that need to be considered for the mark awarded, that these could be indicated in some way.

Proposals vary from one Centre to another most of all in relation to 'Organisation and presentation'. It is recognised that it is very difficult to give initial guidance on organisation, and equally hard to show a candidate how to re-order their work to achieve a more logical organisation. It is easier to give guidance with presentation. Some proposals suggest a good range of methods of presenting findings, and the best include techniques that demonstrate some thinking of a high order. It is possible to reach high levels with relatively simple techniques, pie and bar charts for example, if the size of pies include proportional circles, or, for example, bars are effectively located on maps to bring out distribution patterns. However, some candidates, who seem to demonstrate high ability in all other ways, sometimes present only basic and simple pies and bars, which cannot be credited to Level 3. If the proposal can suggest a good range of techniques, including at least one with some degree of challenge, candidates are likely to score well here. It is impossible to list all high order techniques that can be used here, but as an example, a commonly used and widely applicable technique that can give some illustration of the level required, is a scatter graph with an approximate line of best fit added. Best-fit lines need not be calculated, but drawn in by eye, in order to highlight a trend shown by the data.

The area that is most often neglected in proposals, and as a result, in the work of candidates, is 'Analysis'. Candidates often have little idea of what is meant by analysis, and yet it is sometimes the criterion where they get least guidance. There are proposals that initially give excellent outlines of the purpose of an investigation with great clarity on data gathering, and then state that candidates will 'present, analyse and write conclusions'. In 'Analysis', candidates need to be able to describe what the data shows, bringing out information that might not be immediately obvious, and suggest how it may relate to initial expectations. They may also point to findings that are anomalous and suggest reasons for this. They might also explain how the techniques used to present the information have helped to bring out trends or patterns that are otherwise less easy to detect. They may also suggest explanations for what has been discovered.

'Conclusion and evaluation' are sometimes outlined in proposals, but often candidates are not very sure about exactly what they should do. A good conclusion usually indicates how well the initial questions or hypotheses have been answered, and how well initial predictions or expectations have been met. It also gathers together, or picks out, the key pieces of evidence that have emerged from the data gathered. A good evaluation identifies and accounts for weaknesses in the study and suggests, with the benefit of hindsight, how these might be overcome if the exercise were to be repeated. An evaluation may also indicate new questions that arise as a result of what has been found out, and how the findings could be useful in informing particular interest groups.

In terms of adherence to the requirements of the new syllabus, this was very good for this first session, and Centres are to be congratulated on their attention to this detail. There are a few areas where a small number of Centres did not achieve all requirements. These will be detailed in reports back to individual Centres from the Moderators. However, the ones that more commonly occurred in a number of Centres are detailed below. As in this initial year, quite a range of adjustments to the new syllabus were needed, if not all were achieved, it can be assured that the marks of candidates were not affected in any way by these, and Moderators were instructed to be understanding about such matters. But it is hoped that the ones outlined below will not occur in future sessions.

A number of studies exceeded the 2000 words by a considerable amount. Very marginally over long studies are clearly not a problem, but one very obvious one had an estimated length exceeding 4500 words and others approached double the permitted length. This sometimes arose from excessive background material provided that had little relevance to the key questions in the study, or contained considerable repetition of the

same information or findings. One quality demonstrated by high-level candidates is the ability to state all that is needed with clarity, and yet to be concise. The alternative paper to this Coursework paper is Paper 4, Alternative to Coursework, and is 1 hour 30 minutes in duration. Other Centres would be alarmed if they heard that some candidates had been allowed over three hours by invigilators so that they could complete their work because they had not finished after the permitted ninety minutes. It is unreasonable that Centres should do something similar to this with Coursework whilst other Centres have made great efforts to ensure that their candidates keep to the limit allowed. If it is clear that candidates are likely to exceed the word limit, they should be encouraged to be more concise and to remove information that contributes little to the main answer.

In past versions of the syllabus, Centres often reworded the mark scheme so that descriptors were adapted and referred to the nature of the investigation in hand. It was noted that in this session, a few Centres had continued to do this. In order that there is absolute parity in the assessment of work from all Centres throughout the world, only the mark scheme published in the syllabus should be used. This allows all candidates to be judged by a common yardstick. Fortunately, in the few instances where this did occur it did not lead to a change of marks, or rather, if there was a change in marks, it could not be attributed to using an inappropriate mark scheme. However, in future, all Centres should use only the mark scheme published in the syllabus.

It is intended that within a Centre, all candidates should follow the same investigation. Individual hypotheses may vary from candidate to candidate, and some candidates may be covering areas that other candidates are not. However, all candidates should be investigating areas that are fairly closely related to one another and clearly arise from the same area of the syllabus. There should not, for example, be some pieces of work on a human topic and others from a physical topic in the same examination session. This may not always have been clear in guidance given, but it should be noted for future sessions.

Much of the paperwork has been modified to account for candidates submitting only one piece of work rather than two. Some Centres used older versions of forms, which often led to some confusion. Centres should ensure that they are using the correct forms, and if these do not seem to have been supplied, Cambridge will put this right as soon as they are notified.

One point that needs attention in several Centres does not arise from any change in the syllabus. Moderators noted in quite a number of instances that the mark awarded to candidates on the MS1 form was incorrect. This is the form that is used by Cambridge to enter marks on the system to allocate marks to candidates by which their final grades will be awarded. Errors occurred in some Centres in transferring marks from either individual candidate record cards to the coursework assessment summary or coursework assessment summary to the MS1 so that candidates were given the wrong mark. If such an error occurred in relation to the work of a candidate submitted in the sample, this error would be detected, and a check extended to all candidates. But if this error has been made for some candidates, but none of those affected were in the sample submitted, the error may well go undetected. Moderators will correct errors if they are in a position to detect them, but often they are not. In one Centre, the marks of two candidates were transposed leading to one candidate being awarded nearly thirty marks too few and the other the same amount too many. A thorough check should be made in Centres before marks are submitted.

However, despite the comments above, the number of shortcomings was not great and Centres are to be congratulated on the interesting work investigated, and the quality of investigation and reporting by candidates. If any Centre is unsure about proposals, conducting coursework, assessing the coursework or any other aspect of the component, Cambridge is ready to give supportive help at any time.

GEOGRAPHY

| Paper 0460/41 |
| Alternative to Coursework |

Key messages

- When answering Hypotheses questions that ask whether you agree or not, always give your opinion first before any supporting evidence. This will usually be Yes, No or Partially.
- When giving figures in an answer always give the units if they are not stated for you.
- Read questions carefully and identify the command word e.g. *Describe, Explain....* Particular questions where candidates did not score well also often related to them not fully understanding the question, for example Question 2(c) (iv) where many candidates wrote about the causes of air pollution and traffic congestion
- Check you are using the Resources that a question refers you to e.g. Table 3, Fig. 2.
- Take into account the marks awarded. Examiners do not expect you to be writing outside of the lines provided so do not write a paragraph when only two lines are given – this wastes time.
- If you have to write more than the lines allowed indicate this with a phrase such as (*continued on page 11*). This is very helpful to the Examiner in finding your answers.

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks went from 12 to 56 out of 60 – a similar range to previous years. Weaker candidates scored well on the practical questions, such as drawing and interpreting graphs and making calculations, and those of higher ability scored well on the more challenging sections requiring explanation and judgement especially regarding hypotheses. Overall there was little difference in the standard of answers between **Questions 1** and **2**.

There is less general advice to be given for areas for improvement with this paper compared with others. As there are no choices to make, it is difficult to miss sections out, although some candidates omit graph completion questions which are usually 'easier' to answer. Although there were no reports of time issues some candidates do write too much in some sub-sections. They should be encouraged to answer more succinctly and perhaps give more thought to their answers. Most points for teachers to bear in mind, when preparing candidates for future Paper 41 questions, relate to misunderstanding or ignoring command words and the use of appropriate fieldwork techniques. Questions which require candidates to explain sampling are still answered poorly. This is an area in which Centres could do more preparation with candidates.

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 and appropriate fieldwork techniques even if they have only limited opportunity for fieldwork within the Centre, for example **Question 2(a) (i)** required candidates to comment on the use of a questionnaire.

Comments on specific questions

Question 1

(a) (i) Most candidates scored well. A variety of dangers were suggested including chemicals and disease in the water, swallowing polluted water, allowing the water to touch the skin or get into eyes. Protection strategies included boots, waders, waterproof clothing, rubber gloves and goggles. Sometimes the protection strategy was not appropriate to the danger for example a few candidates suggested wearing radiation suits and masks to undertake fieldwork. A more common

© 2011

mistake was made by candidates who ignored the reference to pollution and wrote about general dangers of river fieldwork such as strong currents.

(ii) Many candidates scored both marks by reference to ideas such as visible materials in the water, colour, smell and testing a water sample. Some candidates did not explain what they were trying to test, such as ph. A minority of candidates incorrectly suggested asking local people or the factory owner.

(b)(i) Most candidates showed a good understanding of the hypothesis and were able to correctly interpret the evidence which supported the hypothesis. Supportive evidence was usually focused on changes in visible pollution and ammonia. Only a small minority of candidates made reference to sites along the river or distance from the factory.

(ii) This was a challenging question. The three most common responses focused on dissolving, dispersing or diluting of the pollution. Answers which were not credited included ideas that pollution would stick to vegetation or stones, or pollutants would be eaten by fauna. Although this is a possibility the ideas were too vague for credit.

(c)(i) Most candidates understood what kick-sampling meant and that it was necessary to move the animals into the open river.

(ii) Also most candidates suggested putting the net downstream to catch the animals. Some candidates wrongly suggested placing the net upstream as this is where there is most pollution.

(iii) Some candidates did not seem to understand the question. A common error was that they wrote about animals being killed by pollution. Only a minority of candidates succinctly made the point that the reason for identifying the animals was to work out the Biotic Index. A more common response suggested that identification of the animals linked to how polluted the water was or the quality of the water.

(iv) The most common answer which did not gain credit was that results would be 'more accurate'. This response is too vague because it does not explain why this would be the case. Answers which did gain credit included reference to gaining an average score which might be more accurate, eradicating errors in measurement, and greater reliability of results.

(d)(i) Most candidates correctly calculated the score. It is important to show the calculation, even when it is done by using a calculator, to show that the method of calculation is understood.

(ii) Most candidates completed the scatter graph accurately, although some did not attempt the question.

(iii) The question discriminated well. Only the most able candidates used figures to support their answer. Most candidates made statements which included 'increase' or 'decrease' to show their recognition of the pattern shown. Candidates who failed to grasp the principle of the Biotic Index wrote about how the level of pollution changed.

(iv) Many candidates did not grasp the idea that different species could tolerate different levels of pollution. So they wrote about numbers of species rather than specific types of species. Many candidates did not use evidence of species from the table but made the correct link between the biotic score and the level of water pollution. Candidates who had grasped the principle of the Biotic Index often scored full marks.

(e) Most candidates correctly identified two other types of pollution, most commonly litter or rubbish or garbage, fertilisers from agricultural run-off, sewage and oil from boats. Some candidates did not read the question carefully enough and wrote about pollution from industry.

(f) Many candidates found difficulty in developing a new hypothesis. Despite the instruction that their hypothesis should not be related to a polluted river, many candidates stayed with the theme of pollution, repeating the same type of exercises which had been done in a polluted river but doing them in an unpolluted river. Where candidates realised that this was an opportunity to write about other river fieldwork, they wrote with confidence about testing depth, speed of flow, and differences between a straight river section and a meander.

Question 2

(a)(i) Many candidates understood why the candidate would not want the opinions of local people in order to investigate the hypothesis. Other answers suggested that it would waste peoples' time and that the views of local people would distort the results.

(ii) Correct responses judged that asking for physical and human attractions separately would help the candidates to classify results and make analysis of the data easier. A common answer which was not accepted was that it would make the questionnaire quicker or easier to answer.

(iii) The most common response was that most tourists came from Asia. Many candidates also scored a second mark by reference to either Europe as second most popular or Africa as least popular origin. Some candidate mistakenly attempted to explain the results shown in the table.

(iv) Most candidates correctly completed the two bar graphs.

(v) This was a slightly different type of question for candidates. When they realised what the question required many scored full marks. The most popular choice was to draw a pie chart and many candidates drew accurate and neat graphs to display the information. Less common graphs which were also acceptable were a divided bar chart and a pictograph. A line graph was not accepted as appropriate to show this data and a bar graph was not accepted because of the instruction to draw a different type of graph than the ones shown in the question.

(vi) This was a challenging question but was answered well by many candidates. The candidates conducting the fieldwork disagreed with the hypothesis but this was an incorrect conclusion. The candidate had to realise this and make the assertion that they disagreed with the candidates but agreed with the hypothesis. In explaining their conclusion many candidates used appropriate supporting data from the table.

(b)(i) As in past examinations this question was often poorly answered. Sampling is a topic which is not well understood by many candidates. Many candidates did not appear to be familiar with sampling as a concept and wrote about other issues such as where they would use the questionnaire. Candidates need to be familiar with different sampling techniques which can be easily taught through practical exercises, for example applying different sampling technique with candidates in the School.

(ii) Many candidates found this question difficult. Most correct responses agreed that it was good idea to ask for first and second choices in order to get two sets of data in priority order, rather than just one which might be difficult to choose.

(c)(i) Most candidates scored both marks by applying the formula and making a correct calculation.

(ii) Most candidates plotted their result accurately. The most common error was to misread the scale and plot the value at 42 rather than 44.

(iii) Most candidates recognised that the hypothesis was correct and provided supporting data. Many candidates also recognised the importance of jobs and income as positive impacts.

(iv) Candidates answered this question well if they recognised that the two negative impacts were those which would affect local people most because they would see or encounter these problems daily. A common mistake was made when candidates wrote about the causes of the problems rather than their impacts.

(d) The final question was a good discriminator. It was answered well by candidates who were able to describe in detail the methodology of conducting a traffic survey. Other candidates wrote good answers focussing on questionnaires about the impact of traffic congestion, or described techniques for monitoring air pollution.

www.XtremePapers.net

© 2011

GEOGRAPHY

> **Paper 0460/42**
>
> **Alternative to Coursework**

Key messages

- When answering Hypotheses questions that ask whether you agree or not, always give your opinion first before any supporting evidence. This will usually be Yes, No or Partially.

- When giving figures in an answer always give the units if they are not stated for you.

- Read questions carefully and identify the command word e.g. *Describe, Explain...*

- Check you are using the Resources that a question refers you to e.g. Table 3, Fig. 2.

- Take into account the marks awarded. Examiners do not expect you to be writing outside of the lines provided so do not write a paragraph when only two lines are given – this wastes time.

- If you have to write more than the lines allowed indicate this with a phrase such as (*continued on page 11*). This is very helpful to the Examiner in finding your answers.

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks went from 0 to 57/60 – a similar wide range to June 2010 - with weaker candidates scoring on the practical questions, such as drawing graphs, calculations and diagram completions and those of higher ability scoring well on the more challenging sections requiring explanation and judgement especially regarding hypotheses. There were few scripts scoring less than 15/60 with the bulk between 25-40 and a pleasing number scoring over 45/60.

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 – though candidates do - 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 consider, when preparing candidates for future Paper 42 questions, relate to misunderstanding or ignoring command words and the use of equipment in fieldwork. Particular questions where candidates did not score well also often relate to them not fully reading the question. Such failings mean that some candidates do not obtain a mark in line with their geographical ability and is an area that Centres should work on.

Centres need to realise too 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. **Question 1** required candidates to have experience of a transect line, systematic sampling, using equipment to measure infiltration rates and using a quadrat to measure vegetation cover. Question 2 required candidates to have experience of devising and asking questionnaires, as well as drawing dispersion graphs and pie charts.

Comments on specific questions

Question 1

(a) The matching exercise was done well by most candidates. A few mixed up the links for the shallow roots and large leaves but otherwise the vegetation adaptations were well understood. In some cases candidates did not clearly show from which box the link went from or to.

(b)(i) Recording the data at more than one site was to ensure there was a wide range and to eliminate the chance of an anomaly so the test could be fair. Candidates need to be aware that "to be accurate" or "better results" are not sufficient responses. Accuracy could be incorrect at all five sites so would not lead necessarily to a more accurate average or better comparison.

(ii) Using a transect line allows candidates to easily measure and locate the distance required between the sites in a systematic way removing bias and candidate choice. Although many candidates gained credit for their answers, too many gave vague ideas such as "makes it easy to find", "makes it quicker".

(c)(i) The three pieces of equipment were illustrated in Fig. 2. Most candidates gained three marks here. The best answers referred to digging the hole and putting the cylinder into it, then pouring 1 litre of water in and using the stopwatch to time the flow until the water was all absorbed. It was important to mention the part played by each piece of equipment e.g. "timing the infiltration rate" should refer to the stopwatch. Weaker answers did not see the sequence through by only referring to one or two pieces of equipment. They also mentioned digging the hole in the ground (but not putting the cylinder in it) pouring in the water (but not the measured amount/1 litre) and timing the infiltration (but not mentioning the use of the stopwatch).

(ii) Almost all candidates correctly chose C showing good judgement of which area contained most vegetation types.

(iii) Again almost all candidates chose Area 3 in Site C recognising where the measurements were taken.

(iv) There were some excellent demonstrations – in several ways - of how to work out the average infiltration time. The most popular answers ended with 181/5 which calculates out to 36.2 seconds for both marks. A few candidates struggled to use the correct figures – some used other sites i.e. A and C instead of B – a clear example of not reading the question carefully.

(d)(i) Plotting the three graphs was well done by most candidates. Good skills were shown in finding the correct data on Table 1 in the Insert and then translating it into the graphs on page 4; these manipulative skills deserved credit. The best answers carefully plotted 50 and 44 and joined the line graph from the 3rd to the 5th point carefully. Almost all plotted and shaded the bar for a mark and also could plot 20 and 43 with the correct shading on the ground cover graph. The minority of weaker answers did not always plot the 44 plot in Area A accurately and did not draw a smooth linking line. On the Area C ground cover graph some plots were incorrect and shading either the wrong type or it did not fill the divided bar graph to 100%.

(ii) Candidates needed to look and think clearly at Hypothesis 1 and the nature of the variables given. There was some confusion between the differences in infiltration rates and infiltration times to be linked with vegetation types and vegetation cover for example a high rate of infiltration means a short/low infiltration time and vice-versa. Understanding these differences was critical to making correct judgements on the hypotheses. Hypothesis 1 was incorrect and correctly judged so by most candidates. Once they had deemed the hypothesis incorrect, evidence was needed from Table 1 and Fig. 3. It should be noted that there is usually 1 mark for stating what the correct hypothesis would be i.e. "there are more types of vegetation where water infiltrates the ground more quickly." This could be supported with data comparing Site A and C where the average information clearly went against the original hypothesis e.g. Area C had faster infiltration rates and a higher number of vegetation types than Areas A and B. In these answers it is important to compare the areas rather than choose individual sites within the areas which could be chosen to illustrate several different aspects of the hypothesis. Using the overall average data, it was clear that the hypothesis was incorrect and no credit could be given for any candidate agreeing with the

hypothesis based on one or two anomalous individual sites that supported that. Some candidates wrote about vegetation cover instead of type; that was more relevant to **(iii)**.

(iii) A number of candidates stated whether they agreed or disagreed with Hypothesis 2 despite the question stating that the candidates had already agreed. Credit was awarded for candidates looking at the average ground cover and infiltration times and using data, usually from Area C, that demonstrated where the lowest infiltration times were, with where the largest vegetation cover was. They often gave data from Area A as the converse. Weak answers just selected individual sites or just listed data without making any judgements. A few referred here to vegetation types instead of cover; more relevant to **(ii)**.

(iv) Most candidates could state that vegetation or its roots absorbed water thereby increasing the infiltration rate. It was a minority that also noted that roots made holes in the ground creating gaps to increase the permeability of soils and so increase infiltration.

(e) The key to success on this final part of Question 1 was to refer back to Fig. 1 as instructed and consider the implications of the different human impacts on factors that would affect infiltration rates. Candidates should have considered the activity in Areas A, B and C and then suggested how that activity might affect infiltration rates. Many candidates chose to describe the activity in Fig. 1 without going on to state its influence so answers using Area A, for example, listed the people visiting and the car park but rarely went on to suggest that trampling the ground would compress the soil slowing down infiltration or the car park would cause an impermeable surface. In B the deforestation and replanting was mentioned but only a few candidates linked this to contrasting infiltration rates. Most gained 1 mark for recognising that the untouched rainforest in Area C should create a faster infiltration time. Here using the resource provided was crucial to gaining high marks.

Question 2

(a) (i) By far the majority of candidates decided that asking the question "where do you live?" would be too embarrassing, an invasion of privacy or personal information that might lead to theft or criminal activity all of which would be awarded 1 mark. The second mark was for recognising that the question in itself was irrelevant to the hypothesis or that the interviewee may not have come directly from their home to shop e.g. work in the Centre or there as a tourist. Fewer candidates gained the second mark.

(ii) Systematic sampling is still not understood by the bulk of candidates. Over half alluded to regular intervals/ordering or gave examples such as "one in every ten" people/houses but too many said it was random or gave answers loosely linked to sampling e.g. you give everybody the same questions or ask the same number of men and women.

(iii) The advantages of systematic sampling are that it avoids bias/candidate choice and thereby ensures a fair test but only the best candidates could write this. Others referred to it being "easier", "quicker" "more accurate" all of which were far too vague for credit.

(iv) Whether candidates chose to say "Yes" or "No" was not the issue here; what mattered was that they could justify that choice by referring to the sample number, its likely range of customers and its appropriateness for three different shopping centres. The best candidates referred to the wide/representative range of answers possible, age/gender issues and the differing size of centres in justifying their choice. Weaker answers just said yes or no and that it would be enough or it was too many or should be over 100 (unrealistic) without any explanation for their view. A few thought 30 was far too many and would take too long. Some thought 30 would pose a problem for calculating percentages and suggested 25, 50 or 100 to make this easier.

(b) (i) There were several variations of formulae demonstrated but the key was to end up with 46/30 and then give an answer of 1.53 km or 1.5 km. Most candidates knew how to do this and demonstrated it well but let themselves down by not giving the km units after the final figure. It is important to note that, if units are not given on the answer line provided, candidates will be expected to provide them for credit. A number of candidates gave fulsome calculations that included all the distances where 0 shoppers went taking up an enormous amount of space.

(ii) By far the majority gave 2 as the correct answer here; a small number gave 1 or 4 and a few missed it out completely.

(c) (i) Overall the plotting on the dispersion graph was quite well done though there were some strange plots from candidates who had either not seen one before or could not work out how to plot the points from the exemplar graphs given. One common error was plotting the points on the 1st and 2nd vertical lines instead of the 2nd and 4th lines. Another was just plotting 30 on the 4th line when, to show two people, it also needed a point on the 2nd line at 30 too. Some candidates used the other graphs to plot their points**.**

(ii) Most candidates correctly agreed with Hypothesis 1. They then stated that the CBD was the largest centre and gave data to support the view that people travelled further to the bigger centres. The common data given was some people travelled 30 km to the CBD whereas other people travelled far less distances to the other two. Some used the average distance comparison with data to back up the hypothesis. A few disagreed with the hypothesis because they counted the larger number travelling shorter distances not the furthest distance as required. A few did not make it clear that the CBD was the biggest centre so were restricted to three marks.

(iii) There were many sensible suggestions here with buying high-order goods, comparison goods or specialist/luxury goods among the most frequent responses. Many put a wider range/choice and also gave examples of other reasons such as to go to the cinema or bank or child-minding facilities along with shopping too. A number referred to better quality goods which is not always true – the quality of any good can be the same albeit in different shopping centres. Some mentioned going for a day out or to see friends which may be true for teenagers but is less so for the bulk of people travelling further to shop.

(d) (i) The pie chart was well done by most with the pie of 60 degrees being drawn fairly accurately in the bottom half of the semi-circle and the remainder being shaded in correctly for a second mark. Those candidates that drew the 60 degree line from the top of the semi-circle sill gained both marks providing they shaded the slices in the correct order from the key.

(ii) Almost all candidates could agree with Hypothesis 2 and justify that choice by quoting data from the total for cars or from the number visiting the CBD or secondary centre. A number used the word "most" when they meant "the most common" or the "highest" of the choices for which they were not penalised but it is worth Centres taking care to ensure candidates understand that "most" would usually mean more than half rather than the most common number.

(iii) Distance/proximity were common answers here; whether the shoppers could afford to own a car or the cost of petrol were other responses. The amount being bought and its bulk and access to public transport were other acceptable answers. Other factors including age and environmental awareness were also seen. It is important to stress that one-word answers are unlikely to gain credit in this kind of question as indicated by the two lines allowed for each answer. A small number of candidates just wrote single words such as Weather, Transport, and Time without elaboration. The Examiner needed to know how these factors could affect the method of travel to shopping centres.

(e) The "sphere of influence" is clearly mentioned in the syllabus and is a popular topic for Centres that carry out fieldwork. Consequently it would be expected that candidates would know what the term meant and could give an idea as to how it could be found. This was often not the case. Only a small number of candidates knew what the term meant and could give some ideas as to how to obtain it. The key to identifying this was to interview shoppers at different shops; find out where they lived and then plot these points on a map and join up the furthest points to identify the "sphere of influence" of each shop. Many candidates suggested asking about distance travelled (already done in the investigation) or plot the average distance in isolines (not possible without a home location) and the average distance is not the furthest which defines the sphere of influence. For those who did not know what the term meant, suggestions such as note down the bags that came from certain shops, ask people in their houses, check how they get there and what they buy, were all examples of irrelevant questions for the sphere of influence. This is a common geographical term which has been tested on Paper 4 before and candidates are expected to know what it is and how it can be found in fieldwork.

GEOGRAPHY

| Paper 0460/43 |
| Alternative to Coursework |

Key messages

- When answering Hypotheses questions that ask whether you agree or not, always give your opinion first before any supporting evidence. This will usually be Yes, No or Partially.
- When giving figures in an answer always give the units if they are not stated for you.
- Read questions carefully and identify the command word e.g. *Describe, Explain.... F*or example Question 2(b) (v) where candidates ignored the command ' Give two reason why...'..
- Check you are using the Resources that a question refers you to e.g. Table 3, Fig. 2.
- Take into account the marks awarded. Examiners do not expect you to be writing outside of the lines provided so do not write a paragraph when only two lines are given – this wastes time.

- If you have to write more than the lines allowed indicate this with a phrase such as (*continued on page 11*). This is very helpful to the Examiner in finding your answers.

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks went from 0 (which was an outlier) to 54 out of 60 – a similar range to previous years. Weaker candidates scored well on the practical questions, such as drawing and interpreting graphs and making calculations, and those of higher ability scored well on the more challenging sections requiring explanation and judgement especially regarding hypotheses. Overall there was little difference in the standard of answers between **Questions 1** and **2**.

There is less general advice to be given for areas for improvement with this paper compared with others. As there are no choices to make, it is difficult to miss sections out, although some candidates omit graph completion questions which are usually 'easier' to answer. A few candidates did not attempt the final part of **Question 2** which may indicate a shortage of time. Some candidates do write too much in some sub-sections. They should be encouraged to answer more succinctly and perhaps give more thought to their answers. Most points for teachers to bear in mind, when preparing candidates for future Paper 43 questions, relate to misunderstanding or ignoring command words and the use of appropriate fieldwork techniques. Particular questions where candidates did not score well also often related to them not fully understanding the question. Questions which require candidates to develop their own hypothesis or investigation methodology are often answered quite poorly. This is an area in which Centres could do more preparation with candidates.

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 and appropriate fieldwork techniques even if they have only limited opportunity for fieldwork within the Centre, for example **Question 2(b) (ii)** required candidates to describe how to measure the angle of slope.

Comments on specific questions

Question 1

(a) (i)   Most candidates showed good knowledge of the Stevenson Screen. Many scored full marks. Two misconceptions were that the white colour is to attract heat and the position above the ground is to avoid animals.

www.XtremePapers.net

© 2011

(ii) There were many incorrect readings which revealed that candidates did not know the correct way to read maximum and minimum temperatures. Incorrect responses included reading the level of mercury on both scales, and reading from the top of the marker. It seemed that some candidates had never used a maximum-minimum thermometer. They could be made familiar with using such instruments by making weather records in School.

(b)(i) Candidates received some help in the form of five possible answers. Most chose the correct alternative. This question would be more challenging if candidates were asked to give a definition of relative humidity.

(ii) The vast majority of candidates followed the guidance of the worked example to work out the correct answer.

(c)(i) Most candidates scored both marks, with reference to accuracy, instant reading, portability, ease of reading the device and less chance of making a mistake. The sketch allowed them to reach these conclusions whether they had actually used the device or not.

(ii) Many candidates failed to gain credit because they merely suggested repeating the readings with the same instruments. Some candidates, however, did realise that traditional instruments could be used to check the digital ones. Other less common acceptable answers were to use a second digital instrument or check the results with other candidates.

(d)(i) Whilst many candidates were successful in making an accurate measurement there were also a minority of candidates who were unable to use the scale to make a fairly simple measurement.

(ii) Most candidates completed this simple task correctly. Occasionally site J was chosen in error.

(iii) Most candidates correctly agreed with the hypothesis and supported their decision with evidence from the data table. Many candidates included anomalies as well as supporting data.

(iv) There were many good answers which referred to shade, shelter and the impact of different surfaces and the concrete buildings. Few candidates referred to aspect and there were irrelevant references to wind direction and altitude. Weaker candidates tended to focus on the buildings with reference to heaters, air conditioning and heat from people.

(e)(i) Most candidates plotted the information correctly, although a small minority did not attempt the question.

(ii) Most candidates showed the correct calculation, although a common mistake was to use the figures for all twelve sites.

(iii) This task was again done correctly by the majority of candidates, although a small percentage also omitted this question.

(iv) Most candidates understood the task and were able to explain why the candidates had disagreed with the hypothesis. They supported their conclusion by referring to differences in relative humidity on the same surface, and to the same relative humidity on different surfaces.

(f)(i) Most candidates did not choose an appropriate hypothesis. Their hypotheses usually referred again to relative humidity or other measurements which involved the use of multiple Stevenson Screens or moving them around. Many candidates stayed with the task of measuring temperatures on different surfaces, ignoring the fact that they only had one maximum-minimum thermometer. The question should have led them to an investigation of temperature change over time.

(ii) Candidates could still score marks even if they had not got a suitable hypothesis. The better answers described how readings should be made on a regular basis and at the same time of day. They also gained credit for explaining how readings are taken on a maximum-minimum thermometer. Weaker answers continued with the idea of placing thermometers at different locations and reading them all at the same time, which was not relevant to this question.

Question 2

(a) (i) Nearly all candidates correctly calculated the total area of the farm.

(ii) Also candidates successfully worked out the percentage of land used to grow barley.

(iii) Many candidates scored marks by stating that the bar graph was good to read off numbers or amounts or area, whilst the pie graph clearly showed the share or percentage of land use.

(b) (i) Most candidates gained two marks for naming altitude, latitude or longitude. A small number quoted figures from the GPS reading which was not the question instruction.

(ii) This question was poorly answered by many candidates, some of whom did not appear to be familiar with an appropriate measuring technique. A minority of candidates gave detailed answers based on their own fieldwork. They included the name of equipment such as a clinometer with a description of how it should be used. Other candidates attempted to describe how an angle is measured by using a protractor and string which is not acceptable as a fieldwork technique.

(iii) Most candidates answered the question well. Common solutions which were suggested included asking the farmer or teacher, taking a photograph or sketch, and researching in a book or on the Internet.

(iv) The question proved to be a good discriminator. Many candidates gave correct explanations for the conclusion reached by the candidate. Many answers included evidence which referred to land use at different heights and on different angles of slope. Only the best answers included consideration of both height and slope. Weaker answers were characterised by vague reference to crops and animals rather than specific types, and merely described land as getting higher or steeper with no supporting figures.

(v) There were many vague answers which did not apply knowledge which the candidates would have learned about farming. Answers were typically vague stating that crops cannot be grown if land is steep or high. However, there was explanation of why this was so, which was the focus of the question. Few candidates included ideas about higher rainfall, stronger winds, or thin soils.

(c) (i) Most candidates labelled both axes correctly. A small number included figures or units such as metres or kilogrammes, or missed 'per year' from the axis label.

(ii) Both values were usually plotted accurately. A small minority omitted the question.

(iii) A higher proportion than usual did not answer this question, presumably because they did not know what a best-fit line is. Most candidates who answered the question identified the negative correlation and drew the line within the range of tolerance. The most accurate lines curved but straight lines were accepted. As usual in this type of question a few candidates joined the crosses together.

(iv) This question was well answered. Most candidates realised that the hypothesis was incorrect and some referred to the best-fit line which they had drawn as supporting evidence. Better answers then stated what the alternative hypothesis should be. Finally paired data was well used to support the answer.

(d) Most candidates understood what was meant by 'inputs' and could identify at least one input. The most common suggestions were money or capital, machinery and fertilisers. Other inputs such as seeds, land, labour or water were not credited as they could not be used to measure the intensity of farming.

(e) Candidates find this type of question difficult, but it is a good discriminator. Good answers were based on the use of more transects or farms or hillsides to see if the results of this fieldwork were typical of hillside farming in general. Another good approach was to repeat the fieldwork during different seasons to see if this made a difference to the results. In contrast weaker answers suggested repeating the investigation to see if results were different, and using the Internet for more research, but not stating what the focus of the research would be.

GEOGRAPHY

Paper 0460/05

Computer Based Alternative to Coursework

General comments

Generally candidates coped well with this examination/simulation. As in previous sessions, candidates seemed to find the questions which involved matching up, labelling and completing graphs relatively easy. However, for the questions that required a description, an explanation and knowledge, more detail, depth and use of data was often required.

The simulation was based on a river investigation. Two hypotheses were investigated. The first related to the changes in the width and depth of a river as it went downstream; the second related to the change in the size of the bedload.

When preparing for this examination in the future, candidates should be encouraged to learn the key terms, read the question carefully, back up their answer with data and include detail in their answer. It should also be noted that, like Paper 41/42/43, this is an Alternative to Coursework examination. Candidates therefore still need to know how to use fieldwork equipment in detail (ideally with some experience of using it).

Comments on specific questions

Question 1

This question involved matching up the river features with the labelled sketch map. Most candidates found the choice of correct definitions straightforward, especially the mouth and source (Mouth = D; source = A; tributary = E; watershed = C).

Question 2

This question asked candidates to identify which stage of the river's course each landform was usually found in. Many candidates were able to correctly identify that a meander was located in the lower course and v shaped valleys were found in the upper course. Candidates also needed to know that rapids occur in the upper or middle course and with reference to the photograph in the information file which shows a river in its middle course. This combined with the fact that each stage of the river's course could only be used once in response to this question the candidate needed to give the response middle course to this part of the question.

Question 3

In this question, candidates had to choose labels for the sketch of a waterfall. Most candidates found the choice of correct label straightforward (1 = a band of soft (less resistant) rock; 2 = a plunge pool; 3 = a band of hard (resistant) rock).

Question 4

This question asked candidates to put sketches showing the stages in the development of a waterfall in the correct order. Overall, a number of candidates struggled with this. Many chose the second stage correctly **(D)** but then were unable to complete the sequence correctly **(B, A, C)**. These candidates needed to look more closely at the sketches, for example, at the size of the overhanging rock which has receded back in C and the plunge pool.

Question 5

This question required the identification of the river processes seen in different parts of a meander. Most candidates found this question straightforward and were able to gain full marks for correctly identifying that deposition was the main process at A (creating a slip-off slope) and that erosion was the main process at B (creating a river cliff).

Question 6

This question involved working out the heights of two sites along the river's long profile from a map. Again, most candidates answered this well and gained full marks by choosing 110 m for Site 1 **(D)** and 47 m for site 4 **(C)**.

Question 7

This question asked candidates to complete a bar graph showing the heights of the seven survey sites. Almost all candidates dragged up the bars to the correct heights (82 metres for site 5, 60 metres for site 6 and 38 metres for site 7).

Question 8

This question was about the correct location (and reason for the location) of two land uses. Many were able to correctly identify that a major settlement would be found in the lower course of a river, but only the most able candidates gave a correct reason for the location, such as the land is flat and therefore easy to build on/farm on. Many were also able to correctly identify that a reservoir with an HEP scheme would be found in the upper or middle course of a river but only the most able gave a correct reason for the location, such as the fact that the land was higher so there would be more rainfall or that the valleys were steep sided, making building of a dam easier. However, many candidates (incorrectly) thought that the reason was because the river flowed faster in the upper course.

Question 9

This question involved choosing the two correct pieces of equipment needed to measure the width of the river at each survey site. Many candidates struggled with this question. For full marks candidates needed to identify both the measuring tape **(C)** and the ranging poles **(F)**. Some candidates were able to identify one of the pieces needed (usually the measuring tape) but many chose incorrect pieces such as a clinometer **(A)**, a float **(B)** or a plumb line **(D)**.

Question 10

This question asked candidates to use the simulation in the Information File to measure the depth of the river at two sites on the river (sites 3 and 5). Most candidates gained 1 or 2 marks here for one or both correct measurements (21 for Site 3 and 35 for Site 5). Some candidates gave answers which were close to these figures but in this instance no tolerance was given. In this case, candidates needed to take more care with measuring (and perhaps completing the measurement several times – as they would in fieldwork).

Question 11

This question was concerned with identifying disadvantages of measuring the depth of a river at the midpoint, using a ranging pole/metre rule. Some candidates struggled with this and wrote answers regarding safety rather than the disadvantages of the method. Good answers stated that the mid-point may not be the deepest point, that there could be an obstruction there and that the river may be deeper than one metre.

Question 12

The first part of this question considered the first hypothesis: 'As the river gets closer to the sea, it becomes wider and deeper'. Almost all candidates correctly agreed with this hypothesis and gained 1 mark. Candidates then had to support their answer (with data). The most able candidates gave very good answers (gaining 3 marks) and explained that near the source (site 1) the river is narrow and shallow (0.42 m wide and 8 cm deep) but that near the mouth (site 7) the river has become wider (3.69 m wide) and deeper (83 cm deep). Some candidates did not include data in their answer and so were limited to 1 mark in this section; others needed to include pairs of data or name the sites/describe the proximity to the source and mouth of the river in order to gain more marks.

Question 13

This question involved the use of systematic sampling to measure bedload. Candidates needed to describe the method and explain why it was the most reliable. Many candidates found this challenging and were unsure of what systematic sampling was. However, some candidates were able to gain 1 mark by identifying that it was reliable because it was fair or not biased. Only the most able candidates were able to say that systematic sampling was when samples were taken at regular intervals/equal distances apart (such as every tenth piece of bedload/at every 50 cm). A few mentioned the use of a quadrant.

Question 14

This question required candidates to use the simulation in the Information File to measure the bedload samples at two sites on the river (sites 3 and 5) and to work out the average bedload size for site 6. Most candidates found this straightforward and gained 2 marks. Tolerance was given with measurements for these answers. The correct measurements were 11.5 cm (11.4 – 11.6) at Site 3; 3.7 cm (3.6 – 3.8) at Site 5; and 2.16 cm (or 2.2) for the average of site 6.

Question 15

The first part of this question considered the second hypothesis: 'As the river gets closer to the sea, the size of the material on the river bed (bedload) increases'. Almost all candidates correctly disagreed with this hypothesis and gained 1 mark. Candidates then had to support their answer (with data). The most able gave very good answers (gaining 3 marks) and explained that near the source (site 1), the bedload is larger (average of 24.4 cm) but near the mouth (site 7) the bedload has become smaller (average of 1.02 cm). Answers that did not include data were limited to 2 marks in this section; others needed to include both pieces of data or name the sites/describe the proximity to the source and mouth of the river in order to gain more marks. The best answers formulated a new hypothesis.

Question 16

This question involved describing and explaining what happens to the shape of the bedload as a river gets closer to the sea. Most candidates wrote about what happens to the size of the bedload rather than the shape and many wrote about both the size and the shape. Most were able to correctly say that the shape of the bedload becomes smoother or more rounded, but many answers only said that it was due to erosion, rather than describing or naming the relevant types of erosion such as attrition, corrosion/abrasion and hydraulic action.

Question 17

This question considered the different methods/types of river transportation. Candidates had to watch the simulations in the Information File to name and describe three methods. Many candidates did not know the names of the methods but were able to describe them well. Weaker candidates confused the names or wrote down types of erosion rather than transportation. Both the movement and location were needed in the description. Sample 1 was suspension – particles are floating/carried along in the river; sample 2 was traction – particles are dragged/rolled along the river bed; and sample 3 was saltation – particles are picked up by the river and then dropped/bounced along the river bed.

Question 18

This question involved suggesting (and explaining) three improvements for the investigation. Most candidates struggled with this question and few gained more than half marks. Some candidates wrote about extensions to the investigation rather than improvements to it. Some candidates could not think of more than one or two answers and left the last improvement blank. Some suggestions were too vague, such as "get more results" and some explanations were incorrect, such as to be "more accurate". It should be remembered that collecting more data makes an investigation more reliable, but not more accurate. Good answers included having more survey sites in order to gain more data which would make the investigation more reliable; repeat the investigation in order to check that the data is valid; and take more bedload samples, as five samples at each site are not enough for a reliable investigation.

www.XtremePapers.net

© 2011