# GEOGRAPHY

| Paper 0460/11 |
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| Paper 11 |

### Key Messages:

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

- read the question carefully – underlining key command words and words which indicate the context of the question is a useful strategy.

- know the meaning of, and respond correctly to command words – e.g. know the difference between describe and explain, be able to compare.

- use statistics to support statements and be able to read statistics accurately from a graph.

- describe and interpret graphs of different types – e.g. describe trends over time by using words such as constant, slow, rapid etc.

- perform basic skills such as interpreting photographs and using maps e.g. to describe a location or distribution.

- 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, and include place specific information in case studies.

- take care when choosing examples to use in case study answers – e.g. an urban area **(2c)**, a *high technology* industry **(5c)**.

- identify the correct focus specified in the question stem – e.g. natural environment or people.

- learn the meanings of key words – compiling and using glossaries of subject specific vocabulary is a useful strategy.

- ensure that examination rubric is followed correctly, answering 3 of the 6 questions only.

### General Comments:

The examination achieved widespread differentiation. Most candidates were able to make a genuine attempt at their chosen questions and even weaker candidates attempted most sections.

In general good use was made of the resources provided. Many candidates were weaker in the final parts of questions and on balance they seemed to do less well this year in these types of questions than in previous years. Higher marks in these questions were awarded for depth of detail or for explanation of a smaller number of points rather than for the amalgam of simple points which many candidates produced. They should be seen as opportunities for candidates to present their knowledge of particular case studies in detail.

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 centre's better prepare their candidates for future examinations.

**Comments on specific questions:**

**Question 1**

**(a) (i)**   Most candidates did not get all parts required for the definition here despite the help given in the resource.  This was because they either gave a general definition of Infant Mortality Rate or their definition was not specific enough.  A common error was to either leave out 'per 1000 of the population' or to give ages such as 'under the age of five' rather than 'before their first birthday'.

**(ii)**   This question was generally well answered although there were some calculations seen where candidates did not know what natural increase meant.  Some candidates did not show their working out which limited them to just one mark for the correct answer.

**(iii)**   Most candidates scored highly on this question as candidates were clearly well prepared for this type of question.  Most frequently seen responses included 'good healthcare, availability of medicines and longer life expectancy'.

**(iv)**   Again, candidates were well prepared for this type of question and many good answers were seen with candidates scoring high marks.  Candidates displayed a good knowledge of the factors affecting birth rates and applied this well to an LEDC context.  The most frequently seen responses were: 'little availability of contraception, want children to work on the farm, have large families due to religion or culture, high infant mortality rate'.

**(b) (i)**   This question was on the whole well answered with the majority of candidates scoring two marks.  Candidates were able to use the key to identify the population change and anomalies were often provided for the second mark but the use of examples with an accompanying statistic was rarely seen.

**(ii)**   This question differentiated well with some excellent answers covering a range of ideas.  Weaker candidates tended to focus on one issue only (e.g. work) or wrote vaguely with answers predominating such as: 'overcrowding, lack of services/facilities' all of which needed further development to gain credit.  A few wrongly focused on problems caused by lots of dependents, both young and old, some of which could be credited as they fitted with the mark scheme ideas, but others could not be credited as they were irrelevant.

**(c)**   There were some inappropriate examples seen – the most common being California rather than USA or a continent given rather than a country i.e. Europe or Africa.  Ideas were often not well developed as candidates listed push and pull factors rather than explaining them.  There were many references to the impact of migration in the host or losing country which were irrelevant to the question being asked.  Place specific information was rarely seen.  The majority of candidates gained simple Level 1 marks with some gaining Level 2 but very few gaining Level 3.  Many candidates also listed opposites which do not get double credit e.g. 'a push factor is low pay and a pull factor is higher pay' this would only gain 1 mark. Candidates need to be aware of a variety of push and pull factors and be able to develop them fully.

**Question 2**

**(a) (i)**   Responses to this question were very variable.  However, it was well answered by many candidates with most attempting to compare in an appropriate way.  For those who did not gain credit it was either because the candidate gave examples e.g. 'city' or that the answers did not compare e.g. candidates may refer to an area being built up in one part of the answer but then go on to discuss low population density which meant that there was no comparison nor could the ideas be linked together.  This was largely due to a lack of knowledge about what the two key terms mean i.e. urban and rural settlement.  It is probably fair to say that some candidates could probably verbalise the differences between the types of settlement but found it difficult to express in writing.

**(ii)**   The majority of candidates correctly identified both settlement patterns as 'Linear and nucleated'.  For those who lost credit it was mainly for incorrectly identifying the settlement pattern for St. Aubin d'Arquenay.

**(iii)** 'Spread out' and 'countryside/farmland' were points which many candidates gained credit for, although all mark scheme ideas were seen. The better answers in addition referred to there being no centre to the settlement and/or no services though a common error referred to roads which was irrelevant to the question being asked.

**(b)(i)** Not many full mark answers were seen for this question. It is likely that candidates do not fully understand the term 'site' and many candidates included lots of surplus irrelevant details. Some candidates included information which was more relevant for the next question e.g. 'defense; near a railway line or river for water supply'.

**(ii)** Responses to this question were much better with many candidates scoring high marks. There were many valid developed references to the river and railway line and the likely defensive site was mentioned by many. Yet some candidates were too brief, giving a simple description not an explanation e.g. 'next to a river or on high land' which did not gain any marks.

**(iii)** This question differentiated well with lots of good answers seen, many referring to the various impacts of clearing vegetation on the natural environment e.g. 'deforestation, habitats destroyed and species becoming extinct'. Air and water pollution were also mentioned by many candidates. A few candidates misread the question, writing about why there would be relatively few impacts caused by the growth of Savignano.

**(c)** This was generally poorly answered especially in comparison to the other case study part (c) questions on the paper as a whole. The best answers seen were those that focused upon a port or tourist function as candidates were able to pinpoint exact reasons for the growth. The term function was not well understood by the majority of candidates. There were lots of descriptive answers that did not explain the reason for growth but were merely a description of the urban area itself. Very little place specific information was seen but some answers did reach full marks.

**Question 3**

**(a)(i)** This question was generally well answered with the vast majority of candidates correctly identifying one cause of physical and one cause of chemical weathering from Fig. 5.

**(ii)** The majority of candidates gained credit for 'freeze thaw or frost shattering' as a type of physical weathering. Fewer candidates gained credit for a type of chemical weathering i.e. 'carbonation or solution'. Many answers were seen that referred to acid rain or corrosion which did not gain credit. The responses in relation to corrosion were more relevant to river processes so not relevant here.

**(iii)** Many candidates scored full credit for correctly describing the ideas of 'seeds/roots growing in cracks, and widening the cracks/breaking rocks'. Some candidates also included information about animals burrowing and weakening rocks too.

**(iv)** This question was not well answered by the vast majority of candidates. The question asked candidates to 'explain the main factors which influence the type and rate of weathering' e.g. 'rocks with cracks are more likely to experience freeze thaw; some rocks may be dissolved by acids in rainwater; in areas where temperatures fluctuate around zero freeze thaw is more likely to occur; high temperature range will lead to exfoliation; higher temperatures increase the rate of weathering; the presence or absence of plants or animals will encourage or discourage biological weathering'. However, the factor was rarely linked to the type of weathering to fully explain and develop ideas, as many candidates did not go far enough to attempt to 'explain the likely factors' and at best just listed the factors without any explanation which related to a form of weathering e.g. 'rock type, weather, climate'. Some candidates wrote about why 'factories' cause weathering and linked this to acid rain which was not relevant.

**(b)(i)** This question was generally well answered with the majority of candidates gaining full credit and many scoring at least two marks. Candidates were able to use the photograph **(A)** well to describe the appearance of the landscape shown. Most frequently seen responses referred to the colour of the rock, the steepness or other relevant characteristics and that it is dry/arid. Some, but not too many, wrote about weather/climate which was irrelevant.

**(ii)** This question was well answered by the majority of candidates. Candidates had learned the process of exfoliation and were able to recall it well for this question. Often diagrams were not needed as the candidate had already gained full credit in the text. Some very impressive answers

were seen here. A handful of candidates wrote about other processes such as freeze thaw and gained no credit.

(c) This was another case study question which candidates found difficult with many candidates just scoring Level 1 marks for simple statements e.g. 'high temperatures, low rainfall'. Occasional answers showed more of an in depth knowledge of why the deserts are dry e.g. 'Hadley Cell, rain shadow and Trade winds' ideas being developed but these were few in number and candidates typically gave simplistic ideas e.g. long way from the sea, no clouds, and/or included irrelevant material on how vegetation or animals have adapted to live in the desert. Answers with statistics were rarely seen which would have gained Level 2 e.g. 'rainfall is less than 250 mm per year'.

**Question 4**

(a) (i) The vast majority of candidates were able to correctly identify that the feature labelled on photograph B was a plunge pool and gained credit mark.

(ii) This question was generally well answered. Those that correctly identified 'W' usually went on to say that there was a 'steep gradient' thereby gaining full marks. Whereas, if 'W' had not been correctly identified then the rest of the answer was also incorrect.

(iii) Again, this question was generally well answered with many candidates having learnt the stages in the process of waterfall formation. Most, but not all, candidates knew about the significance of soft and hard rock and there were many answers which gained full credit.

(iv) Mixed responses were seen here as answers were sometimes not comparative which let candidates down. Also there was evidence of confusion between Z and Y e.g. candidates thinking that water would be faster flowing at Z. Some candidates attempted to compare and focused on valid ideas.

(b) (i) Varied responses were seen to this question with some full mark answers to this question. The majority of candidates gained credit for a reference to Bay of Bengal or Bangladesh or the River Ganges and Brahmaputra. Yet very few candidates measured the width or named both rivers (many named only one). Also it was extremely rare to see 'arcuate delta' in an answer also the term 'distributaries' was not well known.

(ii) This question was not well answered with many candidates not understanding how a delta is formed. The majority of candidates gained credit for the idea of 'current slowing down and deposition'. Few were able to refer to other valid mark scheme ideas such as 'absence of major tidal flows/currents; impact of salt water causing further deposition; growth of vegetation raises it above sea level, distributaries form/river divides into many branches'. Very few high mark answers were seen here.

(c) This was one of the better answered case study questions with most candidates able to develop one or two of their ideas. The most frequently seen ideas were 'fertile soils to allow cultivation' and 'flooding causing death and damage to crops or homes/people'. Named examples were valid with most frequent case studies being the Mississippi, Ganges and Nile deltas. Overall the question differentiated well with some good developed answers seen with place specific information in some cases.

**Question 5**

(a) (i) Many correct responses were seen (coal mining) to this question but equally many incorrect responses were seen such as 'textiles or iron and steel' being the most common incorrect responses. Many candidates may not have understood the term 'primary sector'.

(ii) This question was generally well answered. Candidates tended to lose marks for either not including statistics or giving inaccurate statistics. The vast majority of candidates were able to correctly identify the trend.

(iii) Candidates found this question difficult as very few, if any candidates went beyond the idea of stating 'increased mechanisation' as a reason for the decrease in employment in many manufacturing industries between 1980 and 2010. Almost all candidates referred to mechanisation

with some writing three points about it (for one mark overall). Other mark scheme ideas such as 'substitute materials, competition from abroad, factories relocating abroad' were rarely seen.

**(iv)** This question differentiated well with some good answers being seen. Some higher scoring candidates recognised ideas beyond the obvious 'loss of jobs', which most candidates correctly suggested. All of the mark scheme ideas were seen.

**(b)(i)** Generally good answers were seen with many gaining full credit. The main problem was often linguistic, with some candidates finding it difficult to express the meaning without using the words they were meant to be defining.

**(ii)** This question provided good differentiation, though full mark answers were not seen much. Some candidates selected an inappropriate industry like mining, however most did choose a manufacturing industry and made one or two valid points usually about 'proximity to raw materials and the impact on transport costs'. It did not matter whether or not the chosen industry was influenced by the location of raw materials and some very good candidates realised this and took the opportunity to write in good detail about the relative significance of raw materials and other factors resulting in higher marks. Quite a few primary industry examples were seen which did not score any marks.

**(c)** Again this question provided good differentiation with some Level 3 answers seen, including a variety of developed ideas and place specific information. Weaker responses listed simplistic points but most managed to gain marks within Level 1, even those candidates who clearly were not referring to high technology industries, as generic ideas were valid e.g. transport, workforce and land cost.

## Question 6

**(a)(i)** The vast majority of candidates were able to ascertain from the photographs which one showed pastoral farming and correctly identified 'E'. Very few candidates answered incorrectly.

**(ii)** This question proved a little more difficult but most candidates gained credit for the idea of 'selling/making money'. However, relatively few candidates referred to ideas such as being able to produce a surplus or access to markets which are key points.

**(iii)** This question asked candidates to describe the activities which are taking place on the farm in Photograph C. Some muddled answers were seen here as some candidates did not recognise that this photo was clearly showing a crop being harvested and some said that crops were being planted or the field was being ploughed.

**(iv)** This question asked candidates to suggest how the farming system shown in Photograph D may be influenced by physical factors e.g. 'crops need to be grown where there is an adequate growing season; there must be adequate rainfall for crops to grow; some crops need sunshine to ripen; too much rainfall may waterlog crops; irrigation is used when rainfall is low; glasshouses are used when temperatures are low or to protect from frost; in areas with frost or long winters hardy crops will be grown; gently sloping land is easy to use machinery on; fertile soils enable good crop growth; strong winds or hail will ruin the crops; fertilizers will be needed if the soil is poor'. However, weak answers predominated with many candidates giving narrow responses relating to the small amount of snow which they had observed in the photograph. Other candidates listed physical factors without suggesting how the farming system may be influenced by them e.g. 'rain, sun, good soil'.

**(b)(i)** This question was generally well answered almost all candidates were able to identify three changes to the area shown in Fig. 10. The most frequent responses were 'not so many fields or field sizes have increased; more houses are used by non-agricultural workers and the country road has changed to a dual carriageway'.

**(ii)** The question asked candidates to suggest ways in which commercial farmers in the area shown in Fig. 10 may have been able to increase their output. Many candidates were writing about the roads or the housing, neither of which were significant in terms of increasing output. Similarly large fields were mentioned by many but few explained how they would potentially increase output i.e. by facilitating mechanisation apart from those who suggested that extra land would be created where woodlands were removed and the land incorporated into enlarged fields. Very few candidates made the obvious points about irrigation, fertilizers, pesticides or GM crops, possibly because they may have thought that answers should be restricted to evidence from Fig. 10, which was clearly not the case.

**(c)** This was another well answered case study question. Candidates had to explain why there is a food shortage in a country or named area which they have studied. Most candidates were able to develop their ideas. The question provided good differentiation with most candidates being able to at least get into Level 1 with simple statements relating to drought or poverty, but many candidates were able to develop these ideas in relation to their chosen example and often included place specific information too which gained Level 3 marks.

# GEOGRAPHY

Paper 0460/12

Paper 12

### Key Messages:

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

- read the question carefully – underlining key command words and words which indicate the context of the question is a useful strategy.
- know the meaning of, and respond correctly to command words – e.g. know the difference between describe and explain, be able to compare.
- use statistics to support statements and be able to read statistics accurately from a graph.
- describe and interpret graphs of different types – e.g. describe trends over time by using words such as constant, slow, rapid etc.
- perform basic skills such as interpreting photographs and using maps e.g. to describe a location or distribution.
- 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, and include place specific information in case studies.
- take care when choosing examples to use in case study answers – e.g. a *rural* settlement **(2c)**, a *high technology* industry **(5c)**.
- identify the correct focus specified in the question stem – e.g. natural environment or people.
- learn the meanings of key words – compiling and using glossaries of subject specific vocabulary is a useful strategy.
- ensure that examination rubric is followed correctly, answering 3 of the 6 questions only.

### General Comments:

Most candidates were able to make a genuine attempt at their chosen questions and even weaker candidates attempted most sections.

In general good use was made of the resources provided and the geography written by candidates covered the whole spectrum of achievement from that of a very high standard to that from those candidates who misunderstood what was required in the questions. Many candidates were weaker in the final parts of questions and on balance they seemed to do less well this year in these types of questions than in previous years. Higher marks in these questions were awarded for depth of detail or for explanation of a smaller number of points rather than for the amalgam of simple points which many candidates produced. They should be seen as opportunities for candidates to present their knowledge of particular case studies in detail.

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)**   Generally this was well answered, most candidates being familiar with the term and defining it accurately though there was occasional confusion for example with net migration or emigration.

(ii)    Candidates generally answered this correctly if they knew which parts of the map were North America and South America and which was a country not a state or a city. A significant proportion did not know these basics however.

(iii)    Most candidates achieved the first mark describing the general trend (i.e. Western Europe positive/ North Africa negative) but relatively few used evidence from Fig. 1 to support their answers. Some responses drifted into giving reasons for the net migration, erroneously assuming that all migration was from Africa to Europe.

(iv)    There were many excellent responses, though it has to be noted that significant numbers of candidates wrote about 'pulls' despite the clear instruction in the question to refer to '**push** factors only'.

(b)(i)    Many candidates achieved marks for describing general trends (i.e. slow growth up to 1970, rapid growth from 1970) however there were others who just gave figures from the graph without any form of interpretation, which is not 'describing' a trend. There is a place for quoting statistics and, providing these are suitably accurate, candidates are awarded further marks as these statistics 'support' the description. In this case the accuracy of statistics quoted by candidates varied considerably.

(ii)    This question was well-answered by many candidates who were able to comment from the perspective of governments on numerous problems associated with the excessive growth of the population of cities in LEDCs – a few struggled to be specific enough and wrote generic sentences such as 'crime will increase' and 'disease will occur' with no precision or detail or focused their response on general ideas about overpopulation and therefore did not provide a sufficient amount of specific detail about the problems of urban growth. An over-generalisation was often seen that poverty, unemployment, or living in a squatter settlement causes crime.

(c)    This case study differentiated well and there were some excellent answers. Many candidates chose China and effectively wrote about how the one child policy has resulted in a low rate of population growth. Others chose an MEDC and wrote in detail about why birth rates are low. Another type of example seen was that of a country with a high death rate, particularly one with a high incidence of AIDS such as Swaziland or Botswana. The question was about natural population growth, yet there were many irrelevant mentions of outward migration. Weak answers tended to be generic, with points made (e.g. about high death rates) not always being relevant to the chosen country.

**Question 2**

(a)(i)    Whilst there were many correct answers here not all candidates were familiar with the key geographical namely settlement. Too many responses did not include a sense of (rank) order of size or importance in their definitions.

(ii)    Most candidates knew the first answer as a positive correlation, however significantly fewer knew the second response and there were many who incorrectly repeated there was positive correlation here too, rather than further scrutinising the resource.

(iii)    Most candidates used Photograph A well and identified the settlement correctly as a city, quoting high-rise buildings and details of railways and roads as evidence.

(b)(i)    This was quite well answered with many candidates scoring at least two marks, although photo interpretation is not strong from some candidates as they do not describe obvious features and have a tendency to write value judgements.

(ii)    Most candidates achieved marks here, typically with reference to the developments attracting visitors or creating jobs, however strong candidates produced a range of ideas, developing them where appropriate.

(iii)    There were mixed responses. Weaker candidates focused on the idea of leisure as promoting tourism which was incorrect. Other candidates answered from the point of view of why these developments were not located in the CBD, which was acceptable but usually scored only for the ideas about congestion and lack of space. The best answers focused on ideas about low land values, accessibility and the pleasant environment of the rural-urban fringe.

**(c)**      Some answers did not focus on rural settlement but on urban areas. However there were many interesting answers which identified services in villages, particularly in Africa, but these were seldom developed beyond a list of services. Some candidates did gain access to Level 2 by referring to and describing low order services but generally candidates had difficulty in developing their ideas. Some candidates described conditions in the village area rather than services.

**Question 3**

**(a) (i)**      Whilst there were many accurate definitions there were others describing climate not weather, or listed elements of weather rather than providing an overall definition.

**(ii)**      Many candidates were not familiar with oktas, however many explained correctly that observation is required to estimate cloud cover.

**(iii)**      Generally well-answered though not all candidates knew the correct instruments.

**(iv)**      This question differentiated well, with some good accounts referring to the need to be away from buildings and trees, above grass and in a secure area for example. Weaker responses did not include reasoning or included irrelevant information such as the features of the Stevenson screen or reasoning relating to a rain gauge or wind vane.

**(b) (i)**      Generally well answered with most candidates comparing and using the resource well.

**(ii)**      There were many detailed and accurate answers with relevant points made about the problems resulting from flooding and high winds, with much good development of ideas.

**(c)**      All three options were chosen, with a slight emphasis on coastal areas. Many answers focused on tourism, fishing and the natural environment of the coastal area, usually with an emphasis on how they provide employment opportunities and sources of income. Another popular focus was on farming on a flood plain or delta with associated opportunities for food production, either commercially or in subsistence farming. Those who chose floodplains and deltas gained good marks for developed reference to fertile soils and good water supply. Some candidates would have been well advised to consider other functions or land uses to widen the scope of their answers. A number of candidates did not follow the instructions correctly and either did not underline the type, or more commonly placed the name of the type rather than an example in the space provided, actions preventing the highest credit.

**Question 4**

**(a) (i)**      Most candidates responded correctly here.

**(ii)**      This was also correctly answered by most candidates though some only compared deaths or damage rather than both and some candidates gave figures without any attempt to interpret them.

**(iii)**      Many candidates gave well thought out answers, typically relating to the relative monetary values of buildings and specified features of the infrastructure in LEDCs and MEDCs though others gave superficial and inaccurate responses about how built up the areas were. Many candidates used the word 'infrastructure' however not all elaborated or gave more detail to show their understanding of its meaning.

**(iv)**      Most candidates achieved two marks for reference to warnings being provided by volcanoes in order that people can be evacuated. Others also referred to slow moving lava or methods of slowing it down or reducing its effects. Thus the question differentiated well. Many candidates also suggested that people did not live near volcanoes which is incorrect. There were some responses which seemed to focus on a question about why people live near volcanoes as has been asked previously.

**(b) (i)**      Whilst there were many weak generalizations the better answers referred specifically to those parts of the countries shown which are affected by severe drought. Those countries who simply listed the countries were awarded one mark maximum. Vague responses referred to 'East Africa', 'coastal' and 'part of' a country. Some candidates focused incorrectly on the causes or impacts of the drought.

**(ii)** This differentiated well as there were well developed answers relating to several points from well prepared candidates, whilst weaker answers simply listed basic ideas. In general the impacts of severe drought were well understood.

**(c)** A few candidates showed a clear understanding of the factors causing a desert climate, however many answers lacked detail or were irrelevant. Candidates needed to refer to the continental-scale factors for a hot and dry climate which should have included reference to patterns of air pressure (Hadley Cells), winds and ocean currents, amongst other points. References to localised evaporation from water bodies and vegetation – the most common and often only points made – were considered not significant and only to operate at a micro-climate level. References to proximity to the equator were not highly significant either, but points about latitude/angle of sun would be still relevant. Some candidates achieved Level 1 for simple ideas about the sun being overhead, cloudless sky and dry winds but did not develop these ideas. The lack of detail showed poor understanding at this level and irrelevance was the result of description or explanation of vegetation adaptions.

## Question 5

**(a) (i)** Mostly correct, though a significant minority chose electricity.

**(ii)** Again generally well answered.

**(iii)** Most candidates made the point that a location close to raw materials for reduces transport costs – more perceptive candidates stated that this is due to them being bulky but few expanded on this by explaining how the ore contained waste materials making the finished product relatively cheap to transport compared with raw materials.

**(iv)** This was generally well-answered with some good development of ideas here. Weaker responses were vague (e.g. pollution, noise), referred to the impacts on people or showed confusion over the impacts of burning fossil fuels on the atmosphere by referring to damage to the ozone layer.

**(b) (i)** This question discriminated well between candidates. The best answers gave accurate distance and direction from named cities and used the lines of latitude well. Most candidates scored at least one mark for the idea of location 'in the south of India' but there were many accounts which were far too vague.

**(ii)** Only the best answers focused on high technology industries and referred to skilled workforce as well as cheap workforce. Better candidates also included factors such as government incentives and less stringent pollution controls or employment regulations. Many answers were generic to industrial location and included irrelevant references to raw materials for example, but still gained credit where relevant.

**(c)** Most candidates were able to give some advantages of industry moving to a region and its benefits. Many did not understand the nature of the hi-tech industries though. Many gave huge areas or countries as their examples – 'China', 'Singapore', and 'California' – all of which limited marks. As in **(b)(ii)** many answers were generic to industrial location. Good candidates described benefits such as employment, infrastructural development and economic growth and the most effectively used examples were Bangalore, Silicon Valley and the M4 corridor. Some weak candidates misinterpreted the question and focused on the benefits of the products of high technology industry or the benefits to the industries of locating there (repeating information from **(b)(ii)** rather than to the area.)

## Question 6

**(a) (i)** Generally well answered, most candidates could interpret this unusual resource.

**(ii)** Most candidates got the first answer 'transport' but for the second answer many put 'nuclear' rather than 'thermal', presumably not being familiar with the term.

**(iii)** There were some very well thought out answers here, with most candidates suggesting one or more relevant ideas, the main ones being cost and the fact that oil is likely to run out. Some

excellent references were made to the United States not wanted to be reliant on imports from an area which is not politically stable.

**(iv)** Whilst there were a few answers which confused renewable and non-renewable energy there were also many excellent responses. Many candidates suggested explanations about the lack of suitable siting advantages or the impracticality and unreliability of developing specific renewable resources. Better answers also included suggestions such as the expense of development, lack of technology or expertise, and that fossil fuels may be cheaper to develop.

**(b)(i)** Generally candidates coped well with this different style of question. Those who used the diagrams to produce a summary statement, or 'message', rather than just describing what they saw in each one produced more convincing answers. Weak candidates wrote about 'balance' in the first diagram and 'lack of balance' in the second diagram which was not very effective and some incorrectly referred to industry rather than energy.

**(ii)** Whilst some answers related to extraction and transport of fossil fuels rather than their use there were many other good responses which related to the impact of their use, particularly global impacts. From some candidates there were excellent developed accounts of the problems caused to the natural environment by acid rain and global warming, others as always were confused.

**(c)** This case study differentiated well though locational factors were often not fully developed. The most successful answers focused on HEP stations (e.g. Kariba) although many candidates did not fully explore the physical locational factors. Whilst occasional good quality answers used examples of coal fired power stations (e.g. Hwange) many were superficial or focused on inappropriate ideas such as labour, noise and pollution.

# GEOGRAPHY

## Key Messages:

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

- Use and interpret a variety of resources such as maps, graphs or diagrams in order to extract information, and analyse the data to show patterns or trends.

- Use photographs to generate ideas or to describe features such as a range of tourist destinations or a map.

- Provide full and accurate definitions of key geographical terminology e.g. residential area or fold mountains.

- Show understanding of key geographical terminology, processes and features by providing full descriptions and/or explanations of geographical themes, events or issues.

- Refer to a range of case studies with place specific detail, statistics or other data, and apply this information to the question being asked e.g. Explain the impacts of an earthquake which occurred in a named area which you have studied. This requires information relating to impacts only. Any details on the causes of the earthquake are not required for this question despite the fact that the candidate would know this information.

- Write in depth and detail in a succinct manner and avoid repetition.

Examiners were impressed by the quality of the work which they saw from many candidates. There were relatively few rubric errors. Case studies were well learned and there was good place specific reference for some questions. Candidates generally coped well with the 5 mark questions and many made genuine attempts to develop their answers. Nevertheless Centres would benefit from attention to:

- precision in defining key terms and using them in the correct context. Key word glossaries would help. Key terms need to be used more fully when explaining – e.g. use of words such as convergence, subduction, melting and magma rising through lines of weakness when explaining why there are active volcanoes along destructive plate boundaries.

- knowing how to compare or describe change – either by the use of comparative words or by writing two statements that can be linked.

- developing answers for the 5 mark question and the case studies – sometimes this is done very well but in some cases no development is attempted.

- including place specific reference in the case studies without spending a disproportionate amount of time and space on this at the expense of focusing on the question.

- avoiding the use of vague terms – e.g. – 'higher crime rate' rather than giving the specifics of what the crimes or problems are or 'pollution' rather than giving specific types or examples.

- reading the question carefully – e.g. only writing about one problem if asked to and not several, or focusing on cause rather than effect or vice versa. Advising candidates to underline command words in the question and also the words/terms that give them the content and the context would help. There is very little evidence that candidates do this.

- identifying the stages in a process and describing or explaining each term sequentially and with precision – e.g. freeze thaw weathering/biological weathering or exfoliation.

**General Comments:**

It was unusual to see many answers continued on the additional page and very few candidates went beyond that and used extra paper. Whilst it is possible to continue beyond the space provided candidates should be aware that the space allocated should usually be sufficient if an answer is reasonably concise and relevant. Those candidates who go well beyond the space allocated often do so as they include irrelevant materials. Candidates should be made aware that they:

- write only on the lines provided, not underneath the final line or elsewhere on the page (e.g. in any area of unused space at the bottom of a page).
- continue any answers which they do not have space for on the lined page(s) at the back of the booklet. If they do this they must indicate that they have done so (e.g. by writing 'continued on Page XX') and write the number of the question at the beginning of the extra part of their answer. They should only use loose sheets of paper if this extra space has been used up. Many candidates do not indicate that they have continued their answer.

The examination was considered wholly appropriate for the ability and age range of candidates. The examination paper gave a wide spread of marks allowing for positive achievement for all but also allowed for sufficient challenge for the most able. The majority of candidates were able to answer in full and the weaker candidates attempted most sections of their chosen questions.

Many candidates produced geography of a very high standard. There were only a few candidates who did not understand what was required in the questions or respond in an appropriate way and, in general good use was made of the resources provided.

A few candidates attempted all the questions instead of following the rubric. This is not an advantage to them as it does not give them the opportunity to answer in the detail required or devote sufficient thought to each answer.

Whilst many excellent case studies were seen some candidates are learning case studies from previous mark schemes and trying to use them whatever question is set on that topic. This is not good practice as it is not conducive to the candidates' understanding of the geography involved. It particularly stands out to Examiners when an answer does not 'fit' with the question being asked. Generally candidates who use local case studies tend to write convincing answers. It enables them to write in detail with place specific information, as opposed to learning about distant case studies that have very little relevance to candidate's everyday lives. It is recognised that this is not always possible and that teacher judgment is required as to which case studies are most suitable, local ones or ones which are well documented in text books and other media.

It is also worth noting that the case study questions were answered by some candidates by the use of bullets or key points as would be used in a revision programme. These simple answers mainly kept the candidate at Level 1. Also a lot of candidates have clearly been trained to put place knowledge in the answer to gain Level 3, but some candidates spend too much time detailing place knowledge (locational and background information for example) at the expense of answering the question fully.

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

1. make the choice of questions with care, ensuring that for each question they choose they have a named case study about which they can write in detail and with confidence.
2. answer the three chosen questions in order, starting with the one with which they are the most confident, and finishing with the one with which they are least confident (in case they run out of time).
3. read the entire question first before answering any part, in order to decide which section requires which information to avoid repetition of answers.
4. highlight the command words and possibly other key words so that answers are always relevant to the question.

5.  use the mark allocations in brackets as a guide to the amount of detail or number of responses required, not devoting too much time to those questions worth few marks, but ensuring that those worth more marks are answered in sufficient detail.

6.  consider carefully their answers to the case studies and ensure that the focus of each response is correct, rather than including all facts about the chosen topic or area, developing each point fully rather than writing extensive lists of simple, basic points.  It is better to fully develop three ideas rather than write extensive lists consisting of numerous simple points.  Candidates need to try to consider several issues and develop each one, rather than just focusing on one issue.

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

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:**

**Overall candidate performance**

**Question 1**

This was the most popular question, with the majority selecting it.

**(a) (i)**  Candidates were required to use evidence from Fig. 1 that suggests that Italy had a natural population decrease in 2011.  Whilst most candidates correctly answered that the death rate was higher than the birth rate.  Some failed to understand how to write a comparative statement, and write phrases such as "The death rate is low", which is not a comparative statement and is not quite enough to gain the mark.

**(ii)**  Here, candidates had to calculate the natural population growth rate of Zambia and were required to show their calculations.  On the whole the working out was shown and a correct answer calculated.  Yet some candidates had no idea as to how to do this and a wide range of incorrect mathematical calculations were seen when all that was required was a simple subtraction of birth rate minus death rate.

**(iii)**  Three reasons were needed to explain why there are high death rates in LEDC's such as Zambia and this question was well answered by most.  The most popular reasons were 'lack of medicines, lack of hospitals, poor food supply or poor water supply'.  Some candidates give unsubstantiated answers such as "lots of disease" rather than provide named examples of diseases, e.g. AIDS, also "not educated" and "low standard of living" were frequently seen.

**(iv)**  This question required an explanation as to why there are low birth rates in MEDC's such as Italy.  Again this question was well answered with the most frequently seen responses including: 'contraception is available, women are more career minded and delay having children, women are educated about family planning and contraception, low infant mortality rate' etc.  Where candidates failed to gain marks they gave answers such as "women are educated" which did not go far enough to explain why there are low birth rates.

**(b) (i)**  Candidates were required to suggest three ways in which the population pyramid for an MEDC is likely to be different from the population pyramid for Zambia an LEDC.  Interpretation of the population pyramid produced mixed responses.  Several candidates referred to: "life expectancy", "birth rate" and "death rate", which gained no marks.  Candidates were required to show their understanding by giving ideas such as 'the MEDC pyramid will have a narrower base; a wider middle section of working age people; a wider top' etc.  The majority of candidates did manage to gain marks on this questions with many scoring full marks.

**(ii)**  This question asked candidates to 'describe the likely problems for an LEDC of having many young dependents' yet many candidates failed to read the question accurately and gave responses relating to employment and lack of jobs.  There were also answers that made reference to "not enough houses", "not enough pensions" and "the growth of squatter settlements" which were all irrelevant.  Most candidates scored 1 or 2 marks for this question with few high scoring responses.  The best responses referred to ideas such as: 'high cost of education so many children are not

educated so need to build more schools (dev), this means that literacy levels remain low (dev)' alternatively this idea could be related to high cost of healthcare or providing food and water. Most candidates gained a mark for 'the cost/pressure on families to support a large number of children' or 'that if the government are spending money on the young they can not spend it on other things or examples'. This question differentiated well, as the full range of marks were seen.

**(c)** The final question asked candidates to describe the policy or policies used by a government to reduce birth rates for a named example of a country they have studied. Most candidates selected China as their example. However, whilst candidates clearly knew the impacts of the policy really well this was not required. Hence, many of the aspects of the policy were not known or not described. The best answers included reference to the one child policy, the incentives provided and the consequences if people did not obey the policy, candidates also referred to ideas such as encouraging the use of contraception and applying for marriage and to have a baby. The question differentiated well as the full range of marks was seen.

**Question 2**

This was another popular choice made by candidates, probably the third most popular choice.

**(a)(i)** Candidates were required to define the term 'residential area'. The vast majority of candidates could do this and correctly identified that 'it is the area where people live'.

**(ii)** Here candidates were required to use Fig. 3 to identify which area was the most densely populated and which had the newest houses and provide a reason for their choice. Many candidates correctly identified area B as most densely populated because there are more people living in the same size area as A or gave figures to show this, and area A as the area with the 'newest houses as redevelopment has taken place'. There were several candidates who failed to give a comparative answer, providing responses such as: "more people live there". Some talked about area B having more people but made no reference to the area being the same size as A.

**(iii)** Using Fig. 3 again candidates were require to identify three differences between the numbers of people from each socio–economic group who live in areas A and B. Many gained full marks here but some included responses about how the two areas were the same, which was irrelevant and scored no marks. Answers included 'a greater percentage of professional managerial in A, a greater percentage of skilled manual workers in A, and a lower percentage of unskilled workers in A'.

**(iv)** This question required candidates to state two disadvantages and two advantages of living in an inner city area in an MEDC. This question was not generally well answered but overall disadvantages were identified better than the advantages. Many answers were too vague for example; 'good transport', 'close to CBD', 'close to industry' candidates needed to say why this is an advantage or a disadvantage e.g. 'it's closer to get to the CBD for work or shopping', 'it's close to industrial areas for employment opportunities'. Alternatively, disadvantages such as 'air pollution from nearby factories' or 'noise from traffic' could have been referred to.

**(b)(i)** Here, candidates had to study Fig. 4 in the Insert and from that identify three non-residential types of land use in a specified area. The vast majority of candidates identified correctly the three land use types which are 'commercial, civic and office'. Where there were errors candidates' stated "open space" and "vacant".

**(ii)** This question asked candidates to explain why some people may support or oppose the conversion of a vacant property in Manchaca Road into a cinema. The question differentiated well as some candidates developed good reasoning concerning the support for and the opposition to the proposals for a cinema. Whilst other candidates were able to gain one or two marks for simple ideas such as 'they will be able to use the cinema'. One misconception was that there would be construction work taking place, despite being told that it was a conversion.

**(c)** This final question asked candidates to describe how the land-use has changed in the area surrounding the city where urban sprawl has occurred. This was generally not well answered and very few candidates were able to reach Level 2 or 3. Many candidates looked at the CBD and Inner City Redevelopments and disappointingly showed no understanding of what 'urban sprawl' is. Some candidates even named a country as their example rather than a city.

**Question 3**

This was a popular choice made by candidates and was probably the second most popular choice after Question 1. On the whole the **(a)** sub part questions *were* poorly answered but **(b)** and **(c)** were well answered.

**(a) (i)** This first question required candidates to give a definition of 'fold mountains'. This was not well answered. Candidates were unable to provide a description or definition without re-using the word 'mountain'. Also candidates tended to write about how they are formed which is a requirement of **(a)(iii)**. Candidates should define all words in italics in the question.

**(ii)** Using Fig. 5 candidates had to name the two plates which are moving towards each other forming the Andes. The vast majority of candidates correctly identified 'Nazca and South American'.

**(iii)** Here candidates had to explain how fold mountains are formed in some areas where plates are moving towards each other. Many were confused with plate movement relating to volcanic activity, and gave descriptions of subduction. Most candidates gained at least one mark for either 'continental plates meet or an oceanic and a continental plate meet'. Candidates who gained full marks often did so for ideas such as 'same density plates, one won't subduct, rocks get bent and crumpled'.

**(b) (i)** Using Fig. 6 candidates had to describe three different hazards which an active volcano may cause for people. Some candidates lost marks for not selecting three different hazards from the picture and/or three different problems facing people. Many candidates were able to score at least one mark for this question. The most frequently seen responses included: 'ash cloud pollutes the atmosphere and causes breathing problems, lava flow can burn/destroy houses, pyroclastic flow can kill people'.

**(ii)** Candidates were required to explain why there are active volcanoes along destructive plate boundaries. This was overall well answered with most candidates making reference to 'subduction, friction, oceanic plate melting and magma forcing its way through to the surface'. However, many candidates did not gain their fourth mark as they simply said 'magma rises' rather than 'magma rises through lines of weakness or fissures'. Candidates need to ensure that they finish their statement, sentence or idea fully to ensure full credit is gained.

**(iii)** Candidates were asked to explain how an area of volcanic activity can provide opportunities for people living there. Most gave responses concerning fertile soil and the attraction for tourists. Some candidates stated that it provides jobs but lacked specific comment as to the type of job in order to gain credit. Some stated that 'they live there for the good view' which is irrelevant. This question differentiated well as the full range of marks was seen.

**(c)** For a named area candidates were asked to describe the impacts of an earthquake. Most candidates could develop statements describing the impacts of an earthquake and many, were able to provide some place specific detail to gain Level 3. However, too many candidates wasted time describing the cause of the earthquake which was not required and then either ran out of time or ideas to explain the impacts of the earthquake. Candidates should be encouraged to identify the key command words in the question to avoid issues such as this. However, again the question differentiated well as the full range of marks was seen.

**Question 4**

This was not a popular question, probably the least popular, but of those who selected it they were able to gain good marks.

**(a) (i)** Candidates were required to give a definition for 'westerly wind' and the majority of candidates were able to gain a mark for saying that it is a wind that blows from the west. A few candidates incorrectly stated that it is a wind 'that blows to the west'.

**(ii)** Candidates had to select their answer from a list of four and then had to suggest what the cloud type was at 9.00 and 14.00 hrs after reading the extract in Fig. 7. The majority used the given information correctly to gain the maximum 2 marks and correctly identified '9.00 – cirrus, 14.00 – cumulonimbus'.

(iii)     Here candidates were asked to identify three differences in the weather between the morning and the afternoon of 29<sup>th</sup> July. The majority of candidates gave three accurate differences between the morning and afternoon conditions such as 'it was warmer in the morning and the temperature had dropped in the afternoon, wind direction changed from west in the morning to north west in the afternoon, it was dry in the morning but rained in the afternoon'.

(b)(i)    After studying Fig. 8 showing a weather station and some of the instruments used in it candidates had to say what was measured by an anemometer, wind vane and sunshine recorder. Most were able to gain two out of the three marks. The third mark was usually lost for saying that the sunshine recorder records sunlight or heat.

(ii)    This question asked candidates to describe and explain where a weather station should be located in order to obtain accurate data. Candidates quite often wrote about a Stevenson's Screen rather than a weather station. This question differentiated well as the full range of marks was seen. Some candidates gave the description without an explanation e.g. 'in the open away from buildings' was often seen but very few went on to develop this by saying 'so readings are not affected by the shelter they provide'.

(iii)    This question required candidates to describe the main features of a rain gauge and explain how it is used. Candidates could also use a labelled diagram in their answer. Very few candidates were able to gain the maximum marks here, with several candidates repeating the site factors that they had given in b. (ii). The most common responses referred to features such as: 'funnel', 'cylinder', 'half buried in the ground', 'checked every 24 hours'. Very few diagrams gained any extra credit as they contained the same information as what candidates had already written in the text. However, a few candidates who labelled 'funnel' often gained the mark on the diagram as they had not referred to it in the text.

(c)    This last question asked candidates to choose an example of weathering from freeze-thaw, exfoliation or biological weathering. Freeze thaw was the most popular choice made by candidates. The question differentiated well as the full range of marks was seen. Most gave limited detail explaining the weathering process providing simple statements like 'water gets into a crack and freezes'. More detailed responses for Level 2 were also seen such as 'water gets into a crack in the rock and during the night when the temperature falls it freezes which puts pressure on the crack and causes the crack to expand'. Some detailed diagrams were seen but many were simplistic and many bore no relation to the weathering process. Some candidates got their weathering processes mixed up and referred to a combination of ideas relating to two or more of the weathering processes.

**Question 5**

This question was probably the fifth most popular choice made by candidates and was generally well answered.

(a)(i)    Candidates were required to name one greenhouse gas for 1 mark. Most candidates gave a correct answer. The most frequently seen inaccurate response was carbon monoxide.

(ii)    Using Fig. 9 candidates were asked to identify a way in which climate change might 'reduce energy demand' and 'increase energy supply'. Most candidates gave evidence from the resource material to gain the full two marks i.e. 'A – less heating needed in winter' and 'B- more HEP generated'.

(iii)    Candidates were asked to identify three ways in which climate change might affect agricultural systems around the world. Again good use was made of the resource information. Many however gave climatic changes but failed to link these with agricultural systems. The most frequently seen responses included ideas such as: 'extension of agriculture into areas further north, longer growing season, more droughts so less water for crops to grow.

(iv)    Here candidates had to describe the possible impacts of climate change on the natural environment. Most could provide at least three possible impacts of climate change on the natural environment including ideas such as: 'melting of ice cover, rising sea levels, loss of habitats, extinction of species'. However, many candidates still refer to crops or affects on people when it is irrelevant to the question.

**(b)(i)** Using Fig. 10 a graph, candidates were required to describe the changes in the average annual temperature in Fairbanks between 1906 and 2002. Candidates were asked to refer to statistics and years in their answer. Most candidates identified the overall trend as 'increased' and many referred to 'fluctuations' for a second mark. However, where statistics were given they were often inaccurately read from the graph and vague statements were made. Overall, the question differentiated well.

**(ii)** This question asked candidates to explain why greenhouse gases are increasing in the atmosphere. It would appear that many found this question difficult and responded by giving the source of greenhouse gases, for example, there are more cars, or more factories letting gases into the atmosphere. However, to gain the mark candidates needed to explain why e.g. 'generation of electricity has increased by using fossil fuels in power stations, factories burn coal, there are more cars which burn petrol/oil, deforestation which prevents the use of carbon dioxide by trees'.

**(c)** For a named river, sea or lake which candidates have studied they had to describe the causes of water pollution. Most candidates named a river, lake or sea, but there were a significant number who made reference to oceans. Statements tended to be limited in detail to describe the causes; e.g. "rubbish thrown in by people" or "oil spills". Some candidates also wrote in detail about the effects of the water pollution which was irrelevant to this question and in many cases the effects were written about in more detail than the causes.

**Question 6**

This question was probably the fourth most popular choice with candidates.

**(a)(i)** This question asked candidates to name an example of a job in the tourist industry. Whilst the vast majority of candidates were able to provide an example of a job in the tourist industry such as a 'tour guide or hotel receptionist' there were some candidates who just wrote 'hotel' or similar which in itself is not a job in the tourist industry and does not gain the mark.

**(ii)** Using Fig. 11 only candidates were asked to identify one environmental cost and one environmental benefit of the tourist industry. Most candidates gave accurate lifted responses from the resource.

**(iii)** Using Fig. 11 again along with candidates own ideas candidates had to explain how tourism can undermine social standards. The majority of candidates made reference to drinking alcohol and to the use of drugs. Several gave general statements such as "bad habits" or 'locals would lose their culture' which did not gain credit. Most candidates were able to gain one or two marks here.

**(iv)** Candidates were asked to explain how people not directly employed in the tourist industry may still benefit from tourism. This was generally well answered on the whole, although some candidates still give examples of people directly employed in tourism or vague statements such as 'improves standard of living' without saying how. Most frequently seen responses included ideas such as: 'increased economic growth, enables spending on healthcare or education, development of infrastructure, more business for local shops'.

**(b)(i)** After studying Photographs A, B and C in the Insert, candidates were asked to use evidence from each photograph to give different reasons why Mauritius is attractive to tourists. The majority of candidates gained full marks, those that failed were generally in response to the third picture where they just stated 'beaches'.

**(ii)** This question asked candidates to explain why it is easier to develop tourism than manufacturing industry in LEDC's. A good understanding was shown by the majority of candidates who responded to this question. Ideas related to 'lack of raw materials, imports being expensive, people do not have the required skills or training for the manufacturing industry, beautiful scenery already there for tourism, many jobs in tourism are low skilled or low pay' etc.

**(c)**     For a named area which candidates have studied where the tourist industry is important, candidates needed to describe what has been done in the area to conserve the natural environment. Many candidates failed to understand what was meant by 'natural environment' and 'conservation'. Some talked about the positive aspects of a tourist area or even a city. Very few candidates gave well developed statements for Level 2. The majority of candidates gained marks for simple Level 1 statements for ideas such as: 'restricting the number of tourists or setting up a national park' but did not go on to develop the idea fully. Many candidates also named a country rather than an area which restricts them to 5 marks overall.

# GEOGRAPHY

## Key Messages

- Good answers were focused closely on the questions asked and were often concise, making excellent use of the resources provided in the paper.
- Candidates should make sure that they understand clearly the different meanings of the command words such as *describe*, *suggest* and *explain* and what responses these require.
- Care should be taken with map and graph work to ensure that responses are clear and accurate.

## General Comments

Almost all candidates answered the questions within the spaces provided and avoided the use of additional sheets. Most candidates were able to complete the paper in the allotted time.

### Question 1

**(a)**   Candidates generally scored good marks in this part of the question and made careful reference to the map key. Some candidates, however, did not notice that all the answers related to transport features, so a variety of other incorrect answers were given especially in parts **(iii)** and **(iv)**. Copying of a full line of the key showing a number of symbols should be avoided as no marks can be awarded for this. For example, in part **(i)** where the correct answer was *railway*, those who wrote *railway, with embankment, cutting, tunnel* could not be given credit. Alternative answers of *canal* and *narrow gravel road* were allowed in part **(iv)**.

**(b)**   In part **(i)**, there was considerable confusion over the direction of flow of the main river, the correct answer being north east. In part **(ii)**, candidates noted the presence of many tributaries but many candidates thought that the tributaries left the main river rather than joining it. Other candidates included features which were not about drainage in their responses.

**(c)**   In part **(i)**, most candidates identified that the contour was 400m but sometimes failed to add the units. In part **(ii)**, responses were usually correct, although sometimes the symbols drawn were much too large and occasionally the correct symbol was not used.

**(d)**   This section was answered with variable success. The feature at the summit (trigonometrical station), grid reference (629713) and distance (range of 4600 - 4850m) were often correct but the bearing (range of 171° - 173°) proved to be more difficult. It was pleasing to note that in part **(v)**, the correct answer (Chipoto), and its height difference were accurately calculated by most candidates.

**(e)**   This was a high scoring part of the question in all sections, although in part **(iv)**, candidates who copied a full line of the key, such as *African Huts, Compound* or *Built-up Area, Buildings, Rest Huts,* did not score the mark as the correct answer was either *compounds* or *buildings*.

### Question 2

**(a)**   Most candidates were able to complete the graph in part **(i)** and answer *13* correctly in part **(ii)**. The key to a good answer in part **(iii)** was in ensuring that the changes described were general and did not refer to individual years or individual countries. An answer such as *there was a slight decrease...* could gain the two marks.

**(b)**   Many candidates correctly stated *9 per 1000* but it was essential that the *per 1000* was stated.

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**(c)**     Answers were almost always correct in this tick box section.

**(d)**     A range of suitable suggestions were given in this question, including *a larger workforce*, *more money from taxes* and *fewer old dependents* reflecting good understanding of the issues here.

**Question 3**

**(a)**     Most candidates completed the table correctly though the few errors that occurred were in relation to Photographs A and B.

**(b)**     There were some long but disappointing responses to this question.  Candidates should be aware that marks could only be awarded for description of the buildings shown in the photograph.  Many candidates wrote long accounts and explanations of shanty towns that they had studied in class but which were irrelevant to this photograph.  Other candidates included description of other elements of the photograph, including the relief and vegetation, which again scored no marks.  A small number of candidates wrote exactly what was required, often scoring full marks in a few lines.

**Question 4**

**(a)**     There were some very pleasing responses to this question.   Candidates wrote concise comparisons of the different aspects of the two volcanoes and noticed that the scales on the two diagrams were quite different.

**(b)**     Whilst candidates often tried very hard to use their knowledge to explain the differences noted in part **(a)**, few scored more than one mark.   Many candidates wrote lengthy descriptions of plate tectonics without referring to the variations in the nature of the lava giving rise to the different forms.  This proved to be the most difficult question on the paper for many candidates.

**Question 5**

**(a)**     Many candidates scored full marks in this section.  Any errors usually occurred in parts **(i)** and **(ii)**.

**(b)**     This question required knowledge and understanding of a popular syllabus topic and answers generally were very good.  Mention of wave erosion, weaknesses in the cliff, hydraulic action, cave and arch formation and arch collapse were frequent, and usually correctly explained.  Some candidates included sketch diagrams and credit was given for labels that did not repeat what had already been credited in the text of the answer.

**Question 6**

**(a)**     Most candidates scored good marks in this section and pie charts were clearly and accurately drawn with the correct key.

**(b)**     Candidates coped well with the different types of information that they needed to analyse in this part of the question although some of their responses were rather general and could not be credited.  In part **(i)**, reference to lung/heart problems was required.  In part **(ii)**, the link between $SO_2$ and acidic rain and then $NO_2$ and smog was not always clearly stated.

**(c)**     This proved to be more challenging but many suitable suggestions were made.  Most commonly, the high costs of changes, likely increases to energy prices and possible job losses were offered as acceptable answers.

# GEOGRAPHY

| Paper 0460/22 |
|:-:|
| Paper 22 |

## Key Messages

- Candidates should be aware that tributaries join other rivers, rather than flowing away from them
- When giving numerical answers, candidates should always give the correct units
- Candidates should be aware of the correct method for determining the third and sixth figures of grid references, as described in the syllabus
- The formation of beaches and coastal sand dunes is not well-understood
- The process of global warming is not well-understood

## General Comments

The response to the paper was generally very good and, as usual, there were very many excellent scripts. Candidates are usually very proficient at survey map reading, although certain common weaknesses are described elsewhere in this report. Candidates coped well with the interpretation of choropleth maps in **Question 2**, the interpretation of data about plate tectonics in **Question 4**, the farming photographs in **Question 5** and the graphical data in **Question 6**. Many struggled with the photographs of coastal features in **Question 3** and found difficulty in using Fig. 13 to explain climatic change in **Question 6**. Scripts were generally clearly written and candidates completed the paper within the time allocation.

## Question 1

**(a)** This straightforward, introductory question tested candidates' ability to find features on the survey map of Hippo Valley, Zimbabwe, and then to identify them using the map key. Candidates were extremely successful and the majority of candidates gained full marks.

**(b)** 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, so that candidates who did not measure exactly along the 574 northing were not unduly penalised. The most common error was, in part **(iv)**, to label the summit of Bendezi Hill and not the west-facing slope. A small number of candidates did not draw labelled arrows which ended exactly on the topographic profile, as illustrated by the example of the boundary marked on Fig. 2. Arrows which ended a long distance from the profile were ambiguous and could not gain credit.

**(c)** Description of the relief and drainage shown on the survey map was made easier for candidates by providing a multiple choice format. Many candidates correctly identified the average height between 340m and 400m in part **(i)** and the high drainage density in part **(v)**. However the other three parts proved more difficult. In part **(iii)**, many candidates thought that the main rivers flowed north instead of south and, in part **(iv)**, that there were many distributaries instead of many tributaries.

**(d)** In part **(i)**, most candidates identified the height above sea level of point Y as 368m. Unfortunately a significant number failed to give the correct units. For the bearing in part **(ii)**, Examiners allowed a tolerance of between 13° and 17° with most candidates answering correctly. In part **(iii)**, most candidates gave the correct compass direction of southwest or south south west. The six figure grid reference in part **(iv)** was usually given in the correct square but the answers for the third and sixth figures were rather variable. Part **(v)** required candidates to measure a distance along a road, with answers between 5000m and 5200m being marked correct. It was apparent from candidates' answers that many had measured the straight line distance rather than the distance along the road.

**Question 2**

**(a)** All most all candidates who attempted this part of the question correctly showed area X with diagonal shading.

**(b)** Many candidates scored full marks, usually commenting on the differences between the west and east, north and south and the coastal areas and inland. The small areas with over 900 people per square kilometre were also frequently mentioned. A minority of candidates answered the question without referring to locations and failed to score any marks.

**(c)** Many candidates noted the general negative relationship between population density and height above sea level, going on to refer to densely populated areas below 1000m and sparsely populated areas above 4000m. A wide variety of reasons for the relationship were suggested, those given credit included thinner air over 4000m, low areas developing trade or ports, high areas having cold or harsh climates, high areas being inaccessible, low areas being better for agriculture and low areas being easier to build on.

**Question 3**

**(a)** When explaining why a tourist industry had developed in the area shown in Photograph A, candidates met with variable success. Points given credit included the beach, hotels, mountain scenery, mountains for walking or climbing, gentle slopes for development and the mountains giving shelter. Some candidates ignored the instruction to give evidence from Photograph A and wrote in very vague terms about the tourist industry in general.

**(b)** Many candidates found this part of the question difficult. Most identified Landform Y as a beach but fewer identified Landform Z as sand dunes. Explanations of the formation of the landforms often failed to point out the very basic point that landform Y was formed by deposition by the sea and that Landform Z was formed by deposition by wind. Those statements alone would have gained candidates two marks, with greater detail being needed for further marks.

**Question 4**

**(a)** The responses to this part of the question, and to the whole of **Questions 4**, were variable. Full marks were often awarded but other candidates failed to score any marks. Some candidates ignored the instruction to answer on Fig. 6 only. The position of a volcano was often labelled on the fold mountains and vice versa. The position of the focus of a volcano should have been labelled in the subduction zone but it was often labelled in the water of the ocean trench. It may have been that candidates confused *focus* with *epicentre*.

**(b)** The correct answer of *divergent* or *constructive* was often given.

**(c)** Again the response was very variable. Completely correct answers were common. There was no obvious pattern to the incorrect answers.

**Question 5**

**(a)** Most candidates correctly identified the two descriptions of the farming system in Photograph C as *small scale* and *arable*. Most candidates named the output as *vegetables*, with Examiners accepting any example of a vegetable.

**(b)** Beef and milk were the most common responses for the two products of the farming system in Photograph D but Examiners also accepted dairy produce or a named dairy product, leather, calves and dung.

**(c)** Most candidates identified the problem of the physical environment in the photographs as the dry ground or the loose sandy soil, although the Examiners accepted a wide variety of expressions.

**(d)** This was a potentially demanding question, asking candidates to suggest why the two types of farming were carried out and not just one. Nevertheless, candidates coped very well. The points most frequently given credit included: if one type fails the other can be used, it would provide a varied or nutritious diet, and there would be a supply of fodder, a supply of fuel and a supply of

manure. Less frequently candidates noted that there might be different outputs in different seasons and that the cattle could be used as draught animals.

**Question 6**

**(a)** As usual candidates scored well on the questions involving graph reading and plotting. Almost all candidates plotted China's data correctly on Fig. 11 and they noted correctly that Russia emitted 17 thousand million tonnes of carbon dioxide.

**(b)** Most candidates noted that Germany had reduced its carbon dioxide emissions between 1997 and 2007. Slightly fewer were able to calculate that China emitted 6.2 thousand million tonnes of carbon dioxide in 2007.

**(c)** This question proved to be demanding for many candidates, with many scoring just one mark for noting that increases in the carbon dioxide content of the atmosphere would lead to increased temperatures. Generally candidates failed to explain properly the roles of short wave and long wave radiation and failed to answer the question about *increases* in carbon dioxide. They did not usually note that the sun emits short wave radiation and that the short wave radiation passes through the atmosphere. Candidates sometimes noted that the Earth emits long wave radiation but sometimes incorrectly described this as reflection. They often failed to note that increased carbon dioxide in the atmosphere would lead to increased absorption of long wave radiation and increased long wave radiation back to Earth.

# GEOGRAPHY

## Key Messages

- Good answers were focused closely on the questions asked and were often concise, making excellent use of the resources provided in the paper.
- Candidates should make sure that they understand clearly the different meanings of the command words such as *describe*, *suggest* and *explain* and what responses these require.
- Care should be taken with map and graph work to ensure that responses are clear and accurate.
- When giving numerical answers, candidates should always give the correct units

## General Comments

Candidates responded well to this paper and very few failed to complete every part of each question. Very occasionally **Question 3(b)(i)** which was omitted. Overall candidates found **Question 3** relatively easy, particularly part **(a)(i)**, while **Question 4** was more difficult, particularly parts **(a)(iii)** and **(b)**. **Question 6(b)** needed to be read and answered carefully and this was not always the case in all responses. Candidates found the multiple choice sections in **Question 1** fairly straight-forward.

## Question 1

**(a)**    Fig. 1 directed candidates' attention to a section in the north of the map extract, highlighting features to identify. Feature A was a main A road. It was necessary to state the road classification, not just "main road". Some candidates wrote "culvert, road – Main A" copying straight from the key without interpreting it.

B was a trigonometrical station on the Fayence Mountain, while C was the scrub vegetation in the same area. "Scattered trees" was an acceptable alternative here, due to the similarity of the symbols, and most candidates had opted for one of these two possibilities.

The named building at D was a mill. Almost all candidates had found this. A few had chosen the nearby temple. Careful scrutiny of the building shape would have prevented this error.

The lines indicated by E were cane tracks in the plantation. Again most candidates had answered correctly.

**(b)**    From the road junction to the School involved walking in a north west direction, with a corresponding bearing of 315°. Answers in the range 312° to 317° were acceptable. Common errors, around 40° and 135°, occurred due to aligning the protractor incorrectly.

The distance measurement involved a different section of road, in the north of the map, 3080m being the correct option. This road and many others on the map have settlement aligned, giving the main settlement pattern on the map as linear. Most candidates correctly selected this answer.

**(c)**    This involved scrutiny of two grid squares to determine the presence or absence of specific features. Police station was in 1294 only, plantations with two types of crops were in 1694 only and a School appeared in both squares. Dispensary and marsh/swamp were not seen in either of the squares. Many candidates did this well. Some candidates placed three ticks on the School line, selecting each square only as well as both squares. This went against the instruction to place only one tick in each row.

**(d)**    To complete Fig. 2, the route of the old railway needed to be added. The two straight sections were linked by a curve. Answers were checked at the point of crossing two of the northings: on 91

between 13mm and 21mm east of easting 13, and on 93 between 11mm and 21mm east of easting 12. A few candidates had simply extended the line across Fig. 2 but most had curved the route to the south accurately.

**(e)**    To complete **Question 1**, candidates were directed to the area of the map shown on Fig. 3, and within that the shaded area of Blanche Mountain. The relief here was high and steep, rising to 480m – 500m at several peaks along the ridge. There were varied degrees of steepness on the mountain, with the west being steeper than the east, and the south face being steeper than the north. Slopes could be described as convex or, in other places, concave, both to indicate changes in gradient. A particularly prominent spur extended from the north and the highland as a whole was wider in the east.

Most candidates noted the steep slopes and many also commented on the height. However for full marks it was necessary to give a more detailed analysis of the slopes.

## Question 2

**(a)**    Photograph A showed a river channel and its surroundings, with six locations identified by letters A – F. A was the floodplain; B was where the water would be flowing faster than at the opposite bank; C was a site of recent bank erosion; D was a steep valley side on the outside of a meander; E was a slip-off slope. Most candidates had some of these correct. Some had used the X in this section.

**(b)**    Load X was of boulder proportions. Thus its large size and heavy weight meant that the river flow was not fast enough, or strong enough, to move the load very often. Other possible suggestions were that the boulder had only recently fallen into the river or was wedged into position by stones. Some candidates pointed out that it was partly out of the water, indicating that the water was too shallow to move the stone.

Most candidates had two statements: usually something about the stone and something about the river flow. However, some made incorrect statements about velocity/energy such as "slower flow on the outside of the meander" or "river has less energy further downstream".

## Question 3

**(a)**    Figs 4 and 5 gave plenty of ideas for push factors influencing migration from Somalia. The easiest answer was lack of food and water, which could also be expressed as drought or unreliable rainfall preventing crop growth. Additionally conflict and the prevention of intervention by aid agencies also played a part. Most candidates scored both available marks.

For part **(ii)**, candidates had to look at the situation from Kenya's perspective. The enormous number of people involved (300 000 – 400 000) were concentrating in the north east and east of the country and there was only one designated refugee camp. Yet Kenya itself was also suffering from drought with less than 50% of average rainfall over more than half of its land area. Most candidates commented on the lack of water and the large number of refugees.

For part **(iii)**, answers from 180 000 to 200 000 were acceptable. Most candidates were within this range.

Most refugees only travelled as far as the nearest country simply because they were walking there. Many candidates noted this while some pointed out that the refugees could not afford to travel any further, having got to the nearest safe place.

**(b)**    To complete Fig. 6, it was necessary to draw a vertical line at 380 000, and reinforce identification of its position through the arrow for its label. Some candidates had completed this successfully but a number had made errors with the scale. Others had seen the term bar graph and had tried to draw on the more traditional bars for 380 000 and also the other labelled positions. A number of candidates had omitted this question, probably as a result of reading over the instructions too rapidly.

As a result of the overcrowding, the camp would run short of food, water, medicines and shelter. Also hygiene standards would drop, increasing the risk of disease. These were the most common answers from the candidates. Other ideas were excessive noise, spread of the camp over other

land and resentment by the locals. It was not enough to simply state that the camp would be overcrowded.

## Question 4

**(a)**  Most candidates successfully completed the temperature graph in Fig. 7. Only a few had failed to align the points to the axes with sufficient accuracy.

The annual temperature range was 1°C, the mean annual temperature was 26°C and the approximate annual rainfall total was 4500mm. Most candidates got at least two of these correct.

**Part (iii)** required candidates to describe the general distribution of rainfall. It was important to note that there was rainfall in every month, throughout the year. The year could then be divided into a wetter period (September – December) and a drier period. Many candidates also noted the steady increase through the second half of the year. Common errors here included simply stating the highest and lowest months or giving over detailed month to month changes, neither of which counted as a general distribution.

**(b)**  In attempting to explain Padang's high humidity, many candidates made some good general statements, which would have been suitable for part **(a)(iii)**. The key point here was to link the hot temperatures and high rainfall to the consequent evaporation. Only some did this successfully.

## Question 5

**(a)**  Candidates were given information in both Photograph B and Fig. 8. However to answer part **(i)**, evidence had to be visible on the photograph. The land could be seen to be gently sloping/flat and covering a large area. Power could be generated by oil or via the wind turbines in the background. Raw materials could be transported via pipeline or by water as evidenced by the canal, port or jetty.

Most candidates got the land point and at least one of the others. A common error for power source was to assume the water was suitable for HEP, while for transport some candidates had identified the railway, which was shown to be present on Fig. 8, but was not identifiable from Photograph B.

The chimneys at the site were tall to ensure that any harmful toxic gases were released well away from people, both at the industrial site and in nearby Brunsbüttel. Most candidates had got this idea. A few had simply put "so that gases are released higher in the sky", thus not making a link with the need to keep them away from people.

**(b)**  In part **(b)**, candidates could turn their attention to Fig. 8. This illustrated further advantages – the built-up area of Brunsbüttel for labour/market, the railway, the access to the Baltic/North Sea and the room for further expansion at the site. Canal/port/river were also accepted here as they may not have been referenced in part **(a)**. Most of the candidates scored at least two of the available marks.

**(c)**  The key point in part **(c)** was the fact that outputs of one factory provided the inputs for another. Many candidates had noticed this, though some found it difficult to word a succinct explanation. A common incorrect idea was that the factories were close together so that the pollution would be kept in one place.

## Question 6

**(a)**  There was plenty of evidence in Fig. 9 to indicate large scale farming. Candidates could have commented on the size of farms or the size of herds and most of them did one or the other of these. The commercial nature of the farming was indicated in the second sentence and most picked out that ranching provided more than 77% of state wealth. A few had applied the evidence from Fig. 9 and reasoned that there were too many cows for a subsistence farm. This was also credited.

Fig. 10 showed the percentage of farmland under permanent pasture and answers of 88 – 91% were acceptable. A common error was to measure the smaller segment of the pie chart.

**(b)** Photograph C showed several aspects of relief, so to describe them effectively it was necessary to locate them within the photograph. Thus "flat in the foreground, with hills in the background" was fine for 2 marks. "Steeper" or "higher in the background" was also acceptable. The only comment which did not need to be located was "gentle slopes" with alternatives of "plain" or "plateau". Many candidates mentioned the relief features but they were not always located effectively.

Cattle would need to be moved frequently from one part of the ranch to another in order to allow the pasture to regrow. Some candidates had misread this question and thought it was asking how the cattle were moved.

The area is not used for arable farming because of insufficient rain and poor soils. Candidates with full marks here had often made these two points and many showed good understanding of the rain shadow effect of the mountains. Other acceptable reasons were that it was too cold or the growing season was too short. Ideas that were not credited included that there was too much space, it was too remote, it would be hard to remove the grass, or the cattle would eat the crops.

# GEOGRAPHY

| Paper 0460/03 |
| Coursework |

## General comments

As is usual for the November entry, numbers were much lower than for June. All Centres have now fully adjusted to the changes introduced by the new syllabus and the work submitted was soundly based on topics from the syllabus with tasks at an appropriate level of demand.

## Administration

Moderators reported that marking was fair across all Centres. The mark scheme was applied well and internal moderation at individual Centres was of a good standard. A few minor adjustments were recommended by Moderators. Moderators commented that Centres from widely distributed areas across the globe have a high degree of correspondence in how the mark scheme is applied, and recommendations for adjustments have been relatively modest.

It is worth having a checker look over the paperwork before marks are submitted. It is usually incorrect additions on the individual candidate record cards where problems arise. These in turn get copied across onto other documents and finally submitted onto the mark recording system at CIE. Errors detected are as often to the disadvantage of candidates as they are in crediting them with marks that they have not earned. Moderators report that they have detected such errors in every session, so it worth building in a check of marks.

## Candidate work

On the whole, the work of candidates continues to be of a good standard and that enthusiasm for Geography is seen to be widespread.

The Knowledge with understanding section is usually quite good. Moderators report that some candidates provide a good deal of background that is often not strongly relevant to the study. Such additions add little or no credit to studies. This can also use up a large part of the word allowance. In the worst cases, where candidates are being careful not to exceed the word limit and are using word counts within the software, they give an analysis that is too superficial and conclusion that is too brief because they have run out of words. Candidates who are investigating a hypothesis tend to do this section better than those who are following a guiding question. Whether a guiding question, or one or more hypotheses are being tested, it does help candidates clarify their thinking if they explain why the hypothesis might be true or support why they are investigating a particular guiding question.

Observation and the collection of data is usually the best executed part of the study. Candidates appear to enjoy getting out and conducting fieldwork and acquiring data. Their methods are usually described well and it is good to see so many candidates justifying the worth of their methods and explaining why they carried them out in the way that they did. Photographs taken of the data collecting work usually show candidates fully absorbed in their work.

With the Organisation and Presentation of work there is more variation. The organisation itself presents few problems. The structure of the route to geographical enquiry is broken down into clear phases, and these help almost all candidates present a logical ordering. With presentation, there is greater subjectivity in what is required. At Level 3, the syllabus refers to a range of appropriate techniques being used. Some Centres interpret this with emphasis on range, others paying greater attention to appropriateness. All candidates should demonstrate that they can use more than one technique to qualify for higher levels, so range is important, but a series of variations on bar charts and different pie charts cannot really be fully appropriate. Good Geography should show variations with distance or patterns of areal extent so scatter graphs,

proportional flow lines and maps showing distributions, or related techniques are the ones that are appropriate.

Candidates have not usually any experience of writing an analysis of the data they have collected and so it is pertinent here to suggest the kinds of things candidates might look for. Are there any patterns emerging? Are there patterns if certain results are put to one side? Can the findings be explained? Do the findings fit with initial expectations and can reasons be found for them fitting or not? Moderators sometimes report that there has been very good data collection with some sound presentation of the findings, but little analysis has been made.

For the Conclusion and evaluation similar comments are applicable to those for Analysis. Many candidates have little experience of writing a conclusion or evaluating work and have little idea of what is expected of them. Some guidance as to how to pick out the main findings and the key pieces of evidence that point towards them would be valuable. In the conclusions they can also point out that that not all results fit with expectations and can identify these. Evaluations often include information that emerges with the benefit of hindsight. It is only later that unconscious bias can be seen to have crept in, or that it might have been useful to ask a particular question that had not been included. In an evaluation, it sometimes becomes clear that what has been found out points to further questions in the future. Comment on who might find the results useful can come in here also.

### Good practice to be shared

Some good ideas were noted by Moderators in this session. It may well be that they have been undertaken by Centres in the past, but this is the first time Moderators have drawn attention to them.

Candidates from one Centre made an excellent job of their conclusions and evaluation by creating tables. This gave them a framework which helped them ensure that they had remembered to cover all the information that should go into these sections. In this way they created a full coverage of the Conclusions and evaluation assessment criterion and helped them to achieve high marks here.

Any Centres that are new to this component or would like to consider it in the future should get in touch with CIE. CIE can offer advice on proposed investigations and pass on good practice that will help to achieve good marks. There is also an exercise for teachers to help them in assessing candidates' work. There is guidance in the syllabus on how to write and submit a proposal. Also teachers should contact CIE directly to find out how to acquire accreditation to mark and moderate coursework within your Centre.

# GEOGRAPHY

| Paper 0460/41 |
| :---: |
| **Alternative to Coursework** |

*SECTION 2*

## Key Messages

Every examination is different but there are usually a few generic tips and key messages that need making that should improve candidate performance in future. Most of these have featured in previous reports but the same issues recur each examination session. 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. An incorrect conclusion in regard to the hypothesis will gain no credit.
- 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 the fact file in Fig. 3 and Photographs A, B, C and D to help you to answer.*
- 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 as this will waste 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 show up as well. 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 on pages with a lot of graphs or maps and it is worth double checking all have been answered. 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.

*SECTION 3*

## General Comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do. The overall range of marks went was similar range 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**

**1(d)** where candidates were instructed to describe the use of a maximum-minimum thermometer not where it would be located. As in some previous papers **Question 2 (d)** 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 different types of data and **Question 2 (a) (ii)** tested understanding of sampling techniques which candidates should have learned in class.

Centres should be aware that, although this is an Alternative to Coursework examination, candidates will still be expected to show that they know how fieldwork equipment is used and appropriate fieldwork techniques even if they have only limited opportunity for fieldwork within the Centre. For example **Questions 1(a) (ii), 1 (d)** and **2 (a) (i)** focused on specific equipment and techniques commonly used in fieldwork.


*SECTION 4*


**Comments on Specific Questions**

**Question 1**

**(a) (i)**  Candidates suggested a number of differences between the two rain gauges, focusing on size, material and accuracy. The most common difference was that between using a ruler and a measuring cylinder to measure the amount of rainfall. Some candidates failed to gain marks because they did not make their answer comparative or they did not make it clear which rain gauge they were referring to.

   **(ii)**  The best answers focused on three ideas: where to put the rain gauge to get accurate measurements, how long to leave it before checking the amount which had been collected and how to measure the amount of collected rainfall. Weaker candidates misunderstood the idea of how long to leave the gauge before checking. It is not acceptable to merely note 'measure the amount after it rains' or 'wait until the rain stops before measuring' in a response.

**(b) (i)**  This question was a good discriminator. The best candidates suggested reasons such as to get a bigger sample, so results would be more reliable, to avoid using an anomaly, and to calculate an average. Weaker candidates often did not read the question carefully and did not understand that the gauges were at each location and so gave incorrect responses about gaining comparison between different locations.

   **(ii)**  Most candidates scored both marks. Only a small minority did not show working.

   **(iii)**  Answers were generally correct. Two errors that were made by some candidates were to give the rainfall figures not the days, and to miss out day eight which had the highest average.

   **(iv)**  Most candidates plotted the two results accurately and used the correct symbols. Accuracy is important in such questions as only a limited tolerance is allowed.

   **(v)**  The question discriminated well between candidates. Most recognised that hypothesis one was correct and gave accurate figures to support the conclusion. However, some candidates lost marks by not realising that the data referred to rainfall reaching the ground, not just rainfall.

   **(vi)**  The question proved to be difficult for many candidates. Some were confused with the idea that vegetation would absorb rainfall. The best candidates related interception to the differing amounts and density of vegetation cover.

**(c) (i)**  Most candidates correctly identified the primary and secondary sources of data.

   **(ii)**  Most candidates interpreted the table correctly and recognised that there is most variation in rainfall reaching the ground in deciduous woodland.

   **(iii)**  Generally candidates identified the different conclusions to hypothesis two for the two different types of woodland. Most supported their conclusions with data, although weaker candidates often failed to offer supporting data.

**(iv)**    The question was a good discriminator.  Where candidates used the photographs and information in the fact file they were able to identify the different effects of the two types of woodland.  Many candidates referred to the impact of leaves falling in winter in the deciduous woodland and them being replaced throughout the year in the coniferous woodland.

**(d)**    Some candidates found the question difficult.  They misinterpreted the question and wrote about where to position the Stevenson Screen or described what a minimum-maximum thermometer looks like rather than how they would use it in fieldwork.  The best answers described the process as: read minimum and maximum temperatures, use a magnet to reset the thermometer, make readings at regular or specific intervals or times, calculate the difference between the two recorded temperatures.

## Question 2

**(a) (i)**    The question required a comparative answer, which most candidates managed to give.  The best answers recognised differences between the two questionnaires in the guidance given through optional choices, explanation of the questionnaire's purpose, and age group categorisation.

**(ii)**    Many candidates could not identify and describe a sampling method in detail.  Descriptions of systematic and stratified sampling methods were usually better than random sampling.  Weaker candidates merely repeated that random sampling is asking people 'at random'.  Some good candidates described stratified sampling well by referring to percentages of the sample reflecting percentages of the whole population.

**(iii)**    Many candidates understood that putting the questions to visitors at the end of their visit had the advantage that visitors could relate the questionnaire to what they had been doing.  Also many candidates identified that visitor fatigue or visitors being in a hurry to leave the National Park would be possible disadvantages of their decision.  Another disadvantage which was suggested was that by using the questionnaire in the car park the candidates would not interview visitors who had travelled by other methods.

**(b) (i)**    Most candidates plotted the pie chart accurately.  However, common mistakes were made in reversing the order of the segments, shading segments incorrectly or not at all, and shading inaccurately the 61 – 80 km segment where lines must be horizontal.

**(ii)**    Many candidates scored one mark because they repeated the same conclusion in different ways, i.e. 'more people come from far way' and 'less people come from nearby'.  A common error was to say that 'most came from more than 80 km away'.  It is correct to state that the largest proportion or largest number came from more than 80 km away but not 'most'.

**(iii)**    Most candidates inserted the data into the table correctly.

**(iv)**    The question differentiated well between candidates.  Most stated that hypothesis one was correct and supported their conclusion with relevant data from the table.  They identified the different types of activities undertaken by visitors of different ages.  Better candidates also understood that there were exceptions to the general pattern in that some activities were enjoyed by visitors of all age groups or contrasting age groups.  A small minority of candidates thought that the hypothesis was incorrect because of these exceptions, but this showed a lack of understanding that a hypothesis can be true or correct even though there is not compete support for it.

**(c) (i)**    Most candidates understood that the initial question was asked to ensure that the questionnaire was completed by people who would have a valid opinion about the impact of tourism, i.e. local people.

**(ii)**    Most candidates completed the plotting and shading of the divided bar graph correctly.  A few candidates lost marks because they failed to plot the figures accurately or shaded the segments wrongly.

**(iii)**    This was a challenging question as many candidates suggested problems that were unclear or unacceptable, for example they suggested that a problem would be caused because local people go on holiday at that time.  Some candidates suggested a possible problem of tourism such as traffic congestion without identifying that the problem would be worse or only occur in the summer months.  In contrast the better answers focused on the problems of seasonal jobs and income.

**(iv)** Most candidates identified from the table that bringing money into the area was the most important benefit of tourism.

**(v)** Many candidates found it difficult to interpret the two data tables. The absence of a hypothesis mark meant that they could interpret the data in different ways as long as they supported their conclusion with evidence. The most popular conclusion was that hypothesis two was correct as there is more emphasis placed on problems being either severe or quite severe than benefits being very important or quite important. Some candidates explained why local people might give these responses which were irrelevant to the question.

**(d)** The question differentiated well. Although many candidates had obviously undertaken traffic surveys their description of methodology was often vague. Better candidates did include detail such as the survey should be conducted at different times of the day and in different parts of the village. Other candidates focused their investigation on a questionnaire but detail was needed about who the questionnaire was being used with and what questions could be included. There were also a few well thought out responses about timing traffic in queues in summer to see how it varied at different times and on different days.

# GEOGRAPHY

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

*SECTION 2*

### Key Messages

Given below are a few generic tips and key messages that that could improve candidate performance in future:

- 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.
- When giving figures in an answer always give the units if they are not stated for you.
- Take care when adding plots to graphs and use the key provided.
- Read questions carefully and identify the command word e.g. *Describe, Explain...*and also the key words.
- 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 for evidence or data e.g. Table 3, Fig. 2.
- Attempt all completion tasks on graphs, tables or diagrams – not all the answers are on lines and in writing. Many candidates are missing out on marks this way.
- Take into account the marks awarded. Examiners do not expect you to be writing outside the lines provided so do not write a paragraph when only two lines are given – this wastes time.
- If you have to write more than the lines allowed indicate this with a phrase such as (*continued on page 2 or 16*). This is very helpful to the Examiner in finding your answers.
- Make sure you attempt the questions that require you to complete graphs, tables or diagrams – not just the questions where there are lines that require written answers.
- As all scripts are now scanned for marking, it would be preferable for candidates to write in black and make sure any shading of graphs stands out clearly.

*SECTION 3*

### 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 graphs, diagram completions and those of higher ability scoring well on the more challenging sections requiring explanation, comparison and judgement especially regarding hypotheses.

There is less general advice to be given for areas for improvement with this paper than with others. As there are no choices to make, it is difficult to miss sections out. There were no reports of time issues as the booklet format does not allow or encourage over-writing of sub-sections although this year many candidates did seem to write more than the lines allowed for. 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 formulating practical hypotheses that could be realistically tested in the field. Particular questions where candidates do not score well also often related to them not fully reading the question or taking time to thoroughly understand the resources referred to.

Centres should be aware also that, although this is an Alternative to Coursework examination, candidates will still be expected to show that they know how fieldwork equipment is used even if they have only limited opportunities within the Centre.

**Question 1** required candidates to know about, or have some experience of, fieldwork on rivers, uses of measuring instruments for width and depth of rivers, plotting points on a line graph, calculating statistics of depth and cross-sectional area, a scatter graph and ideas as to how to record river valley characteristics.

**Question 2** required candidates to have knowledge or experience of urban land-use characteristics, sampling techniques, drawing a divided horizontal bar graph and completing a vertical bar graph, and ideas on how to carry out a survey of the quality of the environment in an urban area.

*SECTION 4*

**Comments on specific questions**

**Question 1**

**(a) (i)**   The question required candidates to suggest any three factors they should consider in choosing their sites along the river. Popular responses included depth or width, accessibility, distance between sites, risk of wild animals such as crocodiles being there and whether there were any particular physical or human factors e.g. waterfalls or a dam, which might affect their results in an inappropriate way. These were all worthy of credit. Other answers which were not credited included reference to rocks or boulders in the stream or vegetation present; also reference to making sure the river was slow enough, checking the weather forecast and references to appropriate clothing to wear. These had nothing to do with choosing the 5 sites.

**(ii)**   Most candidates realised that weather conditions as well as river conditions could change the next day so for more consistent and reliable results it was preferable to take the measurements as close to each other in time as possible to remove the time variable. Just stating that 'conditions might change' was not enough here. References to temperature and wind changing were not allowed as their effect on river flow would be minimal.

**(iii)**   Candidates clearly now understand what a pilot study is and can give sensible answers to this question Most suggested that it would help them know what to do and it was an opportunity to correct errors and try out their equipment. Some just said it would prepare them for the fieldwork which was stated in the question! A few did not realise that the local stream for the pilot was not the river that they would be carrying out their investigation on so suggested that the site could be checked for suitability or that the results would be useful to use with the real results; neither would be relevant.

**(b) (i)**   The candidates were referred to the figure that showed two candidates measuring velocity using the float method. Consequently the answers needed to use the information in the diagram instead of ideas from their own experience although they should be close. Most gained 3 marks here by referring to the measured distance, the start/finish lines, the role of the two candidates and the release of the float along the channel with repeats in the other channels. Some suggested types of float, such as an orange, however others suggested a stone or rock to float down the stream! No credit was given for the calculation of velocity as the question was about the method shown in the diagram.

**(ii)**   The flowmeter has been used in previous examinations usually with a photograph and several Centres clearly do teach about its use even if they do not use one themselves. This question overall was not well done; indeed too many candidates decided to use the flowmeter as a float and set it off down the river along a measured distance to be timed. Not many stated that the propellers must be submerged under the water (most said 'in the water') and that the reading was shown on a screen. Most gained some marks though for referring to several readings and calculating the average. Centres need to cover the use of alternative instruments in this digital age although traditional instruments will still have a valid place in the syllabus and their use will continue to be assessed.

**(iii)**   There were two simple points to plot and almost all candidates did this successfully. Good practice meant that they should have numbered them 4 and 5 to match the given 1-3 plots but candidates were not penalised for that. There were a number of candidates who did not attempt the plots; this

is not the first time that candidates have missed out on straightforward graph completion questions on this paper and these are relatively easy marks to obtain.

**(iv)** Almost all candidates scored well here. They agreed with the hypothesis and gave statistics to back this view up as required usually taking Sites 1 and 5 and their velocity statistics of 0.36m/s and 0.78m/s alongside their distances from the source. Some noticed the anomaly and said the hypothesis was partly true; this was rewarded providing the evidence was the anomaly. Some just repeated the hypothesis without stating a decision in agreement or not and gave qualitative statements as answers despite them being clearly asked to give evidence from the information provided.

**(c) (i)** This question was quite well done with most candidates using a tape measure to measure a rope across the river or between two ranging poles; one on each side. For the depth the majority would use a metre rule or measuring stick which touched the river bed or was vertical across the river at equal intervals. Not all candidates stated the instrument they would use; a few just referred to width or depth but not both.

**(ii)** Almost all candidates could calculate 0.22 m/s as the answer.

**(iii)** Almost all gave 2.542 sq. metres or rounded it to 2.54 sq. m. The answer 2.5 sq m was not allowed as it was rounded down too far.

**(iv)** Most candidates realised that the method shown in the photograph and described in Figure 3 was most appropriate to a small shallow part of the river and that there would be problems with a large river such as the tape being too short, difficulty in placing and keeping the tape in place, issues of depth and width and the strength of current. Reference to the student being carried away or drowning were only credited if there was no other reference to the danger of trying to carry this out in a large river. Those that thought it would take a long time, would be tedious or tiring were not credited.

**(d) (i)** Although some candidates did not attempt this simple plot, most did it accurately for the mark.

**(ii)** Despite being told that the candidates had decided that this hypothesis was correct, a number of candidates gave their own view – some even disagreeing with the decision. This was ignored as the marks were for evidence that it was correct. Most candidates did provide data linking the velocity downstream with the increasing hydraulic radius and gained both marks. Others just described the changes with no evidence provided. It is vital that candidates realise that when they are referred to tables and figures of data, they should be extracting evidence from them; not just giving descriptive statements as their support.

**(e)** This was a more straightforward final task than in previous examinations yet still proved to be difficult for some candidates. Many candidates just re-investigated river characteristics that had already been done having ignored the reference to the river valley. Few canddiates stated an aspect of the valley they could investigate e.g. slope, vegetation, width. Those that suggested taking photographs, doing sketches and adding annotations were rewarded though it would have been better if they had given a clue as to which valley characteristics they would use these techniques with. Quite a few candidates did not attempt this question.

**Question 2**

**(a)** Most candidates could give some ideas as to why land-use varied in different parts of the city. Credit was given for references to different price/land values, some ideas of historical development and ideas that some land-uses would be close to each other e.g. factories/cheap housing and others kept away e.g. high class housing and industry. References to minerals and resources were too vague and needed a specific item such as coal or gold mines to be credited. The use of farming land was inappropriate in a city setting.

**(b) (i)** This was a straightforward question on CBD characteristics and most candidates gained 3 marks for answers that included high-rise/skyscrapers, traffic congestion, air pollution, crowded with pedestrians and government buildings. Weak answers that were not credited included shops, lots of people/high population, busy and pollution.

**(ii)** This was a question where candidates had to choose a sampling technique and describe its use in choosing sites. The question referred to 10 sites and to Fig. 6 which showed the transects and had a scale on it. Few candidates seemed aware of this scale so, although credited for systematic sampling, the suggestion of taking sites at every 10 metres despite each transect being up to 10 km long was unrealistic. Random sampling was also acceptable though the description of just picking any site was weak; it was difficult to envisage how a stratified sampling technique could be used successfully in choosing their sites here.

**(c)(i)** The answer to this question was 6,2,2 i.e. 6 Residential uses (Houses + Apartments), 2 Offices (Tourist + Insurance) and 2 Shops (Newsagents and Food shop). Almost all candidates gave 6,3,1 as their answer as they clearly judged that a Newsagents was an Office. There may have been some confusion with News Agency.

**(ii)** The divided bar graph should have been completed in the order provided in the table and matching the order and shading in the key. Most candidates could do this for both marks. Other canddiates, however stated the bar graph from the right instead of the left (this was allowed though unconventional); some plotted the lines in any order (not credited) and some either used the wrong shading or failed to completely shade the graph units.

**(iii)** Candidates did not always seem to realise that the candidates had recorded all the land-use at the sites then decided to only show the main land-use; consequently suggestions that it would be easier and quicker when recording the land-use were not appropriate. It was the showing of the main land-use that was the critical issue here. Those that agreed often stated because it was more important than others which was not accepted; the fact it was easier and quicker to show it on a map for simpler analysis was relevant. Those that disagreed needed to say more than 'all land-uses were important'. Some did refer to the hypothesis regarding different land-uses and also wrote that by just using the majority land-use as the main use would give a misleading picture by ignoring the others.

**(iv)** This was done well by those candidates who focused on the main land-use on the transects rather than just described every land-use along all of the transects. As before some candidates decided to agree or disagree with the hypothesis despite being told that the candidates had decided it was correct. This was ignored as marks were for the evidence supporting a 'correct' hypothesis. The best answers used the key on Figure 6 and referred to Residential dominating Transect A/away from CBD; Shops taking up most of Transect B/to the south; Offices near/in the CBD and Industry close to the docks/motorway. The key on Fig. 6 clearly listed these 4 land-uses so references to the motorway or parks and open space as land-uses were not credited.

**(d)(i)** It was important for candidates to not just state it was easy/quick but to elaborate briefly on the use of storeys to get an idea of height so good answers would state that most storeys are the same height, then adding up the total storeys and multiplying by the height of the ground floor storey, which could be estimated, would give a good idea of the actual height. It was also acceptable to comment on the difficulty of candidate actually trying to measure the height with equipment though reference to the length of tape/ladders needed or danger were regarded as irrelevant.

**(ii)** Almost all candidates plotted this correctly and used the appropriate shading. It is again unclear why quite a few candidates missed this question out. There are no lines to write answers on this page so maybe some candidates are only looking to provide written answers without being trained to look for graph, diagrams and tables to complete. This is an area for some Centres to work on in preparing candidates for the examination.

**(iii)** This was done well. Almost all candidates stated that there was a relationship and then gave numerical evidence contrasting the number of storeys for Offices with the lower number for Residential use. A few gave the right evidence but did not give a hypothesis decision here thereby losing 1 mark.

**(iv)** The key to the different heights was to refer to the different values of land and also to issues of space available/required though both are linked. Most candidates gained marks here and it was also accepted that some cities regard prestige as a reason for having tall buildings e.g. in London, Dubai and Kuala Lumpur, although these are also linked to space issues and the cost of land. Too many candidates suggested that it was to do with the activity or the number of workers employed.

**(v)** This was done well by candidates who realised that there could be different/other land-uses on the floors above the ground floor (or below in some cases!). There were a few vague answers such as the information would not be complete or the ground floor is only one use – reference to the use of other floors was important for credit.

**(e)** There was a disappointing response to this question as there was to the same kind of **Question (e)** in **Question 1**. The question asked about investigating the quality of the environment so the answer should suggest what aspects of this quality could be investigated in different parts of the city and how could it be done. There were a few sensible, pragmatic answers that chose trees/vegetation or traffic congestion/air pollution and suggested photographs, surveys, questionnaires and bi-polar surveys to investigate these. Although 'litter' was accepted it is not a good choice for investigating across a city; using quadrats was also an inappropriate technique within a city context. Few candidates referred to where in the city the investigation would be carried out or gave any detail as to the possibilities of their techniques. Most suggested ideas would be impossible or inappropriate. Centres should consider what small-scale investigations could be carried out by a candidate in an urban area to prepare for this kind of question.

# GEOGRAPHY

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

*SECTION 2*

### Key Messages

Every examination is different but there are usually a few generic tips and key messages that need making that should improve candidate performance in future. Most of these have featured in previous reports but the same issues recur. 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. *Support your decision with data from Tables 6 and 7.*
- 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 as this will waste 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.

*SECTION 3*

### 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 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 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. A simple illustration is **Question 1(a) (iii)** where a significant proportion of candidates ticked more than two correct statements. **Question 1 (b) (i)** required

candidates to suggest advice about using a questionnaire, not compiling the questionnaire. As in some previous papers there was a question, **2(d)**, which required candidates to develop their own hypothesis and investigation methodology. Such questions are frequently included on this paper and are an area which Centres should practise with candidates. Another question, **1(e)**, required candidates to suggest a suitable mapping technique to show the results of a fieldwork investigation.

Centres need to realise that, although this is an Alternative to Coursework examination, candidates will still be expected to show that they know how fieldwork equipment is used and appropriate fieldwork techniques even if they have only limited opportunity for fieldwork within the Centre. For example **Questions 1(b) (i)**, **2(a), 2 (b) (i)** and **2(c) (i)** focused on specific equipment and techniques, commonly used in fieldwork.

## *SECTION 4*

## **Comments on Specific Questions**

### **Question 1**

**(a) (i)** This first question was simple but proved to be a good discriminator which tested understanding of different types of goods and services. Where candidates made an error it was usually because they did not understand that a laundry is a service whilst a chemist / drug store is a convenience shop. Most candidates understood that a furniture store is a comparison shop.

**(ii)** A variety of reasons were given why there may be unoccupied shops in centres. These included loss of income forcing shop closure, competition from other retailers, high rates or rents for the properties, and lack of customers. Weaker candidates gave answers that were too vague such as 'shops have closed down', 'shop could be for sale', and 'shop is in a poor location' without any elaboration. There was no explanation of why these situations occurred.

**(iii)** Most candidates identified the two correct statements. However, a common error which lost candidates marks was to choose more than two answers. In this situation candidates were penalised one mark in this sub section for each incorrect statement.

**(b) (i)** Candidates who misread the question scored poorly. The question focused on using a questionnaire whilst doing fieldwork, not producing a questionnaire. So answers about question design, number of questions to include, and not including personal questions were irrelevant. Candidates who focused their suggestions on using the questionnaire scored marks for ideas such as working in pairs, being polite to respondents, and going to different locations in the shopping mall to use the questionnaire.

**(ii)** Most candidates reached the appropriate conclusion that hypothesis one was true. They used evidence from the data tables to illustrate how people shopped mainly for comparison goods in the CBD and for convenience goods in the local shopping centre. Also they showed that there were more comparison shops in the CBD and more convenience shops in the local centre. A small number of candidates also commented about there being some goods which were purchased in both shopping centres.

**(c) (i)** Most candidates completed the histogram correctly, although some lost marks because the top of the bars did not touch the appropriate line. Accuracy is required in such a plotting exercise.

**(ii)** Most candidates completed the pie chart accurately. However, common mistakes made by candidates included: reversing the order of the two segments to be completed, shading incorrectly or not at all, and shading the 'between 2 and 6 days ago' segment inaccurately. Lines within this segment must be vertical.

**(iii)** Most candidates reached valid conclusions about this difficult hypothesis. Candidates generally agreed with the hypothesis that shoppers went to the local centre more frequently, and this conclusion was supported by evidence from the data table. Candidates found more difficulty in reaching a conclusion about whether it took longer to travel to the CBD than the local shopping centre. Better candidates realised that generally time taken to travel to both centres was similar with only small exceptions. Other candidates placed too much emphasis on the slightly larger percentage who travelled for more than one hour to reach the CBD.

**(d)(i)** Most candidates correctly compared the percentages of people going to the two shopping centres in different ways, and usually supported their comparison with statistics.

**(ii)** Few candidates were successful in suggesting how the method of travel to the shops may affect the conclusion of hypothesis two. Candidates often recognised that some methods of travel were quicker than others, which might help to explain the different times taken to travel to the shops.

**(iii)** Most candidates suggested appropriate factors which could affect method of travel to the shopping centres. Amongst the most popular suggestions were distance people had to travel to the shopping centre, availability or cost of public transport, whether people owned a car, and the availability of parking.

**(e)** The extension task proved to be difficult for many candidates, although there were excellent answers from candidates who suggested that a choropleth map or pictogram would be a suitable map to show the districts of the city with an appropriate key or symbols to show differing amounts of people. Some candidates suggested that a flow line map would be suitable. This method could be used if the lines were located in different districts.

**Question 2**

**(a)** Consideration of safety issues in doing fieldwork is a common question on this paper. Most candidates were familiar with safety precautions to be taken when doing fieldwork. Many suggestions were generic to all fieldwork tasks especially river investigations, rather than specific to those done at a coastal location. Appropriate precautions could include: keep away from the edge of the cliffs, check times of high and low tide, take care when working at the sea's edge.

**(b)(i)** Where candidates made use of the diagram provided they gave a good description of how to measure a beach profile. Better answers included details of where marker poles should be placed, how a clinometer is used to accurately measure the angle between pairs of poles, and to repeat the measuring from sea level to the top of the beach.

**(ii)** Most candidates were successful in comparing the width of the two beaches, usually making accurate measurements.

**(iii)** Although most candidates reached the appropriate conclusion that hypothesis one was correct, the evidence which they gave to support their conclusion was a good discriminator. The most common evidence was a comparison of distances across the two beaches to raise the elevation by five metres. Some candidates calculated the average gradient of the two beaches and others measured angles of elevation on both beaches, for which they received credit.

**(c)(i)** Some candidates were more familiar with the use of a quadrat than others. If candidates had not seen or used a quadrat they imagined it to be a measuring device. In contrast candidates who had used a quadrat in their own fieldwork gave detailed descriptions of how it should be placed on the beach in the different sections of the profile, and the squares of the quadrat used to estimate the percentage of different types of beach material.

**(ii)** A number of problems which may occur in classifying beach material were suggested. The most popular were: this way of classifying material by observation is subjective, different types of material can look similar, and there may be other materials on the beach which are not included in the classification such as boulders or driftwood.

**(iii)** Most candidates correctly completed the divided bar graph. Where candidates made an error it was usually because they plotted the dividing lines at the wrong figures on the scale or shaded the sections incorrectly.

**(iv)** This question was another which discriminated well. Most candidates concluded that hypothesis two was correct for Cala Blanca beach and supported their conclusion by comparing data from two sections of the beach profile. Generally candidates had more difficulty in concluding that this hypothesis was incorrect at Cala Bassa beach. They also found it more difficult to give suitable supporting evidence. The best answers referred to the dominance of sand in all sections or identified two sections where sand was the only beach material.

**(v)** Most candidates did not score well on this question because they did not relate the increase in size of material along the beach profile to swash and backwash. Erosion of material near the sea was not accepted by itself because this is just part of the process of waves moving up and down the beach profile.

**(d)(i)** Many candidates suggested a suitable hypothesis for investigating longshore drift. They often related it to the two Mediterranean beaches already studied. If candidates did not suggest a suitable hypothesis they were still able to score marks in the next section.

**(ii)** The quality of descriptions given in response to this question varied considerably. Four different methods of measuring longshore drift were suggested: using painted stones which could be identified and monitoring their movement along the beach; putting a floating object in the waves and monitoring its movement along the beach; using a quadrat to estimate the different proportions of beach material along the beach; measuring beach deposits either side of groynes. All four methods were described in detail by different candidates. Weak answers were vague and lacked appropriate detail of fieldwork methodology.