

# GEOGRAPHY

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Paper 0460/11

Paper 11

## **Key Messages:**

In order for Candidates to perform well on this paper they needed to be able to:

- ensure that examination rubric is followed correctly, answering 3 of the 6 questions only.
- read the question carefully – it is important to spend time doing this. If it helps underline command words and words which indicate the context of the question.
- know the meaning of, and respond correctly to command words - e.g. know the difference between describe and explain, be able to compare.
- identify the correct focus specified in the question stem - e.g. causes or impacts, natural environment or people.
- use the mark allocations and answer space provided in the question and answer booklet as a guide to the length of answer required and the number of points to be made.
- perform basic skills such as interpreting graphs, photographs and maps of various types.
- give evidence or data from a source if asked to by the question. Data needs to be used to support statements being made rather than just being lifted and presented in isolation.
- learn the meanings of key words in order to be able to define and accurately use geographical terminology.
- write as clearly and precisely as possible avoiding vague, general statements – e.g. ‘it will improve standard of living’, ‘it will cause pollution/make a lot of noise’.
- write developed ideas wherever possible, especially where extended writing is required in the final two parts of each question.
- have a range of case studies so that appropriate ones can be chosen for the topics tested. Some seem to have too few case studies and try to apply them inappropriately (e.g. the China one child policy for explaining the push factors which have caused large amounts of migration).
- include place specific information in case studies, however care needs to be taken that this is not done at the expense of answering the question.
- when using the extra space at the back of the question and answer booklet make it clear that the answer is continued and indicate the number of the question accurately many candidates do not indicate that the question is continued.

## **General Comments:**

The most perceptive and well prepared candidates performed superbly across the paper and some excellent geography was seen. Such candidates were familiar with, and able to cope with handling the wide variety of ways in which geographical data was presented to them, handled the skills involved and displayed a mature and sophisticated knowledge and understanding of the topics tested. Most candidates were able to make a genuine attempt at their chosen questions and attempted most sections, however some candidates found it difficult to interpret tasks and write effective responses to some or all questions.

Whilst there were rubric errors, the number of candidates who answered more than three questions was relatively small, and there seemed to be little, if any, evidence of candidates being short of time. It is accepted that candidates are writing under time pressure it is important that all answers are legible so that Examiners can mark them.

The following comments on 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

- (a) (i) Almost all answers were within the tolerance, although some weaker candidates did not understand the unusual scale.
- (ii) The vast majority of candidates mainly got this question correct in both parts, although a minority of candidates did not get part **B** correct.
- (iii) This question was generally well answered with most mark scheme ideas included. Problems could have been for people or the natural environment but they had to be specific. Some candidates did not score full marks as weak ideas such as 'visual pollution, noise and crime' were not credited words like 'overcrowded' and 'overpopulation' needed some elaboration to gain a mark.
- (b) (i) Most candidates were aware that they needed to subtract 'Death Rate from Birth Rate', many successfully reading the graph and working out the answer '12' however, many lost the final mark as they did not express the answer as 'per 1000'.
- (ii) The majority of candidates could recognise the required trends e.g. that there is a general decline in death rate with a steeper decline up to 1980, and many gained full credit which was reserved for the use of statistics. Not all candidates secured full credit as they very often did not identify the more gradual decline after 1980.
- (iii) Most candidates scored well here with many valid ideas being provided, as usual the question on this topic is well understood and answered, many candidates also included appropriate development of ideas for extra credit. The most common responses seen included 'lack of availability of contraception, can not afford contraception and not educated about the use of contraception'.
- (c) Overall this was not a well answered case study with many candidates failing to make any appropriate explanatory points in relation to population density. Many approached the question from the angle of population growth or variations in growth rates and China was a common answer – however in this case the One Child Policy was not a valid response. Others incorrectly referred to migration, although credit could be gained if they referred to push factors which might explain a low population density, particularly with reference to lack of natural resources or drought. Such case studies really need to focus on factors such as relief, access and climate yet few candidates made any reference to these, especially in the detail required to achieve Level 2 or above.

### Question 2

- (a) (i) Most answers here were within the tolerance and gained credit.
- (ii) The vast majority of candidates gained the full credit available with only a minority of candidates missing out on the second mark.
- (iii) Varied answers were seen here, some of which scored full credit although other responses were somewhat simplistic. Weak statements or incorrect perceptions included ideas such as 'better standard of living, safer, or cheaper houses etc'. The reasons offered most often included the need to 'avoid traffic congestion and air pollution and to be attracted by the need for a more peaceful environment'.
- (iv) This question was better answered with some impressive responses which showed good understanding of service provision in settlements of different sizes, typically referring to 'higher order shops/services, specialist shops and comparison goods'. Weaker candidates usually made at least one point which was credit worthy, although many wrote vague answers about the services without adding either the terminology or the precision to gain many marks.
- (b) (i) Many good responses were seen here. Some candidates just copied the text from Fig. 4. However, most candidates were able to provide enough information to show at least a simple understanding of it and gain some marks.
- (ii) Varied responses were seen here and the question differentiated well with most candidates scoring well. Most answers focused on the need for more housing as a result of migration, though the

other mark scheme ideas were seen (relatively infrequently). However, some good development marks were gained by some candidates which is a helpful strategy with the five mark questions.

- (c) This question differentiated well. At the higher end some excellent details were seen, typically about London or South American cities. Perhaps more candidates should have been able to develop simple ideas to enter Level 2 as some candidates were able to include good place specific details in this answer but this was insufficient in itself if answers did not contain enough developed ideas.

### Question 3

- (a) (i) Varied answers were seen here although many were within the marking tolerance.
- (ii) Mainly correct answers were given here although not all candidates knew what these common features were.
- (iii) Most candidates scored some marks here with good references to the impacts of flooding or erosion being made.
- (iv) Many candidates did not know the process of formation of the flood plain and there were many responses given which misunderstood the question and attempted to explain simply why floods occur in a river. Some use of specialist terms were seen but the application of them was not shown very well. Overall, very little clear understanding of the stages of development of a flood plain was demonstrated.
- (b) (i) Again, many variable responses were seen. Most candidates were able to gain credit. Most candidates offered the idea of 'heavy rainfall', some then went on to answer this with 'a lack of large enough levees, management or vegetation' which were too vague to gain credit.
- (ii) This question was generally well answered with well prepared candidates referring to a variety of ideas and some developing them, or listing sufficient ideas in order to gain full credit. Weaker candidates referred to only one or two ideas most commonly 'death and damage' with no development. This is a well rehearsed sub question with many candidates scoring four or five marks. Most focused on the 'damage to housing, the loss of life, the risk of water borne disease and the disruption to travel'. The weaker candidates often scored a minimum of two marks here.
- (c) This was a relatively straight forward case study which differentiated well. A minority of candidates restricted themselves to Level 1 by writing simple statements although there were a reasonable number of candidates who gained Level 2 as they were able to develop their ideas, however the use of place specific detail was absent from many answers. Most referred to ideas such as 'irrigation, fertile soils for agriculture, communications along the river and flat building land'.

### Question 4

- (a) (i) There were many correct answers seen to this question. However, some candidates obviously did not know what range meant.
- (ii) The vast majority of candidates answered this question correctly.
- (iii) Again, this question was well answered, although some candidates referred to the large diurnal range in the desert without explicitly comparing night temperatures in the desert and tropical rainforest.
- (iv) This question was not well answered as most candidates did not understand the atmospheric processes involved and therefore too many gained no credit in either section. References to clouds being blown away earned no credit for the first part and there was a lot of confusion over the link between atmospheric pressure and rainfall in the second part.
- (b) (i) This question was generally better answered as candidates made a fair effort to describe the characteristics of the vegetation in Photograph B with most including at least one or more appropriate descriptive points such as 'small shrubs, needles or fleshy stems'.

- (ii) Overall this question was well answered with most candidates showing some understanding of how the vegetation has adapted to the desert climate, albeit in some cases responses were fairly simplistic and not well expressed. Nevertheless this question achieved good differentiation.
- (c) The 'natural environment' focus of the question was missed by some candidates who wrote about people. Other than that good differentiation was achieved with some very well expressed and developed points being made by better candidates about both local and global effects. Development of answers in this type of question is aided by the sequential nature of events so many candidates did achieve Level 2, though place specific detail was often lacking from many answers. Many developed some good ideas with common answers featuring the 'extinction of species, the effects on global warming and the effects of flooding'. Chosen examples were often well used.

#### Question 5

- (a) (i) Most candidates were able to answer this question correctly however, some candidates did not have secure knowledge of which were the fossil fuels.
  - (ii) This question was generally answered correctly, for at least one of the marks and many scored both.
  - (iii) Many candidates were able to make reference to at least one appropriate idea though full credit answers were not common. The most common response provided was 'exhaustion of fossil fuels'.
  - (iv) There were some good answers seen here but the majority of responses were rather simplistic and contained inaccurate statements. Most common errors or responses that required further development to gain credit included 'a lot of power, renewable, dangerous or low/high costs'.
- (b) (i) Most candidates could make at least one correct observation about the distribution of wind turbines and a few gained the full credit available. The common correct answer was usually in relation to height though there were some good references to the wind turbines in relation to farms and roads using scale and/or direction. However, many responses were also seen with vague statements such as 'near/close to/between' being most common.
  - (ii) This question differentiated well and there were some excellent wide ranging responses, covering all mark scheme ideas, from perceptive candidates. Some candidates were able to gain one or two marks typically for simple references to 'noise and/or visual impact'. Many answers were seen relating to 'loss of farmland, habitats etc and likelihood of collapse' which were not credit worthy.
- (c) Overall this was not a well answered case study from many candidates. Some candidates made many errors the most common of which were to write about coal not charcoal and to write about impacts on the Natural Environment rather than people so lengthy answer referring to 'global warming or extinction of species' earned no credit.

#### Question 6

- (a) (i) The majority of candidates correctly selected the second statement and gained the mark.
  - (ii) Varied responses were seen here with some candidates gaining the full credit available but many candidates did not have the relevant knowledge to gain credit here.
  - (iii) Most candidates suggested at least one correct reason here whilst others could identify more.
  - (iv) Again, varied responses were seen here and full mark answers were seen but they were not common. Generally the advantages were dealt with better than the disadvantages as many candidates referred to disadvantages compared with high technology which the mark scheme did not allow. Candidates should really have been considering the advantages of this simple piece of machinery compared with no machinery. Vague responses commonly seen were 'it is easy, or cheap'.
- (b) (i) This question was generally well answered by most candidates as they could recognise the trends to describe the changes in employment structure as a country develops and therefore scored full marks. Candidates were expected to describe the change and not just repeat the statistics.

- (ii) This question differentiated well. Some candidates just referred to one or two simple ideas whilst others wrote about several mark scheme ideas, some with good development. There were some impressive references to the impacts of globalisation. In contrast vague statements such as 'better paid jobs' were seen, which did not gain a mark as it did not explain why the employment structure changes. The most common ideas were the rise of education which goes hand in hand with an increase in tertiary, the introduction of technology and increasing industrialisation.
- (c) This case study differentiated well and a variety of examples were seen, including some impressive local case studies. Candidates who received lower levels of credit candidates did little beyond providing a simple description of the attractions, however others tried to address both parts of the question with some well thought out ideas about how the growth of tourism has been encouraged in their chosen area. Weak answers contained lists of attractions. Named examples earned credit at Level 1. The development of the answers might have included more detail in the description or explanation or a combination of the two. Many country examples from the Americas were used well. Some distracted themselves by discussing the advantages and disadvantages of tourism for the chosen country.

# GEOGRAPHY

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Paper 0460/12

Paper 12

## **Key Messages:**

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- Ensure that examination rubric is followed correctly, answering 3 of the 6 questions only.
- Read the question carefully – it is important to spend time doing this. If it helps, underline command words and words which indicate the context of the question.
- Know the meaning of, and respond correctly to command words - e.g. know the difference between describe and explain, be able to compare.
- Identify the correct focus specified in the question stem - e.g. causes or impacts, natural environment or people.
- Use the mark allocations and answer space provided in the question and answer booklet as a guide to the length of answer required and the number of points to be made.
- Perform basic skills such as interpreting graphs, photographs and maps of various types.
- If the question asks for evidence or data from a source then candidates need to ensure they do this to get the highest marks. Data needs to be used to support statements being made rather than being presented in isolation.
- Learn the meanings of key words in order to be able to define and accurately use geographical terminology.
- Write as clearly and precisely as possible avoiding general statements – e.g. ‘it will improve standard of living’, ‘it will cause pollution/make a lot of noise’.
- Write developed ideas wherever possible, especially where extended writing is required in the final two parts of each question.
- Have a range of case studies so that appropriate ones can be chosen for the topics tested.
- Include place specific information in case studies, however, care needs to be taken that this is not done at the expense of answering the question.
- When using the extra space at the back of the question and answer booklet make it clear that the answer is continued and indicate the number of the question accurately.

## **General Comments:**

As expected the most perceptive candidates performed superbly across the paper and some excellent geography was seen. Such candidates were familiar with, and able to cope with handling the wide variety of ways in which geographical data was presented to them, handled the skills involved and displayed a mature and sophisticated knowledge and understanding of the topics tested. Most candidates were able to make a genuine attempt at their chosen questions and attempted most sections, however weaker candidates found it difficult to interpret tasks and write effective responses to some questions.



Whilst there were rubric errors, the number of candidates who answered more than three questions was relatively small, and there seemed to be little, if any, evidence of candidates being short of time.

The following comments on 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**

- (a) (i) Most candidates correctly identified Mongolia, though a significant minority identified Australia or Finland.
- (ii) Most candidates gained a mark for referring to the large area, although could then have gone on to support this with statistics.
- (iii) This was not as well answered in general, as there seems to be a lack of understanding about the factors that affect population density. Some candidates answered with general statements about climate, birth and death rates and war or referred explicitly to migration. Some responses focused on human or social reasons rather than physical ones.
- (b) (i) Candidates usually described the general relationship and better answers went on to distinguish between the pattern before and after 1950.
- (ii) A common mistake was to describe the relationship, thus repeating the answer from the previous question. High quality explanations focused on deforestation, destruction of habitat, and requiring or hunting for food, although some referred to cows, pigs and chickens which were not allowed as domestic livestock are bred for future supply.
- (iii) Many candidates answered well with a range of problems suggested. The most popular ideas were lack of jobs, housing, water, food and education. Weaker responses suggested pollution or water and air pollution without discussing health problems.
- (c) There were some irrelevant answers about population pyramids, structure and policies. Improvements could have been made by focusing on explanation rather than description. One error was to choose the wrong scale, often relating the answer to population distribution within a city. The most common countries chosen were Canada, Australia, Indonesia, Brazil and the UK though some candidates focused on migration rather than population distribution. There were a number of really excellent answers seen, particularly for Australia, and other responses could have been developed by including place specific detail.

#### **Question 2**

- (a) (i) Answers varied, with some lacking the idea of 'order'. Those who had learned a definition or knew what a hierarchy was gained the mark, whereas others simply described the pyramid diagram.
- (ii) Most candidates identified the correct statements.
- (iii) Strong candidates chose comparative examples. Other successful answers focused on higher order, specialist vs convenience goods shops and more variety of services. Weaker responses did not compare or used a 'there are ... there are not' approach. Some responses compared quality, sphere of influence or frequency of use which is not what the question was asking.
- (b) (i) Most candidates identified the correct types of shop.
- (ii) This proved challenging for some candidates, though there were some excellent responses seen, particularly references to high order goods, specialist and comparison goods, accessibility and the fact that many people had to travel a long way for these shops and services as they were not available locally.

- (iii) There were some good answers here, although some candidates did not understand the concept of a pedestrian zone and so there were misconceptions. Candidates usually scored better on benefits, especially the fact that the environment was safer without vehicles with less air and noise pollution. Problems such as crimes were a common answer, however they are no more likely in a pedestrian zone than in any other part of the CBD.
- (c) Many good out-of-town examples were chosen, though some wrote about a CBD mall of an urban supermarket. Some candidates gave descriptive answers rather than the explanation required and some explanations would have been improved by applying the factors mentioned to the named location. The better answers concentrated on factors such as accessibility, including identifying specific roads, which gave access to a large potential customer base, the cost of land and its availability.

### Question 3

- (a) (i) Most candidates chose the correct plate boundary.
- (ii) Where candidates gained credit it was usually for the mention of convection currents, although some could have improved their answers by showing an understanding of how they explained plate movement.
- (iii) Answers varied. Many candidates scored full marks though some did not focus on plate movement in the correct way to explain why earthquakes occur at plate margins.
- (iv) There were many good answers which focused on factors such as family, jobs, confidence in buildings and preparations. Weaker responses linked ideas to those which apply to volcanoes and thus incorrectly referred to issues such as on fertile soils, tourism and geothermal energy.
- (b) (i) There were many well thought out answers showing a clear understanding. Some candidates could have improved their answers by avoiding copying from the resource, and ensuring they interpreted the information.
- (ii) The best answers were excellent and clearly comparative. Well expressed ideas included building structure, medical and rescue services and education about the dangers. Many candidates insisted that earthquakes can be predicted, especially in an MEDC.
- (c) Most candidates named a volcano and there were some very good answers. Most candidates interpreted the question correctly and wrote about the effects of the eruption. Some need to ensure that all information included in their answer is relevant to the question. Weaker answers were generic and candidates needed to include more specific detail to gain higher marks. Common examples included Mount St Helens, Merapi, Etna and volcanoes in Iceland and Montserrat.

### Question 4

- (a) (i) Correct answers were less common here than incorrect ones and there was a wide range of answers.
- (ii) Many candidates correctly identified the oxbow lake and the old course of the river.
- (iii) Many candidates scored at least two marks. The most common error or omission was the village. A few candidates identified a meander from the old course.
- (iv) There were many detailed descriptions which identified a number of advantages, including references to fertile soils, availability of water for irrigation or household use, the opportunity to fish in the river and the ease of transport by water or along the flood plain.
- (b) (i) The most commonly identified features were that the river is wide, shallow and contains deposited material. Weaker answers referred to features which were not visible in the photograph, such as a V-shaped valley and interlocking spurs. Some candidates explained the formation of the features rather than describing them.



- (ii) There were many detailed answers which named and/or explained the three methods of erosion. Some responses included attrition, which in this case did not answer the question, or explained methods of river transport.
- (c) There were many areas suggested, the most popular being Bangladesh, the Ganges Valley and Boscastle. Some candidates gave detailed reasons for the floods, though others were more general, referring to heavy rain. Many of these answers included place-specific detail, many case studies of Bangladesh being particularly impressive. Some candidates included impacts of the flood which was not required.

#### Question 5

- (a) (i) This was mainly correct.
  - (ii) Many candidates gave appropriate answers. Some included physical features such as mountain or beach which are not generally found in cities.
  - (iii) Most candidates successfully identified reasons from the climate graph, many including appropriate statistics.
  - (iv) Some candidates tended to refer to statistics from the graph but then needed to use this material to answer the question. Perceptive candidates did this by referring to conditions which were appropriate for both winter activities (e.g. temperatures below zero which were suitable for skiing) and summer activities (e.g. temperatures which were mild or not excessively hot which were suitable for mountain walking).
- (b) (i) This appeared to be a straight-forward question and many candidates did score high marks, although some found it a challenge. Some candidates misunderstood food crops being sold as food to eat, listed types of jobs or repeated that more jobs would be available and for roads and airports they wrote about benefits to tourists rather than local people.
  - (ii) There were many excellent answers to this question with well developed and valid ideas such as the impact of noise and litter on people and the cultural impacts of tourism, along with the issue of seasonal employment. Common mistakes were to write about crime and the effects of tourism on the natural environment.
- (c) Many different areas were chosen, textbook examples and ones which were obviously based on local case studies. The main impacts which were identified in strong responses were those associated with the clearance of vegetation for hotels and tourist facilities, and those associated with marine pollution and the consequent damage to ecosystems, including coral reefs. In contrast weaker responses either repeated effects on people or gave simple, brief responses.

#### Question 6

- (a) (i) Most candidates gave an acceptable definition, though a few defined subsistence farming.
  - (ii) Generally plotting was done within tolerance.
  - (iii) Answers from many candidates were well thought out and showed a good understanding, though some referred to 'climate' or 'weather' rather than specific elements such as precipitation, temperature or sunshine. There were some candidates who made good reference to human factors such as subsidies, demand or market prices, however most concentrated on physical factors.
  - (iv) A range of methods were suggested and particularly impressive answers included clear details and the names of methods of soil conservation.
- (b) (i) Many candidates listed areas of production, often with full supporting statistics, whilst more perceptive answers referred to a pattern from the map, such as the uneven distribution or the fact that coastal areas, particularly of the south east, produced most coffee.

- (ii) Most candidates scored marks by briefly mentioning a number of generic factors, particularly temperature, rainfall, relief and soil fertility, whilst well informed candidates developed their ideas in relation to the impact of these factors on agricultural land use, sometimes with examples.
- (c) The best answers included a specific area or location which helped to focus the impact of water shortage. Therefore named locations in Australia or specific African countries or regions tended to produce the most developed answers. These answers usually referred to impacts on food supply, loss of income, inability to work and malnutrition or starvation.

# GEOGRAPHY

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Paper 0460/13

Paper 13

## **Key Messages:**

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- Know the meaning of, and respond correctly to command words - e.g. know the difference between describe and explain, be able to compare.
- Identify the correct focus specified in the question stem - e.g. causes or impacts, natural environment or people.
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- Write developed ideas wherever possible, especially where extended writing is required in the final two parts of each question.
- Have a range of case studies so that appropriate ones can be chosen for the topics tested.
- Include place specific information in case studies, however, care needs to be taken that this is not done at the expense of answering the question.
- When using the extra space at the back of the question and answer booklet make it clear that the answer is continued and indicate the number of the question accurately.

## **General Comments:**

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Whilst there were rubric errors, the number of candidates who answered more than three questions was relatively small, and there seemed to be little, if any, evidence of candidates being short of time.

The following comments on 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**

- (a) (i) Almost all candidates answered correctly, some using a quote from Fig.1 but many with the single word 'immigration'.
- (ii) Many candidates gained both marks for ideas such as 'employment, education or healthcare'. Some candidates need to avoid using vague statements like 'standard of living or quality of life'.
- (iii) Candidates generally responded well to this question with the most common ideas being 'availability of contraception, educated on the use of contraception, women have careers and so delay having children'. Some answers were general or lacking in the detail required. Candidates need to study the question carefully and recognise exactly what is required in their answer.
- (b) (i) Candidates should focus clearly on the differences in this question. Some candidates did a great deal of work on statistics but could have gained marks very quickly by simply saying increase/decrease or higher/lower. On the whole, this was generally well answered and most candidates gave answers which were comparative as required.
- (ii) No real problems were seen here. Most were able to identify the fact that they received low wages and did the unattractive jobs, and the cultural aspect was also seen frequently.
- (iii) This was a straight forward question and many candidates got the correct idea about such as speaking the language, cultural differences, racism or discrimination and many of these ideas were developed, thereby gaining high marks.
- (c) Most candidates were able to respond well to this question. Many included relevant information about pull factors. A full range of responses was seen, with many candidates converting level 1 responses to level 2 by making good use of statistical information such as patient to doctor ratios or adult literacy rates. Whilst some candidates included place specific information, some needed to include this to improve their answers.

#### **Question 2**

- (a) (i) Many gave clear and accurate definitions, though some candidates were clearly not familiar with the term 'urban sprawl'.
- (ii) Mixed responses were seen here, with some candidates giving general non-geographical statements about being 'near' or 'above/below' other features. However, some good descriptions were seen, with the best answers providing compass directions, and valid answers referred to being within or outside certain boundaries like the ring road.
- (iii) Not all candidates seemed to understand this question, writing answers which seemed to imply the growth of shopping centres within the CBD. In contrast, lots of good details such as loss of customers/profit/dereliction, along with some positive ideas, for example, reduce traffic congestion or air pollution in and around the CBD, were seen.
- (iv) This question appeared to be somewhat misunderstood with many answers assuming the growing industries would directly and exclusively supply the out of town shopping centres. Where the response was based on an understanding of the problems inner city locations bring for factories, then candidates were rewarded for 'lack of' and 'expense of land'. Successful candidates gave several ideas, and other candidates could have improved their answers by giving a range of reasons, rather than focusing on one or two in some detail, particularly transport issues. Reference to pollution issues was common though not relevant unless tied into environmental planning regulations.

- (b) (i) Most candidates were able to compare and homed in on relevant differences. Some seemed to miss the evidence in the photographs, stating differences they were expecting but were not valid in the case of these pictures. The majority of candidates gained marks for 'more shops or more people' ideas.
- (ii) Varied responses were seen, depending on the familiarity of candidates with the concept of 'sphere of influence'. Most were able to apply knowledge about high and low order goods but some needed to fully develop these ideas, for example, about the willingness to travel further but less often and to want to shop around in a centre with several competing outlets for items like clothes. Some development was seen but this is an area for improvement – candidates need to practice developing their ideas for the 5 mark questions.
- (c) A wide variation of valid urban traffic schemes were evident, many based on the candidates' direct experiences of rising congestion in their own cities/countries. Where candidates had used well-established case-studies there were some excellent answers, for example, based on London, particularly the congestion charge and Barclays/Boris Bikes schemes. Weaker responses were often unable to expand beyond a basic list of ideas such as car-pooling or new/widened roads, without giving exemplars or stating how congestion would be reduced. At the top end some excellent details, typically about London or Chinese cities were seen. More candidates need to develop their ideas to reach the next level.

### Question 3

- (a) (i) Virtually all candidates answered this question correctly.
- (ii) This was mostly answered correctly although some gave examples of landforms (e.g. lake) which by themselves were not evidence of tourism.
- (iii) Generally well answered by all candidates with the majority gaining full marks.
- (iv) Many candidates knew the process well. Some missed the simple point that plates moved together and some were not sure, so mixed moving together and moving apart in the same answer.
- (b) (i) Variable responses were seen here. Those that did what the question asked and talked about the different directions achieved highly. In general the use of scale was an issue, as many did not use the scale and those that did tended to get it wrong. Whilst many simply got the mark for naming two or more countries.
- (ii) Where candidates clearly linked their points to 'economic' impacts they scored well. However, some just listed the likely damage caused by an eruption, like people being killed, but needed to establish how this would have an economic effect like 'lack of workforce'. Many candidates gave several ideas with some good development.
- (c) There were many who developed relevant ideas, however, could have improved their responses by including place specific detail. Reference to the Sahel and Australia were commonly seen. Some candidates confused flooding and drought case studies.

### Question 4

- (a) (i) Candidates could have made the comparative point of 'trees on valley side and grass on flood plain'. However, this question was not generally well answered.
- (ii) This question was generally well answered with many candidates gaining both marks. However, a small minority wrongly gave one or two methods of transportation.
- (iii) Most diagrams were recognisable as cross sections and most were the correct asymmetrical shape with accurate labels for full marks. Some candidates simply sketched photograph C.
- (iv) Some excellent answers with accurately labelled diagrams, showing the sequence of the meander neck narrowing, being broken through and the ends sealed off with deposition, and equally detailed descriptions in the text space. Not many candidates identified the starting point for the process, namely erosion on the outside of the bend. Some diagrams were unclear and/or unlabelled. Most

candidates however, understood the process, many scoring high marks. Most included diagrams, some of which enhanced the written text.

- (b) (i)** Generally candidates attempted to compare and most gave one or two correct comparisons, particularly relating to size, number of distributaries or direction. However, there was some confusion evident between tributaries which join a main river and distributaries which separate off in a delta. Most saw there was a different scale on the two maps and therefore the Niger had the bigger delta. A few excellent answers were able to state the difference between an arcuate (Niger) and a bird's foot (Mississippi) delta. Few noticed the lake enclosed within the Mississippi Delta.
- (ii)** Most candidates were able to show an understanding that deposition of the river's load will occur due to the sudden slowing of velocity at the river mouth. A few excellent answers were able to explain flocculation. Some answers were muddled, referring to tributaries as opposed to distributaries.
- (c)** A straight forward case study. Weaker responses tended to give simple statements e.g. 'farmland flooded'. There were many responses at level 2 as many candidates could develop their ideas, however the use of place specific detail would have improved answers further. There were some very good Bangladesh and Boscastle answers seen at level 3.

### Question 5

- (a) (i)** Most candidates answered within tolerance with few outside the tolerance.
- (ii)** This was generally correctly answered, with many candidates gaining at least one of the marks.
- (iii)** Most candidates understood the significance of factors such as relief, temperature and precipitation, picking up their marks in a simple but effective way. This question was generally well answered by all.
- (b) (i)** Most candidates could make at least one correct observation and there were many who gained 3 marks. Candidates need to clearly and precisely describe their observations, avoiding vague statements or value judgements. There were some vague mentions of mountains without really describing the canyon itself and not many described the steep or sheer sides.
- (ii)** This question was generally well answered with the best responses identifying a range of ways tourists and their activities would impact on the canyon area, including air pollution from their cars, water pollution from their boat engines, deforestation etc. Weaker responses identified litter as a problem, however, to improve they needed to focus on more than one aspect.
- (iii)** Most candidates understood that national parks have rules designed to protect the natural environment. There were a range of responses, from basic ideas like rules against littering and well-explained ideas about having rangers and educating the visitors to encourage a greater understanding and appreciation of the park. There were some excellent wide ranging responses from perceptive candidates. Weaker responses typically included simple references to rangers, litter control or restricting access to areas, and were usually able gain some marks.
- (c)** Answers relating to examples from candidates' home countries were plentiful and often detailed. There were also plenty of classic text-book exemplars such as skiing in Courmayeur and safaris in Kenya. Weaker responses referred to whole countries rather than tourist areas and gave lists of basic points like more jobs, more litter, and so on. This was another successful case study for many candidates and a wide range of answers was seen, most of which were balanced between benefits/problems. Some candidates strayed into problems for the natural environment without relating these to people. As with previous case studies, improvements could be made through developed ideas and the presence of place specific detail.

### Question 6

- (a) (i)** Numerous different ways were used to define pollution but most candidates produced something which was acceptable.
- (ii)** Well answered by most who were able to pick out two relevant phrases from the resource.

- (iii) The impacts on people were generally well done with ideas such as smell, loss of jobs and health issues gaining the marks easily. However, some referred to the environment rather than people.
  - (iv) Popular ideas were 'kills' and 'habitat'. Whilst some candidates did develop other ideas, not many were able to reach full marks.
- (b) (i) This question was not very well answered. Many candidates struggled to state the main points describing features of the homes. This type of question needs further focus from candidates, thus the skill needs practising.
- (ii) All methods could be successfully justified and good answers were seen on each. Weak responses referred to features of all methods (e.g. it would clean up the beach/sea) rather than the evaluation required. Typically the stronger answers wrote about cost effectiveness and economic benefits, particularly in relation to the retention of the fishermen's community, discussing the advantages of the chosen method along with reasons for rejection of the other two methods.
- (c) Many candidates were able to draw on experiences from their home countries and cities. Some struggled to identify the source of the pollution in a developed way, such as exhaust fumes or specific chemicals from vehicles. Impacts, particularly on people, were often well-explained with reference to specific conditions like asthma, bronchitis or, more extremely, lung cancer. Many good answers about Beijing, Shanghai and numerous other Chinese cities were seen. Place specific detail could have been evident in more answers.

# GEOGRAPHY

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Paper 0460/21

Paper 21

## Key Messages

- Many candidates failed to understand clearly the different meanings of command words such as describe, suggest and explain and what responses these require
- Answers to questions using phrases such as “Using evidence from Fig. 1 **only**.....” should be answered referencing evidence from the relevant figure and other evidence cannot be given credit.
- The syllabus contains detailed instructions on how to give grid references and has a suggested method for measuring distances on maps

## General Comments

Responses to the questions ranged from excellent to weak across the whole paper. There were several really good scripts and only a very small number of weak ones which scored fewer than 20 marks. Handwriting, in general, was legible and clear. Almost all candidates answered the questions within the spaces provided and avoided the use of additional sheets.

## Question 1

- (a) Many candidates scored good marks in this section and used the map key with care. Almost all candidates identified the Mazowe river correctly in part (i). Copying of a full line of the key showing more than one symbols should be avoided as no marks can be awarded for this. For example, in part (ii) where the correct answer was *quarry* or *excavation*, those who wrote *mining* or *prospecting trench*, *mine dump*, *quarry* or *excavation* did not gain credit. In part (iii) where the answer was *huts*, those who wrote *huts*, *staff quarters* did not gain a mark. Most candidates correctly identified *orchard* or *plantation* in part (iv) and the *wide tarred road* in part (v).
- (b) In part (i), most candidates scored full marks for naming three services out of many possible answers. In part (ii), candidates commonly and correctly recognised factors such as the presence of *flat land*, *mining*, *water supply from rivers or dams* and *many services*. References to roads and railways were sometimes vague and lacked map evidence; marks were awarded for the idea of a route centre or transport junctions, not merely for stating that there are roads.
- (c) This question was carefully answered by the majority of candidates with most scoring at least 3 marks out of 5. The most common error related to the understanding of high drainage density where a number of candidates incorrectly ticked *Area in Fig. 2B* rather than *Area in Fig. 2A*.
- (d) This section was answered with mixed success. The six figure grid reference in part (i) was rarely correct and commonly 285863 was incorrectly stated. The method for giving the third and sixth figures of grid references is described in the syllabus. There were many accurate responses to part (ii) where answers between 5200 m and 5400 m were accepted. Some incorrect answers given were *0.106 m* or *5.300 m*. Using the edge of a sheet of plain paper (in the Additional Materials for the examination) and comparing the distance against the scale line, rather than a mathematical calculation, is often more likely to result in a correct answer. A range of answers was given in part (iii), the correct one being 216°.



## Question 2

- (a) Many candidates found interpretation of Figs 4A and 4B difficult. The question required them to describe where coral grew using the maps, and then use their knowledge to explain this. The depth of the sea in part (i) was 5-200 m, the salt content in part (ii) was 35-37 ppt and the prevailing wind in part (iii) was the windward or simply windy side. Unfortunately, very few candidates were able to link correct explanations from their knowledge to the descriptions given. Some good candidates scored the marks for explanation but generally knowledge of the topic was disappointing and many candidates were not aware of factors such as light, salinity and oxygenation.
- (b) A large number of answers were incorrect in this section, especially in part (i) with the whole range of possible answers being suggested. The correct answers were: *B* in part (i) and *D* in part (ii). Candidates found it difficult to relate Fig. 5 to Figs 4A and 4B.

## Question 3

- (a) In part (i) most candidates were familiar with the term *extinct* although there was some confusion with *dormant* volcanoes. Answers in part (ii) were almost always correct and included reference to evidence such as housing, a building on the volcano's summit and the presence of trees and other vegetation.
- (b) There was a great range in the quality and accuracy of the field sketches. Up to 2 marks could be gained for the actual drawing (the shallow sloping sides and the accuracy of the summit area) and up to 3 marks for labels including *cone*, *gentle slopes*, *wide base*, *crater*, *secondary cone* and *shield*. One mark was reserved for accuracy of diagrams.
- (c) Whilst candidates often tried to use their knowledge to suggest reasons for the differences in the shapes of the volcanoes in Photographs A and B, few scored significant credit however. Many gave lengthy discussions of plate tectonics without referring to the variation in the nature of the lava giving rise to the different forms.

## Question 4

- (a) Many responses were of a very good standard with accurately drawn pie charts, shaded with the correct key. Full marks were given to those where the smaller segment measured 42°- 44° and the correct key was used for both segments.
- (b) Most candidates responded correctly to all or most of this section. Those who scored poorly (especially in part (iii)) often ignored the instruction to use only information from Fig. 8 and included information which could not be given credit.
- (c) The best answers were those where the candidate linked evidence in the photograph directly to the disadvantage for the local people. Answers such as *the chimney releases air pollution*, *the smoke causes breathing problems* and *visual pollution from the pylons* were given credit but those which did not include evidence from Photograph C were not.

## Question 5

- (a) Most candidates full credit and there were very few errors.
- (b) Once again, most responses gained full credit and most candidates realised that the changes in the *total* numbers were what were required.
- (c) There were some very pleasing answers in this section and a very good understanding of the changing shape of population pyramids was widely demonstrated. The key ideas that the younger adult population would decrease in number whilst the older group would increase over the 20 year period were clearly stated.
- (d) Most candidates recognised that *differences* were needed here. Many correctly compared the relative numbers of young, adult and elderly and scored both marks. Unfortunately, those who tried to back their ideas up with figures frequently made errors as a result of misreading Fig. 10.

**Question 6**

- (a) Most candidates read the isohyets correctly to identify the answer of *10-15 cm*.
- (b) Close attention to the detail of Fig. 11 led to most candidates scoring well in all three parts of this section. In part (i), a variety of answers was allowed including New Bern or Cape Lookout and New York or Long Island. In part (ii), N, NW and NNW gained credit. In part (iii), the decreased strength was identified by most candidates.
- (c) This proved more challenging for some candidates, but once the weather hazards of *heavy rain* and *strong winds* had been recognised, most were then able to link relevant effects from the resource.

# GEOGRAPHY

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Paper 0460/22

Paper 22

## Key Messages

- Some aspects of describing rivers on survey maps could be improved (see below).
- Many candidates are unaware of the difference between *epicentre* and *focus*.
- Candidates frequently confuse instructions to describe landforms with instructions to explain how landforms form.
- Candidates are generally very competent when analysing statistical data and graphs.
- In photograph description questions, candidates should describe what they can see in the photograph rather than referring to background knowledge of features which cannot be seen.

## General Comments

The paper proved to be accessible to candidates. Strong candidates were able to score marks well in excess of 50 and the weaker candidates were able to gain credit for demonstrating their knowledge and skills. The highest marks were generally achieved on **Questions 2** (except part **(a)**), **5** and **6** with the two photograph questions, **Questions 3** and **4**, proving more difficult. The standard of presentation of written answers was very good with candidates answering in appropriate detail and depth. It was very exceptional for a candidate not to complete the paper.

## Question 1

- (a) Most candidates scored full marks, demonstrating their ability to find features on the map and then use the key to identify them. Some candidates confused the symbol in part (iii) where the key showed the symbols for a *bridge* and a *gravel or earth road* on the same line. In this case the correct answer was simply *bridge*. In part (v) it was intended that the symbol at point E indicated a waterfall however Examiners also accepted the answer *weir* because of the proximity of that feature.
- (b) Many candidates were able to score full marks on this question. Marks were awarded for noting the flow direction to the N or NNE, then towards the NE or ENE or E, the meanders, fairly straight sections, the many tributaries, the small tributaries, the width of 100 m – 300 m or widening downstream, the islands or braiding, rapids, waterfall and gentle gradient. As is sometimes the case, some candidates wrote irrelevantly about the land surrounding the river. On this occasion fewer candidates reversed the flow direction of the river and referred to tributaries *leaving* the river, although this remains an issue. Some candidates were confused by the braided sections of the river and referred to these as oxbow lakes.
- (c) This was answered less-well than part (b). There were some irrelevant answers from candidates who did not understand the meaning of the term *relief*. Marks were most commonly awarded when candidates noted the hill (or mountain or upland), the plateau (or flatter top) and steep slopes. Some candidates misread the 1400 m contour as 400 m. Others said that 1400 m was the highest point when there were contours higher than this. Candidates often did not appreciate that the height of a summit will be higher than the height of the highest contour.
- (d) The ability of candidates to give the third and sixth figures of grid references (using the method described in the syllabus) is generally improving however this remains an issue for some candidates. Most candidates gave the correct bearing, although 216° was a common incorrect response.
- (e) This was well-answered with the majority of candidates correctly identifying the linear settlement pattern and giving the reason of transport along the road. Less frequently candidates referred to

gentle slope, avoiding steep or high ground, the edge of the cultivated land, water supply from small rivers and avoiding flooding from the Pote river and all of these were given credit.

- (f) There was a wide range of responses to this question which tested the skill of labelling the positions of features on a cross section. Many candidates produced extremely accurate, carefully measured and clearly labelled answers. The mark scheme gave a reasonable tolerance for each answer. A small number of candidates did not draw labelled arrows which ended exactly on the topographic profile. Arrows which ended a long distance from the profile were ambiguous and could not gain credit.

### Question 2

- (a) Few candidates were able to give the precise definition as *the point on the Earth's surface directly above the focus*.
- (b) Some candidates found it difficult to plot the isoseismal line on Fig. 4. One mark was awarded for the line passing between the 7 and 8 values north of Yokohama and a second mark for the line passing between the 7 and 9 values north of Furukawa. Part (ii) was answered much better with candidates noting that the highest intensities were close to the epicentre, in the east and decreasing from 9 to 4.
- (c) This was answered very well. Candidates noted that the large population of Sendai suffered a high intensity earthquake and a tsunami. There were many excellent answers noting how the configuration of bays and headlands protected Osaka and Yokohama from the tsunami.

### Question 3

- (a) As is frequently the case, the photograph description question produced a varied response. For relief, examiners gave credit for noting the flat or gently sloping lower areas, the small hills, the plateau, steep slopes, boulders and the dry river bed. For vegetation, examiners gave credit for noting the overall sparse vegetation, trees, scrub and dry grass. Some candidates correctly identified that this was desert vegetation and gave long accounts of features such as small leaves and deep roots. These features were not visible in the photograph and no credit could be given for these answers.
- (b) The syllabus requires that a small percentage of marks on this paper are for Assessment Objective 1 – Knowledge with Understanding. This part of the question tested this objective. Candidates were required to give two features of the vegetation and, in each case, explain how it was an adaptation to the dry climate, e.g. shallow, widely branching roots to catch rain before it evaporates. Many excellent answers were received, although other candidates referred simply to data from Table 2 and therefore did not answer the question.

### Question 4

- (a) In the descriptions of landforms X and Y, examiners gave credit for simple points such as, for X: beach, sand, gentle slope, low tide, and for Y: cliff, layers of rock, small amounts of vegetation, bare rock, different colours. This allowed many candidates to score full marks. Candidates who did not identify the landforms correctly often gained good credit through valid description. Other candidates went beyond the brief of the question and wrote long but irrelevant explanations of how the features were formed. They then repeated this for part (b).
- (b) Candidates generally scored quite well on this part of the question. Credit was given for noting wave action, a relevant process of marine erosion such as abrasion, undercutting, collapse, retreat and repeated action.

### Question 5

- (a) Candidates coped well with the unfamiliar way of showing population structure presented to them in Fig. 5. They generally gave two points such as noting that the total population of the European Union had more young people, fewer of working age and more old people. Occasionally candidates failed to note that the question required differences between the two populations, and so they did not gain any credit for their answers. Most candidates noted that the main reason for the difference was that the foreign born population contained large numbers of people who migrated for work.
- (b) This potentially demanding question was well-answered. In parts (i) and (ii), candidates noted that the total population of Belgium had increased over the time period and that immigration was greater than emigration. In part (iii), many noted that net migration did not account for all the population increase. They supported their answers with data from Table 3, e.g. by saying that in 2005 net migration was 46 000 but the population increased by 50 000. They referred to natural increase or birth rates and death rates as being the explanation for the figures.

### Question 6

- (a) Most candidates were able to note that Ovoort Tolgoi was south west from Ulaanbaatar and that the distance from Ulaanbaatar to Tavan Tolgoi was 550 km.
- (b) This question was also well-answered. Candidates noted that the very large population of China shown in Table 4 would lead to a high demand for coal and that the proximity of the coal extraction areas to the Chinese border shown in Fig. 6 would make transport easier.
- (c) Most candidates scored at least three marks out of four. For the advantages, examiners were looking for two simple points: that coal mining would produce financial profits and that these profits could be invested in various infrastructure projects. For the disadvantages, examiners looked for more precise and detailed analysis of Fig. 7. This might be the damage to grazing lands which would affect wild animals, or that the mines would consume water used by people or the effect of dust on people e.g. health.

# GEOGRAPHY

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Paper 0460/23

Paper 23

## Key Messages

- Candidates need to study the map very carefully before deciding their answers. Looking beyond the area in question can often help with interpreting the landscape. For example, contour line labels may be some distance away from the designated area.

## General Comments

Most candidates found the paper to be accessible and were able to score marks well. This was so on **Question 1**, which required relatively few extended prose answers. Candidates also found **Question 2** and **Question 4** relatively straightforward. **Question 2** contained the main piece of extended writing on the paper but there were plenty of points that could be made and many achieved full credit on this. Candidates found **Question 3** to be the most challenging.

## **Question 1**

- (a) The first task was to locate on the map extract the area shown on Fig. 1 and identify the features indicated. A was the dip tank, named as Nzvimbo Dip. B was a gravel or earth road. C was police station. D was the aerodrome landing area. E was a hut. F was cultivation. Most candidates found this to be fairly straightforward and got a majority of correct answers. The most difficult was the gravel or earth road at B. Some responses copied the whole line from the key and thus including the *bridge*. Narrow tarred road was the most common incorrect answer. The police station at C was difficult to spot on the map but most candidates managed this. However, several did not select carefully from the key with *post station* appearing as an incorrect answer on a number of scripts. For D, a few just put the name *Chombira* rather than identifying the symbol with the aid of the key. For E, *huts*, *staff quarters* was not correct and again candidates needed to select from the key.
- (b) The river Chipfururwe, north of grid line 15, had a gentle gradient, rapids, some meanders and was crossed by many tracks. Most candidates got at least 3 out of 4 of these correct. The most common incorrect answers were to describe the river as completely straight and also wide.
- (c) The six figure grid reference of the road junction was 922143 or 923143. The most common error here was 4 rather than 3 for the last digit, and this was a more common response than the correct answer. A few candidates listed 6 possible services at this location.

The compass bearing from the stores to the Muchirakuenda School was  $108^\circ$ . Three other options were given, all of which could be obtained through aligning the protractor with the wrong cardinal point. These wrong answers appeared with fairly similar frequency to each other. Many candidates did choose the correct answer.

Four choices were also given for the distance by road between these points and 4300 m was the correct response. Many candidates chose the correct answer. Those in error had tended to over measure.

- (d) In this section candidates had to compare the features of two grid squares and a table was provided to enable them to present their results in a simple way. An area of linear settlement was in 9617, as was a very high density of drainage, though *neither* was also an acceptable alternative for drainage, due to the subjective decision needed to determine *very high* drainage density. Land over 1440 m was found in 9616. Neither area had a tarred road, while both had a building. Most

candidates scored at least 3 here, but relatively few had all 5 correct. Wrong answers were most common on drainage density and land over 1440 m.

- (e) Credit was given to those candidates who drew the subdivision boundary on Fig. 2, such that it intersected northing 19 between 16 mm and 19 mm east of easting 89, and northing 16 between 10 mm and 13 mm east of easting 88. Candidates who drew a single straight line, most often had it in the correct place, though a few had incorporated the junction in 8815, showing that their area was 1 km too far to the south. Others drew complex patterns as they had selected the wrong type of line: either the contours or the roads and tracks. Candidates offering no response to this question were quite common here also.

### Question 2

- (a) This was the main piece of extended writing on the paper and most candidates were able to score all available marks, since there were plenty of points to discuss. Most candidates noted the flat, grassy foreground and the hill behind, with its trees and boulders. Other points given credit were bare rock, rounded tops, cracks, scree or fallen rocks, cliff, layering, a comment on the rock colouration and, in the foreground, terraced, cactus and dry river channel. In the best answers candidates systematically covered the whole area and wrote about everything that they could see. The stem of the question indicated that there were two zones and it was necessary to make at least one comment about the foreground. A few candidates wrote in great detail about the background only, so missed one of the marks. A small minority picked up on the weathering and wrote about processes, which was not relevant.
- (b) Location B was the location where weathering would be likely to have least effect, due to the absence of cracks through the rock. Most candidates responded correctly.
- (c) The correct statements in the table were *when rock is weathered the broken rocks remain at the location* and *when rock is eroded the broken rocks are transported away*. Candidates seemed to find this knowledge question rather difficult and there was a wide range of answers, with no particular pattern to the incorrect ones.

### Question 3

- (a) Most candidates completed the graph in Fig. 4 correctly, though, as always, a few missed this completely. A small number had added a further section to the top of the bar for May.

The annual temperature range was 2°C, though many had expressed this incorrectly as 26 - 28°C. Some had a correct calculation but had omitted to record the units.

Plants can grow all year round in this climate because it is warm/hot all year and wet all year. To score the marks the *all year* aspect needed to be clear and it was not enough to say that the temperature was constant without giving an indication of the heat level. Most candidates had the right idea but did not always express it well. Many included irrelevant references to sunshine hours.

- (b) Many candidates made statements such as *to get lots of sun*, but the key to a good answer here was the use of Fig. 4, as indicated by the question. Scrutiny of Fig. 4 revealed low sunshine hours at certain times of the year so the broad leaves are needed to maximize sunlight exposure at these times. An alternative approach was to comment that due to high rainfall there was no need to minimise water loss. Few spotted the cloudy climate shown by the resources.

Leaves with drip tips are necessary to shed the heavy rainfall. Correct answers were more common here, though *because of heavy rain* was too vague and some candidates wrote about conserving water, absorbing water or transpiration.

- (c) Buttress roots provide useful support for the tall rainforest trees, helping to keep them stable in the muddy, wet ground. They are also shallow so able to make good use of the surface nutrient concentration. Many candidates wrote about the support/stability idea, but few appreciated the shallow nutrients and wrote instead about deep roots or just water absorption.

#### Question 4

- (a) Although some omitted this section, most candidates correctly completed both the lines and the key for the south-east region pie chart on Fig. 6. They then used the pie charts to indicate in the table that the most pasture was in the mountain states, most arable in the Corn Belt and greatest area of “other” land-uses in the south-east.
- (b) Some candidates used the idea of mountains indicated by the name “Mountain States” and wrote about the effects of relief and/or altitude. Others simply took any two physical factors, which was also acceptable, though it was necessary to explain their influence rather than just state them. Any factors relating to relief, climate, soil or vegetation were valid. A few candidates wrote about human factors but these were not common. More often answers lacked a clear enough explanation of the influence of the factor.

#### Question 5

- (a) The second photograph question showed a rural area in Lesotho. Candidates were asked to describe the settlement and were given headings as a structure.

The settlement was small in size, with few buildings, classing it as a hamlet or a small village.

Site proved to be more difficult as candidates were drawn to the surroundings rather than the land that the settlement was actually built on. Thus many wrote *surrounded by mountains* instead of stating that the settlement was on the hillside/mountainside. Other valid points were gentle slopes, lower slopes and also the apparent lack of a river at this dry point and the lack of a road. Candidates struggled to score on this and a score of 2 was very uncommon.

In part (iii) the layout could be viewed in more than one way. Just considering the area of the settlement, the buildings within that area are relatively well spaced or scattered. However, considering the whole area of the photo, the buildings then could be described as clustered or grouped. Thus it was relatively easy to gain the mark, provided the candidate understood the term *layout*.

Land around the settlement was used for farming and any indication of this was accepted, including fields, crops and terraces. A few candidates decided that the land was not used for anything, or wrote about natural vegetation, but most had a correct answer.

- (b) Many candidates scored 3 marks. They commonly pointed out that the area was mountainous and remote, with no visible power lines, water source or roads. Also the dry land would indicate a dry climate, the open landscape would offer little shelter and the area appears to lack resources. All of these would discourage growth of settlement. Some candidates wrote about the lack of services such as schools, hospitals etc. but these would be expected to come after a growth in population.

#### Question 6

- (a) The south-east of Colombia had a population density of less than 1 person per square kilometre. Most candidates had located the right area and read the key correctly, but many had spoilt their answer by failing to state the units of measurement.
- (b) Attention was then turned to the areas of highest population densities. *South-west, Andes, mountains* or *highlands* were all acceptable for P, while *north-west, coastal* or *lowlands* was correct for Q. Many candidates had located the areas on Fig. 8 and selected from the key there. A small number had written their descriptions for P and Q the wrong way round, probably because Q appears to the north of P on Fig. 7.
- (c) Candidates had plenty of ideas for this question. Most wrote about the likelihood of ports, with associated trade and transport and some developed this further, writing about subsequent economic development, industry, jobs and immigration. Other responses focused on the coast for tourism or fishing. A few picked up on the lowland, which would be likely to have less hindrance to road construction, building and agriculture, though this had to be in relation to lowland, not flat land. Most scored both marks. A few wrote about climate being modified by coastal location, but this was not a convincing argument.



- (d) This was done well. Most mentioned either tourism or fertile soils. A few wrote about minerals.
- (e) In this part of the world the surrounding lowlands are hot, so the mountains offer a cooler climate, with less humidity. Some areas would have lower rainfall too. Candidates who wrote about climate, generally scored well, but many focused on the lowlands and wrote about flooding being a problem in the surrounding river basins. Others wrote about agriculture or the volcanic landscape attracting tourists.

# GEOGRAPHY

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Paper 0460/03

Coursework

## General Comments

There was quite a large increase in the number of Centres taking this paper. The majority of the new Centres approached the work well, and achieved results that reflected the potential of their candidates. Established Centres continued to work well to the tradition established. All Centres will have feedback from CIE Moderators. Comments usually include those firstly on the quality of candidates' work, and if relevant, on how candidates might improve their written accounts to increase the credit they could be awarded, secondly, on the quality of the assessment and how, and if applicable, it might be improved, and finally on administration in general. In most instances, all these three areas addressed are complimentary, but if Moderators have suggested ways to improve, it is worth considering these comments carefully.

Many of the new Centres and the majority of those that had entered candidates in previous years, had made clear preparation for the Coursework element and supported their candidates well. These Centres achieved sound results and Moderators had little difficulty with them.

There were however weaknesses reported by Moderators that were more common in new Centres but also occurred with some Centres that had undertaken this work in previous years. These weaknesses fell mainly into three classes that will be outlined below.

Most Centres had submitted proposals of the work they intended to carry out. These had been frequently approved without any changes being necessary. Some Centres were given advice on the suitability of the investigation, or assistance was offered on certain areas of the investigation. The subsequent submission of work, which seemed to have been acted upon for the benefit of candidates, was almost always good. But some Moderators reported on having received studies from Centres that had not submitted any proposal, with some of the work sent in being inappropriate in one way or more. The most common was that they did not give access for candidates to achieve high credit in one or more of the assessment criteria, or across the range of assessment criteria. Of those falling into the category of not submitting a proposal, the majority involved carrying out investigations that could uncover some very good Geography. Usually the method of data collection was very good, and candidates reported this in detail. But many Centres that had not submitted proposals had neglected to give sufficient attention to some of the work that could be credited under assessment criteria other than Observation and collection of data. A few interesting investigations were carried out without any reason for them and the Knowledge with understanding did not appear in any section of the reports. Sometimes hypotheses or guiding questions were presented but with little or no support as for their choice and the Geography that inspired them. If these are not clearly presented in proposals, Moderators will have pointed this out. But if no proposal had been submitted, it is possible that work may be submitted that is weak in this area.

Organisation and presentation can be overlooked by Centres. Youngsters of IGCSE age may be aware of pie and bar charts, but are often unaware of more complex ways of presenting information unless guided. Occasionally proposals indicate that little guidance will be offered to candidates here, but proposal reports returned to Centres would, in these circumstances, suggest what would be appropriate for the investigation undertaken, especially to give guidance as to how high credit can be achieved. For Geography work, the greatest weakness in presentation is in the use of maps. A whole range of map types is available in Geography, and they are often amongst the best ways of portraying results.

The areas most neglected in proposals are Analysis and the writing of a Conclusion and evaluation. Geography Coursework is often the first work undertaken by candidates where an analysis of collected data has been carried out. With only a small amount or no experience of this aspect of the work, youngsters have little idea of what is expected of them, and some supported guidance of how to carry out this work is offered if it is often not evident in a proposal. Conclusions and evaluation fall into a very similar situation. Without submitting a proposal it is easy to undertake Coursework without an appreciation of what support candidates are likely to need.

By submitting a proposal there is the opportunity to undertake an investigation with a greater awareness of the qualities that will be assessed.

The marks submitted by Centres are on the whole, unchanged. But Moderators have to ensure that the standard of assessment is uniform for work submitted, no matter from what part of the world it originates. If any Centre is new to this work, it is very helpful if teachers from the Centre go through the training offered by CIE and are accredited as having reached the required standard. Without going through this process, it is very difficult to be aware of the standards looked for by CIE Moderators. The training is relatively simple and feedback is designed to be supportive and constructive rather than be negative and critical. Where CIE Moderators have had to recommend a change to the marks submitted, it is often the case that no teacher in the Centre has completed the training offered.

Overall, the administration of all the accompanying paperwork was of a very high standard and Moderators within Centres, along with Examination Officers in the Centres, are to be thanked and congratulated. CIE Moderators frequently commented favourably on this in their reports back to Centres. There is only one area where some errors occasionally, but consistently, creep in, so it worth identifying this for future sessions, and for Centres to give attention to it. The marks of of twelve, for each of the assessment criteria, need to be added to give the final total. It is easy to make a mistake here, as it is this total that is then transferred to documents to submit marks to CIE. CIE Moderators discovered a number of instances of errors here, and where detected, corrected them so that the candidate received the right mark. There seemed to be an equal number of changes needed where the candidate had benefitted from the error as where they had received a lower mark than earned.

It is clear that most Centres go to some trouble to ensure that their candidates stick to the word limit. Moderators have little concern where candidates marginally stray over this limit. But in instances where candidates go 50% or more beyond the limit, this really does require action by the Centre in future. If such over length studies have been submitted, Moderators will have mentioned this in feedback. If a Centre has allowed a large number of candidates to stray well beyond the word limit, a note of this has been made. If a Centre persists with over length studies, CIE may well need to take take action to correct this and be in contact with Centres involved if it occurs again in the future.

Overall the main feedback from Moderators is that is heartening to see so much good Geography being undertaken, and clear enjoyment of the work in the reports written by the candidates. There is clearly much high quality teaching taking place, and first class fieldwork undertaken which is very much welcomed by CIE Moderators.

# GEOGRAPHY

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**Paper 0460/41**  
**Alternative to Coursework**

## Key Messages

There are a few generic tips and key messages that should improve candidate performance in future. Here are a few key messages that the Examiners feel will benefit future candidates if they are passed on by teachers:

- When answering hypothesis 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 / To some extent. If you are asked to support your decision with data then statistics must be used from the resources referred to. Data is quantitative; evidence can be qualitative or quantitative. If you make an incorrect conclusion to the hypothesis you will gain no credit for the answer.
- 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*.
- When asked to compare, make judgements e.g. *higher, lower*, rather than just list comparative statistics.
- Check you are using the resources that a question refers you to, e.g. *Use the map key in Fig. 1 and Use the results in Table 5*.
- 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 valuable time.
- If you have to write more than the lines allowed indicate this with a phrase such as '*continued on additional page*'. This is very helpful to the Examiner in finding your answers.
- When completing graph work use a dark-coloured pencil as scripts are scanned for marking and light colours do not always show up. Always shade bar graphs and pie charts accurately.
- When you think you have finished, check that you have not missed a question out. Some questions are hard to find if they are on pages with a lot of graphs or maps. Make sure you have answered the questions on every page. This applies especially to questions where you are asked to complete tables, diagrams, graphs or maps.

## General Comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks was similar to previous years - with weaker candidates scoring on the practical questions, such as drawing and interpreting graphs and tables, and candidates of higher ability scoring well on the more challenging sections requiring explanation and judgement especially regarding hypotheses. Overall **Question 1** proved to be slightly easier than **Question 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 significant 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 and equipment. Particular questions where candidates did not score well often related to them not carefully reading the question, for example **Question 2(c) (ii)** where candidates were instructed to suggest problems in completing a questionnaire survey not compiling the questionnaire itself. As in some previous papers **Question 1 (e)** required candidates to suggest a suitable fieldwork investigation methodology. Such questions are frequently included on this paper and are an area which Centres should practise with candidates. **Question 1(c) (i)** required candidates to know about a specific sampling technique which candidates should have learned in class.

Candidates who sit this examination will 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 **Questions 1(c) (ii), 2(a) (ii), 2(a) (iii), 2(a) (iv), and 2(d)** focused on specific equipment and techniques commonly used in fieldwork. Centres are encouraged to carry out basic fieldwork with candidates, especially using simple weather techniques which can be carried out on the premises.

### Comments on Specific Questions

#### Question 1

- (a) (i)** Many candidates scored full marks, although a significant proportion missed out the task. The common mistake from candidates who gained no credit was to label the two buildings with 'clothes' and 'bank' rather than using the key as instructed.
- (ii)** Many candidates showed good understanding of 'distribution'. Candidates described by using terms such as clustered and linear or described it as east of the CBD or used named roads.
- (iii)** Most candidates correctly identified the department store by using the key.
- (iv)** Most candidates correctly identified the furniture store by using the key and scale.
- (b) (i)** Only half the candidates correctly identified the data as secondary data. The spread of responses suggests an element of guesswork by other candidates.
- (ii)** Most candidates worked out the correct difference in number of shops and plotted these on the bar graph. Some weaker candidates were unsure about positive and negative values and so plotted furniture stores on the positive axis.
- (iii)** Most candidates correctly concluded that the hypothesis was true and supported their decision with appropriate evidence. Some candidates used overall totals of shops or services, but most compared statistics for individual types of shops or services.
- (c) (i)** Sampling continues to be a difficult concept for many candidates. Some candidates omitted the question which indicates lack of knowledge of stratified sampling. Many candidates described other methods of sampling rather than stratified. Where candidates addressed the question correctly many did score a mark for reference to gender or age. Only the best candidates also referred to the idea that stratified sampling should reflect the population in terms of percentage or proportion, which is the key characteristic of stratified sampling.
- (ii)** Candidates had to focus on possible problems of completing the survey, those that did so scored well. Other candidates failed to score marks because they wrote about possible problems of the questionnaire itself which was not wanted.
- (d) (i)** A significant number of candidates did not attempt to complete the pie graph. Those that did answer the question generally scored well and plotting was usually within tolerance. The most common error was to reverse the position of the two shaded segments by not following the key.
- (ii)** Many different appropriate reasons were suggested for shopping in the city centre. The only significant error was made by candidates who included reasons given in the questionnaire.
- (iii)** Almost all candidates correctly identified appropriate headings for the two answers, usually referring to overcrowding and gangs.
- (iv)** This required a more challenging conclusion to the hypothesis because two aspects had to be evaluated. Candidates had to recognise that the hypothesis was true for the variety of shops but false for litter and graffiti, or make the conclusion that it was partly true. Where candidates gave an incorrect conclusion of true or false they gained no credit as both are incorrect. Good candidates were able to support their conclusion with evidence from the results' tables.
- (e)** The final section proved to be difficult and challenging for many candidates who were unable to suggest appropriate fieldwork to investigate the sphere of influence of shops. Candidates who scored marks usually did so by first referring to using a questionnaire but many did not specify that

it should be used in the shopping area. Some candidates mistakenly thought it could be used in a door to door survey. Some candidates who wrote about carrying out a survey failed to mention that the key question 'where do you live' should be included. Only a small minority of candidates addressed the question of how they would show the results of a survey. Those that did include answers usually scored well for including ideas about plotting results on a map of the area and drawing a boundary around the plots.

## Question 2

- (a) (i) Most candidates identified the appropriate measuring instruments. Those who failed to score both marks usually did show knowledge of the barometer.
- (ii) Candidates found the question challenging. There was no particular answer which candidates could not do but few managed to explain fully how the equipment is used.
- (iii) Candidates were more knowledgeable about the siting of the rain gauge than about how it works. Maybe this is because location is taught in class but fewer candidates had experience of actually using the equipment.
- (iv) Although many candidates scored both marks a significant proportion suggested ideas that were too vague to credit. They wrote about putting the wind vane 'on high ground' or 'in a high place' rather than on a roof or top of a building.
- (v) Although there were some detailed answers which scored full marks many candidates were vague in their explanation of how a wind vane works. Again their answers suggested that many candidates may not have seen a wind vane in operation. Many candidates did not understand the significance of the pointer or arrow indicating the direction that the wind is coming from. Other candidates failed to explain that the wind pushes the tail rather than the whole wind vane. Many did not include reference to direction points on the wind vane.
- (b) (i) Most candidates correctly identified the correct atmospheric measurement.
- (ii) Most candidates also identified the correct time and day.
- (iii) Many candidates concluded correctly that the hypothesis was true. They supported their decision with appropriate evidence from the graphs. Their evidence could be either trends recognised on particular days or statistics to show the relationship.
- (c) (i) Most candidates plotted the measurement from day 14 correctly but had difficulty in plotting the measurement for day 2. This was because there was already one plot at  $10^{\circ}$  from the south and they were required to add another cross next to it. Many candidates put their cross on top of the existing one which was not acceptable.
- (ii) Many candidates agreed with the conclusion given in the question that the graph showed no clear relationship between temperature and wind direction. They chose appropriate supporting evidence from the graph by giving examples of when the temperature was the same even though the wind blew from different directions, and how the temperature varied when the wind blew from the same direction.
- (iii) Many described the change accurately. Some candidates did not gain credit because they did not include the decrease in temperature after midday.
- (iv) This question proved to be difficult for some candidates. Correct responses were based on changes in sunlight during the day. However, many candidates suggested the effects of rain, cloud and wind which were not relevant.
- (d) The question differentiated well. Although some candidates had obviously done fieldwork to measure cloud cover, a significant proportion did not attempt the question. The best answers included clear descriptions of how to measure both cloud cover and type. Weaker candidates could not do either and often gained credit only for the idea of 'look at the clouds or sky'. A common error was that some candidates created a new hypothesis about clouds and explain how they would test it. However, the question did not ask for that approach and indicates that candidates should read the question carefully.

# GEOGRAPHY

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

## General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks was similar to June 2013 - 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 no reports of time issues on this examination as the booklet format does not allow or encourage over-writing of sub-sections. This year, however, many candidates chose to write longer answers and frequently wrote down the sides of the pages or added 4-12-page booklets at the end. It is important that, when candidates write the remainder of their answer elsewhere, that they signal it by writing something; like –“continued on page 15” to ensure it is seen.

Most points for teachers to consider, when preparing candidates for future Paper 42 questions, relate to misunderstanding or ignoring command words, the use of equipment in fieldwork and the importance of experiencing fieldwork – even if is only in the School grounds. Particular questions where candidates did not score well also often relate to them not fully reading the question or just completely missing out straightforward graph completion questions. 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.

As this is an Alternative to Coursework examination, candidates will still be expected to show that they know about fieldwork equipment, how it is used and fieldwork techniques especially those to do with systematic, random and stratified sampling which continues to be a topic that most candidates do not seem to be able to grasp or distinguish between. Some fieldwork experience is vital even if there is only limited opportunity within the Centre. Familiarity with maps, tables and various graphs is also important to this examination.

**Question 1** required candidates to know about digital weather instruments, sampling as well as comparing maps, locating plots, drawing bar charts, making various calculations and judgements regarding statistics as well as applying knowledge and understanding to hypotheses. They were also required to know about safety in fieldwork and to think about improvements to the investigation they had just answered questions on.

**Question 2** required candidates to have experience of using an environmental quality sheet, bi-polar survey, organising themselves to carry out urban fieldwork, drawing horizontal bar charts and divided bar graphs, and using and comparing statistics as well as analysing and making judgements from evidence with regard to hypotheses. They were also required to know about pilot surveys and suggest a new investigation into housing areas.

## **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 / To some extent. Do not just copy out the Hypothesis if you agree with it.
- When giving figures in an answer always give the Units if they are not stated for you.
- When shading graphs, use the same style as that provided in the Question and make sure your pencil gives a good dark image.
- Read questions carefully and identify the command word e.g. *Describe...*, *Explain...*, *Compare...*
- When asked to compare use words like “closer”, “nearer”- not “close” or “near” – see **Question 1b(vi)**.
- Check you are using the Resources that a question refers you to e.g. **Question 2b(iii)** Table 2 and Fig.5.

- 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.
- Make sure you understand the three key sampling techniques that are used in most examinations – these are systematic, stratified and random. It is important to know in which situation each is most appropriate.
- Make sure you understand how the fieldwork is being carried out e.g. in **Question 2** many candidates did not gain many marks for **(a)** and **(b)** because they thought the environmental quality sheet was to be completed by candidates asking people their views – but the candidates did this themselves as clearly stated. It was only in **(c)** that questionnaires were used.

### Comments on specific questions

#### Question 1

- (a) (i)** This question required ideas about safety that would be given by a teacher. Many candidates gave three sensible pieces of advice such as stay in groups, wear sensible clothing, and take precautions regarding insects, wild animals or the sun. Other candidates did not focus on safety and gave answers such as use a stick, do it in daylight, tell the teacher where you are going (the teacher would be with them) and do not pick flowers or climb trees.
- (ii)** It is important in this sort of question to make sure that X and Y are distinguished in the ‘Differences’ rather than using expressions like “One goes north, the other goes East”. Most candidates did this and recognised that they both began at the same height and were the same length for ‘Similarities’; common ‘Differences’ included X being coniferous and Y deciduous (which some candidates gave as separate differences), Y being steeper, and the transects going in different directions - X to the east and Y to the north. Some incorrect heights were given as candidates had not studied the contours closely enough.
- (b) (i)** Systematic sampling is the one technique that most candidates know about; the vast majority chose systematic as the one that matched the description of taking measurements at a fixed, even or regular interval i.e. over 25 metres.
- (ii)** The common answer “to measure differences in temperature and light” was not a reason why the measurements were taken every 25 metres – that is just why they are carrying out the measurements. Practical answers such as “it would be easy and quick to measure 25 metres”, or it is a good choice regarding the usual length of tape measures were acceptable as well as the answers related to systematic sampling in that it prevents bias and gives a fair test. Some ideas worthy of credit were related to the distance being not too close and time-consuming to getting a wide range of data in a reasonable time over 400 metres.
- (c) (i)** This was well done even if many correct answers were prompted by the photograph of a digital thermometer. Most candidates referred to them being more accurate, easy to read, faster/quicker and portable.
- (ii)** Most candidates gained full credit for giving a figure in the 35-37% range or 1 mark for giving a figure +/- 3 outside this range i.e. 32-34% or 38-40%. As with the next answer there were some issues regarding the way candidates wrote the figures 4 and 7 which may have made the difference of a mark here.
- (iii)** Almost all candidates correctly picked out 8.4°C as the most common temperature from Table 1; the previous statement applies here regarding distinguishing between 4 and 7 too.
- (iv)** Most of the plotting here was very accurate but some candidates did not attempt the question.
- (v)** Most candidates drew bars in the correct places; the 70% bar was drawn more accurately than 62% as some candidates plotted it on the 64% line. It is important that candidates plot and shade the bars clearly so they can be seen by Examiners. Some were drawn too lightly to be seen. Again a number of candidates did not attempt the question.
- (vi)** Most candidates recognised that the sky percentage seen in grassland was higher than the woodland. Some compared the woodland areas with each other and a few others just stated the percentages without making any comparative statement e.g. higher than, more than.



- (d) (i)** Almost all candidates identified that the temperature would be higher in the deciduous woodland but then failed to give the correct supportive evidence for the decision. Many candidates gave qualitative statements when what were needed were judgements using data for the woodland sites. It had been made clear through the first few questions that the first three sites were grassland leaving 14 sites for woodland however many candidates used the 17 sites to calculate average figures which included grassland. Consequently, by including grassland sites, the evidence was statistically wrong with the average temperatures calculated all being too high. Some candidates just used one or two individual sites when an overall view of the data was required. Comparing the lowest temperature in the woodlands was not the best way to give evidence for one being higher than the other though this was a popular answer.
- (ii)** Most candidates related the amount of light to the temperature and type of woodland by stating that it was higher in the deciduous woodland. Various single sites were chosen to illustrate this but not always the best sites and data.
- (iii)** This was quite well done. Using the photographs, most candidates recognised that A showed coniferous trees which were densely packed together and so would block out sunlight causing lower temperatures than the more widely spaced deciduous woodland which would let light in and so have higher temperatures. The tallness of the tree was not credited but references to thicker canopies and trees being closer together were accepted for coniferous woodland.
- (e)** Some reasonable ideas such as making the transects longer, taking measurements at smaller intervals and taking the measurements at the same time for comparative reasons. It is important in this type of question that candidates consider the context provided rather than just repeat generic answers such as repeating the study, using more candidates, doing it in another season. Here, for example, it is unlikely that a pilot study would be appropriate nor would doing more transects be possible given the nature of difficulties carrying out fieldwork in thickly wooded areas. The key was to think about what the candidates could have done differently in this investigation to make it more reliable.

## Question 2

- (a) (i)** It is important that candidates avoid giving generic responses to questions such as this. Those that did perform well on this question did so because answers were given that did not take into account the context. For example “to test equipment” would be relevant if they were using weather instruments but here the candidates were only using a recording sheet and pencil. It was stated clearly that the “candidates did an environmental quality survey” yet many candidates assumed the survey was filled in by residents not by the candidates. The questionnaire part of this question came in **(c)** and had not been mentioned at this point in the examination. The candidates did their pilot survey in a road near their School not in the housing areas so the responses “to get to know the area” or “to know what results to expect” were not relevant here. Candidates who did well appreciated the context and referred to checking that the description of features would work, that the scale was appropriate and the general idea to test their method would work and that they would know what to do.
- (ii)** The focus in this question was a practical one; how would candidates use the recording sheet. Candidates who did well suggested they would go to the area, circle the area on the sheet, observe the features, make a judgement using the bi-polar descriptions and put a tick in the box. Most did this but too many just described the content of the sheet and what a bi-polar scale was.
- (iii)** The key to this question was the phrase “how the candidates would organise themselves”. Credit was given to candidates who suggested that the class could divide itself into three groups with each visiting one of the three areas. With each group, opinions could be shared to get more reliable judgements and avoid subjectivity and bias. Doing the surveys at the same time would also ensure results were comparable between groups. Over half the candidates did this well but many suggested ways of carrying out the survey e.g. do questionnaires, ask a representative sample, or have each candidate do it on their own. Reading the question was crucial to success here.
- (b) (i)** It was pleasing to see that almost all candidates could add the total and be aware of the +/- factor ending with +11. Candidates did not always put the + sign before the 11 but that was allowed. A few missed the table out completely; those that ignored the plus gave 13.

- (ii) Some candidates made no attempt to complete the graphs almost all of those that did scored both marks. A few plotted the 3 box correctly but did not shade the boxes for 1 and 2. Others tried to draw a vertical bar graph on the horizontal one but, overall, this was well done by the vast majority of candidates.
- (iii) Candidates need to read hypothesis questions carefully. Here, for example, they were told that the candidates had decided the hypothesis was partly true so no decision was needed; they just had to give supporting evidence for that. Some candidates still gave a decision contrary to what they had been told e.g. true, true to a great extent, not exactly true or mostly not true. This was not penalised. Evidence used was generally good though candidates who compared every single features separately did not score well. What was needed was reference to the ages of the housing areas and overall judgements about which had the better environment based on scores of +11, +6, -14. Most candidates did use these figures but not always in relation to the age of the area and the reason why the hypothesis was only partly true.
- (c) (i) Over several examination sessions sampling has not been a topic that candidates have done well in. They seem competent with the systematic technique but less confident with their knowledge and understanding of stratified and random techniques. That was the case with this question and this was one of the questions that candidates found hardest on the paper. The key to the question was its context. A questionnaire was to be used with residents about their views on parking and traffic problems. Candidates wanted to get a representative sample of people. Although it can be argued that all sampling techniques are representative in some way as they avoid bias, the only one that deliberately aims to get representative groups of people from a population is stratified which some candidates did choose and then went on to say because you can get representative groups related to age, gender or socio-economic groupings. Systematic and random techniques cannot guarantee these groupings and were given in equal measure and not credited. Use of the three major sampling techniques is the main area that Centres need to work on to improve candidate performance. A minority of candidates did not know a sampling technique giving answers such as tally, questionnaire and do a transect.
- (ii) There was a pleasing response by most candidates here. They decided that the hypothesis was partly true because the scoring system suggested that A and B had problems with both whereas the newer area C disagreed that there were problems. Some candidates just wrote the statistics as evidence without stating how they linked to agree/disagree which was important. A few decided that any figure meant there was a problem without closely looking at Table 3.
- (iii) Again some candidates made no attempt to complete the divided bar graph despite the empty graph paper being placed above a completed one making it as clear as can be that the graph needed completing as stated in the question. Candidates need to read the examination carefully and follow instructions to complete graphs carefully. Some candidates often do not get the marks they should simply because they do not complete simple graphs whereas many that do complete them get full marks. Most candidates did do this well but a few misplotted 39 and some did not shade according to the key especially the diagonal shading which was sometimes drawn in the wrong direction.
- (iv) This question required specific ways to improve parking and traffic problems so just stating “make more parking spaces” or “more roads” were too vague to be credited. Candidates who suggested underground or multi-storey car parking, or off-road parking on brownfield sites were credited as were those who gave a specific scheme such as ring-roads, flyovers, congestion charges or park and ride schemes for solving traffic problems. The majority did this and gained full marks.
- (d) Here the question needed reading carefully. It required candidates to choose “another possible difference between housing areas” that could be investigated so this eliminated any previous investigations on the environmental survey sheet or parking and traffic problems. There was still plenty of scope for sensible practical investigation e.g. house prices, access to shops/services, safety, building heights. Some suggested these and scored quite well on the methodology. Candidates could score a maximum of two marks if they suggested an investigation which could possibly be carried out but was judged to be inappropriate or impractical such as finding out the income of people living in the housing, how healthy they were, each house’s population structure, and a pedestrian count. Candidates could attempt to do these but would find many difficulties especially in asking people about their work and income. Candidates who suggested an investigation into a topic already covered in the question gained no credit.

# GEOGRAPHY

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**Paper 0460/43**  
**Alternative to Coursework**

## Key Messages

There are a few generic tips and key messages that should improve candidate performance in future. Here are a few key messages that the Examiners feel will benefit future candidates if they are passed on by teachers:

- When answering hypothesis 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 / To some extent. If you are asked to support your decision with data then statistics must be used from the resources referred to. Data is quantitative; evidence can be qualitative or quantitative. If you make an incorrect conclusion to the hypothesis you will gain no credit for the answer.
- When giving figures in an answers always give the units if they are not stated for you.
- Read questions carefully and identify the command word e.g. *Describe, Explain*.
- When asked to compare, make judgements e.g. *higher, lower*, rather than just list comparative statistics.
- Check you are using the resources that a question refers you to, e.g. *Use evidence from Table 4 and Fig. 8 to support your decision*.
- 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 additional page*). This is very helpful to the Examiner in finding your answers.
- When completing graph work use a dark-coloured pencil as scripts are scanned for marking and light colours do not always show up. Always shade bar graphs and pie charts accurately.
- When you think you have finished, check that you have not missed a question out. Some questions are hard to find if they are on pages with a lot of graphs or maps. Make sure you have answered the questions on every page. This applies especially to questions where you are asked to complete tables, diagrams, graphs or maps.

## General Comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks was similar to previous years - with weaker candidates scoring on the practical questions, such as drawing and interpreting graphs and tables, and candidates of higher ability scoring well on the more challenging sections requiring explanation and judgement especially regarding hypotheses. Overall **Question 2** proved to be slightly easier than **Question 1**.

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 43 questions relate to misunderstanding or ignoring command words and the use of appropriate fieldwork techniques. For example **Question 1 (b) (i)** required candidates to explain how a maximum-minimum thermometer is used to measure temperature, not how such a thermometer works. As in some previous papers there was a **Question, 2(d)**, which required candidates to suggest improvements to the investigation methodology. Such questions are frequently included on this paper and are an area which Centres should practise with candidates. However, it is not good practice to develop a series of generic improvements which may apply to all fieldwork as such suggestions tend to be vague and not worth credit.

Candidates who sit this examination will 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 **Questions 1(a) (ii), 1(a) (iii), 1(a) (v), 1(b) (i), 1(b) (ii) and 2(b) (v)** focused on specific equipment and techniques, commonly used in fieldwork.

### Comments on Specific Questions

#### Question 1

- (a) (i)** Most candidates identified two advantages of digital measuring instruments. The most common ideas were accuracy, ease of reading and quick to get a measurement.
- (ii)** This question proved to be a good discriminator using the full range of marks. The most popular features to be identified were that a Stevenson Screen is white, on legs above the ground and contains slats or vents. Many explanations were appropriate to the identified feature. Common mistakes included vague descriptions such as 'above the ground' or referring to wind getting into the box rather than air circulating. Weaker candidates claimed that the screen is above the ground to be out of the way of animals or flooding. Some answers were irrelevant because they explained the location of the Stevenson Screen rather than its features.
- (iii)** Most candidates correctly chose to put a thermometer inside a Stevenson Screen.
- (iv)** Most candidates correctly suggested wind speed, wind direction or cloud cover. Some candidates just wrote 'wind' which was not accepted. The other error was made by candidates who chose one of the elements on the given list.
- (v)** Quite a large percentage of candidates failed to answer this question. Where candidates made errors it was in suggesting either element could be measured by an anemometer or naming a hydrometer rather than a hygrometer to measure relative humidity.
- (b) (i)** Many candidates answered the question poorly. Candidates described how a maximum-minimum thermometer works rather than how it is used. Consequently candidates explained the different heating properties of mercury and alcohol rather than concentrating on how the indices were moved and left at the highest and lowest temperatures. Few candidates explained simple ideas such as read the thermometer at eye level, read the temperatures once per day, or use a magnet to reset the indices.
- (ii)** Candidates gave much better explanations of how rainfall is measured using a rain gauge. Candidates focused on collection of rainfall in the jar and using a measuring cylinder to determine the amount of rainfall. Some candidates thought that the rain gauge had to be underground and others focused on where a rain gauge may be positioned, such as in open ground or away from trees, rather than how it is used.
- (c) (i)** Most candidates who attempted the question plotted both points within tolerance and completed the line. However, there were a large percentage of candidates who did not attempt the question.
- (ii)** Most candidates correctly concluded that the hypothesis was true. Their supporting evidence included the bigger space between minimum and maximum temperature lines on the Pretoria graph. Many candidates used statistics from the graphs or table to indicate where the relationship was proved and also to identify anomalies. Some candidates just referred to the highest and lowest diurnal ranges without using a daily comparison.
- (d) (i)** A significant proportion of candidates omitted this question. Candidates who did complete the graph generally plotted the bars within tolerance. Some candidates misread the scales and plotted the bars by using the temperature scale on the left hand axis rather than the rainfall scale on the right hand axis.
- (ii)** Most candidates made the correct decision to disagree with the hypothesis. They usually gained a second mark by stating a more accurate relationship or saying that there is very little relationship between rainfall and temperature increase. Candidates found it quite difficult to choose appropriate data to disprove the hypothesis other than stating that the maximum temperature had no rainfall.

## Question 2

- (a) (i) Most candidates realised that the students had gone in different directions within the CBD and consequently building height or usage and land use might vary. Some candidates incorrectly focused on student error as a reason.
- (ii) This question was another example of a graph completion question which was not attempted by a significant proportion of candidates. It should be noted by candidates that not all questions on this paper involve written responses and thus some will not require lines for responses. Most candidates who did the question plotted the two bars accurately.
- (iii) The question differentiated between candidates well. Most candidates reached the correct conclusion that the hypothesis was partly correct. They then backed up that conclusion by recognising that it was true for the north and west transects but false for the south and east transects. They then gained further credit by using data from the graph or table to support these two different conclusions.
- (iv) The most common reasons suggested for variation in building height were that it varied according to the price of land and the use of the land. Most candidates included one or both of these reasons in their answer.
- (b) (i) Nearly all candidates correctly used the key to shade the restaurant and hotel. A small number of candidates shaded only the restaurant and left the hotel blank.
- (ii) Nearly all candidates correctly identified that there were 12 offices shown on the map.
- (iii) Candidates who scored the mark usually did so by reference to issues such as lack of time or lack of access to the buildings to investigate upper floor land use. Some candidates incorrectly made the assumption that ground floor land use will be the same as on upper floors and so there was no need to check it. Weaker candidates just stated that it would be hard, without suggesting a reason why.
- (iv) Many candidates who attempted the question did well in completing the pie graph. Candidates generally plotted accurately but many candidates lost one mark by choosing their own order of segments rather than following the pattern of the key and the other pie graphs. Some candidates also made errors in shading the segments by not following the shading patterns shown in the key.
- (v) Whilst many candidates could identify differences between the two pairs of transects some failed to score marks by not making a comparative statement to show the difference. Some candidates just gave two statistics for a land use category with no comparison or interpretive word such as 'only'. Lack of examination technique therefore handicapped these candidates.
- (vi) Candidates generally scored well on this hypothesis interpretation question. Most concluded correctly that the hypothesis was true and supported their conclusion with statistics or interpretation of the figures from the table or pie graphs. Thus they compared land use in the CBD with one or more transects. The most popular categories of land use which they compared were residential, commercial and offices. A few weaker candidates merely listed the land use percentages of the CBD and four transects, which gained no credit.
- (c) This was a challenging question which differentiated well. More able candidates explained differences in cost of land, access, transport and raw material availability. A minority also referred to how a city might grow and develop over time. Weaker candidates incorrectly explained land use was affected by population density. Other candidates described land use zones rather than explaining them.
- (d) This question also proved to be a good discriminator between candidates of different ability. Weaker candidates tended to give generic improvements which they may have learned but may not be relevant to this fieldwork exercise. Ideas such as repeat the investigation next day, do the investigation in more groups, repeat the investigation at another time of year or in another city are either too vague to gain credit or will not improve the data collection which has been done for this particular task. The improvements which were suggested and did gain credit included recording upper floor land use, lengthening the transects to go further from the CBD, investigating the number of storeys of more buildings or at more locations along the transects to get more reliable

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Principal Examiner Report for Teachers

results, and investigating land use along more transects from the city centre in directions such as north west and south east of the CBD.



# GEOGRAPHY

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Paper 0460/05

Computer Based Alternative to Coursework

## General comments

Generally candidates coped well with this examination but performance obviously varied between centres. As in previous sessions, candidates seemed to find the questions which involved matching up answers, multiple choice answers and completing graphs relatively easy. However, with the answers that required a description, an explanation and knowledge, often more detail, depth and use of data was required.

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 (and ideally have some experience of using it). Candidates also need to know about the different methods of collecting data (and again have experience of doing it).

## Key messages

Here are some key messages which will help candidates do well in the future:

- Learn the key terms carefully
- Read the questions carefully
- Look at the resources directed to in a question
- Use evidence and data to back up answers. Comparative data needs to be in pairs.
- Make sure to *explain* and *describe* answers in detail
- When asked to compare, candidates need to use comparative words such as increases, decreases, larger, smaller, lower, higher
- Look carefully at the number of marks awarded for the question –and write accordingly.
- Use the word *accurate* carefully. Repeating a survey or collecting more data does not make it more accurate, it makes it more valid/fair/representative.

## Comments on specific questions

### Question 1

This question involved naming four coastal processes, in response to definitions given. Most of the candidates found this question easy and most gained full marks or close. Most knew that the leaving behind of beach material was deposition, that carrying of beach material was transportation, that the movement of material up the beach was swash and that the wearing away of the cliff face by the power of the waves was hydraulic action.

### Question 2

This question involved the candidates identifying coastal landforms from a sketch map. Most candidates correctly identified that landform A was a beach and landform B was a bar.

### Question 3

In this question, the candidates had to watch an animation showing the process of longshore drift and then describe and explain how the process led to the formation of spits and bars. Most candidates found this difficult. Many answers incorrectly wrote about wave refraction. Some candidates recognised that the waves/swash moved up the beach at an angle (due to the prevailing wind) and some knew that the waves returned straight down/perpendicular to the beach (due to gravity). Other candidates recognised that the

pattern was in a zigzag or that the process was repeated. However, few candidates were able to explain that a spit formed where the coastline changed direction or how a bar was formed.

#### Question 4

In this question, the candidates had to study the sketch map again and identify two human and two physical features shown. This question was well answered and most candidates gained full marks. The most common answers for human features were the castle and the lighthouse; the most common answers for the physical features were the spit and the saltmarsh.

#### Question 5

In this question, the candidates had to again look at the sketch map and estimate the distance from the west to east of the spit. They also had to work out the average width of the spit from three given measurements. Most candidates gained 1 mark for correctly identifying that the average width of the spit was 92 metres. Some candidates had difficulty with working out the distance of the spit (2.5 kilometres).

#### Question 6

This question involved giving the six figure grid reference for the lighthouse and stating which direction visitors would walk from the lighthouse to the quay. Most candidates found this question quite easy and gained full marks for choosing the grid reference of 327653 and the direction south west.

#### Question 7

This question involved the candidates considering why there are no footpaths on the salt marsh behind the spit. Most candidates found this difficult. Some thought there was no need for a path and others needed to qualify their answer more. Good answers included the fact that the footpaths could be washed away or the wildlife habitats would be damaged.

#### Question 8

This question involved studying two photographs and then describing the appearance of the beach material. Some candidates found this difficult and only named the material (such as pebbles and shingle). However, good answers recognised the fact that the material was rounded, smooth and of varied size. The candidates also had to suggest a reason for the lack of sand on the beach. Again some candidates found this part difficult and said that it was because there had not been any erosion on the beach. However, good answers identified that the groynes would have trapped the sand or that longshore drift would have moved the sand.

#### Question 9

For this question, candidates had to identify the name of the sampling method used by the students. Most candidates correctly identified systematic sampling as being the correct answer. The candidates also had to explain the use of the quadrat. This part of the question was quite well done. Most candidates gained credit here – usually for placing (or throwing the quadrat) on the ground, studying/estimating the different beach materials and recording the results. Some candidates incorrectly thought that the beach material would be measured.

#### Question 10

In this question, the candidates had to study the photo of the quadrat at site 7 on the beach transect and work out the percentage of small and large pebbles. Most candidates found this quite easy and over two thirds gained full marks.



### Question 11

This question considered the difficulties of classifying the beach material and to suggest ways to make the results more reliable. Most candidates found this rather difficult and most only gained one or two marks. Good candidates recognised that the method was subjective and that it was unreliable without using a measuring device. Good candidates also recognised that the method would have been improved if students had worked in pairs/groups or they had been given a ruler or the accepted sizes of the different types of beach material. Vague answers were often given here such as the beach was too large and had too much material present or to repeat the study or use larger quadrats.

### Question 12

This question involved the candidates completing a divided bar graph to show the size of beach material at site 10 of the transect. The candidates found this question easy and most gained full marks for an accurate graph with 51% shingle, 35% small pebbles and 14% large pebbles.

### Question 13

This question considered the first hypothesis 'The size of beach material increases towards the eastern end of the spit'. The candidates needed to decide whether they agreed with the hypothesis and then explain their answer, supporting it with data and examples. Most candidates correctly disagreed with the hypothesis and went on to get further marks for their explanation. Good answers said that the amount of shingle and small pebbles increased towards the eastern end of the spit. They also said that the amount of large pebbles decreased towards the end of the spit. Marks were awarded for correct pairs of data to back up these statements (such as there was 15% shingle at site 1/X but this increased to 51% shingle at site 10/Y). However, some candidates incorrectly agreed with the hypothesis and therefore gained no marks for this question. Others did not compare sizes and just listed data.

### Question 14

This question involved the candidates considering how to conduct a visitor count on the spit. The candidates needed to decide on the length of time to conduct the survey and then explain their reasons for this. In addition, the candidates needed to suggest two ways to make the visitor count as reliable as possible. Candidate responses to this question were varied – some candidates found it relatively straight forward but others struggled. Good answers identified that 15 minutes was the most suitable length of time to conduct a visitor survey and went on to explain that it would give a reliable representation and it was not too long that they would lose count. Good suggestions for making the visitor count as reliable as possible included using a tally chart and working in pairs/groups.

### Question 15

For this question, the candidates needed to complete the visitor survey graph by completing two bars and adding a title. Candidates found this an easy question with most scoring full marks.

### Question 16

This question focused on the second hypothesis 'The number of visitors decreases towards the eastern end of the spit'. The candidates needed to give evidence and data to support the idea that the hypothesis was not true. Candidate responses to this question were varied – some candidates found it straight forward but others struggled. Good answers identified that the number of visitors decreased from locations A1 to A3 (57 at location X/A1 decreasing to 27 at location A3). Good answers also recognised that the number of visitors then increased from location A3 to A5/Y (27 at location A3 increasing to 35 at location A5/Y). Weaker answers did not use pairs of data or use the terms 'increase/decrease'.

### Question 17

For this question, the candidates needed to describe and suggest reasons for the variations in the number of visitors along the spit. Most candidates gained reasonable credit for this question, usually for suggesting that the highest number of visitors was at the start because many just stay close to the car park and that the increase of visitors at the eastern end was due to the tourist attractions of the castle and quay. More able candidates also recognised that the lowest number of visitors was in the middle of the spit (location A3) as there was no attraction there.

**Question 18**

This question considered the addition of a visitor questionnaire to the survey. The candidates needed to write three questions that could be asked of the visitors. This question was quite well answered. Good suggestions included questions such as 'Where do you live?', 'How did you travel here?', 'How often do you come here?' and 'Why did you come here?'.

**Question 19**

This question involved a further investigation into the beach profile. The candidates had to explain how they would carry this survey with ranging poles, clinometers and a tape measure. Responses to this question varied. However, there were many good answers which said that they would use the ranging poles at the start and the end of the transect/at each change in slope, they would use the tape measure to measure out each section of the transect and they would use the clinometer to measure the angle of each section of slope (lining it up correctly with the corresponding pole markings). Marks were also awarded for recording the results and repeating the method at each of the three locations.