

GEOGRAPHY

Paper 0976/12
Geographical Themes

Key messages

To perform well on this style of paper candidates should:

- Follow the examination rubric correctly, answering three questions, one from each section.
- Answer the questions they choose in the spaces provided.
- Be familiar with command words used in questions.
- Identify words which indicate the focus and context of each question, ensuring that irrelevant material is not included.
- Use and interpret a range of different types of graphs to support ideas expressed in answers.
- Interpret photographs, diagrams, graphs and maps carefully, referring to relevant evidence in them.
- Learn the meanings of geographical words and phrases to define and accurately use them.
- Use comparative words to describe differences or compare features shown in source material.
- Write answers of an appropriate length by considering the mark allocations and space provided in the answer booklet.
- Write clearly and precisely.
- Develop ideas and/or link them to others when extended writing is required in questions worth five or more marks.
- Ensure that answers are entirely based on the provided source material when this is a requirement of the question.
- Be able to describe a distribution from a map and the location of a specific feature.
- Learn a suitable range of case studies, including relevant place specific information, and choose them with care to fit the questions selected.

General comments

Many candidates performed well across the paper, displaying excellent geographical knowledge and understanding and writing answers of a consistently high quality. Whilst other candidates were not as consistent, most were able to make a good attempt at many parts of their chosen questions. The paper achieved widespread differentiation, enabling all candidates to show what they knew, understood and could do.

There were a very small number of candidates who made rubric errors. In some cases, all six questions were answered, whereas in other cases candidates tended to answer three or four questions from the six, selecting two from the same section rather than one from each section.

The presentation of answers from candidates was generally acceptable and answers were usually in an appropriate amount of detail. Occasionally answers worth a small number of marks were excessively long, mainly due to the inclusion of irrelevant material, whilst some other answers to questions worth more marks were too brief. Most candidates, however, were guided by the space provided and mark allocations, the best responses being concise, yet sufficiently detailed and accurate. Some candidates made use of the continuation sheets at the back of the question-and-answer booklet. When using these extra pages, it is vital that candidates indicate that the answer is continued in the main body of the answer and clearly show the number of the question on the extra page(s).

Questions 1, 4 and 5 were the most popular questions. There were good answers seen to most questions, including those requiring extended writing, in particular the **part (c)** questions on migration, deforestation, volcanic eruptions and energy supply. The strongest answers from the most perceptive candidates were well focused, with developed or linked ideas. Weaker responses were sometimes poorly focused with brief lists of

simple points, sometimes in bullet points, not all of which were relevant. Many candidates included unnecessary general introductions in some questions with irrelevant information about the topic being tested. In some answers where case studies contained developed ideas, they tended to be generic developments with little place detail to support them. To enable access to the higher levels, candidates need to include place detail related to the chosen example.

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

Comments on specific questions

Question 1

(a) (i) Most candidates were able to accurately place the words provided into the formula. A minority put immigration and emigration the wrong way round, and even fewer put death and birth rates the wrong way round.

(ii) Candidates generally performed well on this question, with the majority accurately describing at least one difference between population growth rates in Africa and South America, typically that in general they are higher in Africa. Although the question clearly stated that statistics are not to be used, a significant number of candidates did. Some even referred to colours on the map, although in many cases they also included appropriate comments, allowing them to access the marks. A common error was to write statements about just one of the continents without making any comparisons. Another common error was to attempt to give reasons for the different growth rates rather than simply describe them.

(iii) Most candidates demonstrated their confidence in using the map provided, with the majority completing the ranking correctly. Incorrect responses usually reversed China and Spain.

(iv) This question discriminated well and there were many high-quality answers. The lack of workforce and tax issues were frequently identified as well as the various economic and social costs of an ageing population, which is likely to be the result of population decline. Generally, candidates effectively explained their ideas in sufficient detail through linking or elaborating. A common error was to write about the causes of population decline rather than the problems caused by it. Candidates should give themselves time to read and understand the questions fully before answering.

(b) (i) Candidates were mostly able to identify three problems which people living in a country with a high population growth rate might encounter. Most responses were accurate and appropriate, concentrating on pressure exerted on employment or specified services and resources. The use of general vocabulary, for example words such as 'pollution', 'overcrowding', 'services' or 'infrastructure', rather than being more specific, often prevented some candidates from achieving full marks.

(ii) This was another question which discriminated well. Many candidates scored high marks by writing in detail about appropriate policies and strategies. Many of these suggestions were based on anti-natal policies introduced by countries such as China, whilst many also referred to significant issues such as female emancipation, contraception and abortion. High scoring answers showed both breadth and depth, with points often developed or linked. Weaker responses tended to focus on one or two simple ideas.

(c) Many candidates produced very strong responses to this question by describing a range of economic and cultural benefits of migration to a named country. Weaker answers consisted of simple descriptive lists, often in bullet points, or irrelevant general background, including the causes of migration. Candidates could either discuss the benefits of migration on the source or the host country; most chose to focus on the host country. Mexican migration to the USA was a very popular example, as were examples such as the UK and Qatar. Many candidates achieved at least Level 2 as they were able to describe a number of benefits in some detail, usually focusing on workforce and culture. The strongest answers, which gained Level 3, demonstrated a clear understanding of a wide range of benefits, which were clearly linked to places within the country or appropriate specific data. Many answers included statistics, but they were often included in

isolation. Candidates should remember to accompany statistics with relevant context within a case study.

Question 2

(a) (i) Most answers showed an understanding of the word 'rural', explaining that it is countryside, but often gave no definition of the word 'settlement' by reference to it being an area or place where people lived.

(ii) Answers varied in quality. The most popular responses were 'grocer', 'post office' and 'church'. Vague examples such as 'shop' needed more precision for credit. Some candidates gave answers of jobs, such as 'farming', or goods, such as 'milk', which indicated a misunderstanding of the word 'services'.

(iii) Most candidates scored at least one mark by referring to the population being small. Whilst a minority of candidates gained further marks for reference to other mark scheme ideas, especially those relating to the viability of higher order services, few gained full marks. There was very little accurate use of terms such as threshold population and sphere of influence.

(iv) Many candidates referred to roads and/or the stretch of water shown in the photograph and gave the reason for the growth of the settlement related to access or water supply. Common errors included reference in vague terms to scenery, calm/quiet atmosphere, unpolluted areas and migration.

(b) (i) Many candidates recognised that the settlement pattern for X is dispersed but that Y is nucleated or explained that in X the buildings are scattered, whereas in Y the buildings are very close together in a central area.

(ii) Most candidates recognised the pattern as being linear and the more perceptive were able to suggest a variety of reasons for this, such as the settlement developing alongside a river and road, and develop their ideas by referring to access to water and opportunities for trade. Some candidates recognised that the land was flat and therefore easier to build on. Weaker candidates gave only one or two simple ideas, mentioning the road or river or referring to flat land.

(c) Candidates used a variety of urban areas, including New York, London and Bangkok. Only a small number were able to make developed statements which described the impacts of urban growth on the rural areas. Instead, many made simple statements which achieved Level 1 only, such as air pollution, noise from the urban area, increased traffic and people being forced to migrate. These points could have been developed: for example, air pollution is increased in the rural area by the increase in vehicles which emit gases such as carbon dioxide. Many candidates wrote lengthy introductions, including detailed locational information, reasons for the urban growth and impacts on the urban area. Such detail was not relevant to the question and did not receive credit.

Question 3

(a) (i) Just over half of the candidates were able to read the correct answer from the graph. Some candidates made the error of reading the temperature instead, but most incorrect answers were due to inaccuracy of reading and using the scale provided.

(ii) Many candidates found this question challenging and few scored marks. Whilst the question was testing the reading of the graph the essential requirement was a familiarity with the phrase 'annual range of temperature'. Those candidates who knew that this was calculated by subtracting the lowest from the highest monthly average scored two marks by subtracting 24.5 from 26. Many candidates attempted to calculate the mean annual rainfall, and some candidates used the wrong figures, in this case the rainfall figures.

(iii) Many candidates scored three marks for identifying features **X**, **Y** and **Z**. Other candidates simply guessed and gave incorrect answers.

(iv) Many candidates observed that there is high rainfall and/or high temperature all year round, as indicated by Fig. 3.1. Some also referred to high amounts of sunlight enabling photosynthesis and rapid/continuous growth. Weaker answers showed some knowledge but often used terms such as 'optimum' or 'adequate' to describe rainfall or temperature rather than being more precise. As the

question instructed candidates to use Fig. 3.1 only, any reference to factors other than climate were not relevant (e.g. soils, fauna).

(b) (i) Most candidates interpreted the divided bars and compared South America and Africa effectively. Full marks were frequently awarded.

(ii) Stronger candidates suggested a variety of impacts of deforestation on people who live in the rainforests, with many references to ideas such as homes being destroyed, loss of food sources, loss of medicinal plants and loss of culture as people are forced to migrate from their ancestral lands. Such answers often showed both breadth and depth, with some points being effectively developed or linked. Weaker responses tended to focus on one or two simple correct ideas, though some needed elaboration in order for the impact on people to be clear (e.g. flooding, soil erosion, loss of vegetation). A common error was to refer to impacts on the natural environment, locally and globally. These ideas were not relevant to this question.

(c) The impact of deforestation on the local natural environment was well understood by many candidates. Examples chosen ranged from the Amazon or specific parts of countries such as Ecuador, to parts of Southeast Asia such as Borneo and named parts of countries such as Malaysia. Simple ideas at Level 1 tended to relate to loss of wildlife, although most candidates were able to link or develop ideas in order to enter Level 2 (e.g. ‘destruction of habitats has led to extinction of species’). Reference to named species, such as the orangutang in Borneo, was a way in which some candidates were able to add place specific detail, but many otherwise good answers did not achieve the highest level as they lacked this element. A common error was to refer to global issues (e.g. global warming, rising sea levels) rather than focusing on the local natural environment which was specified in the question. Similarly, a few candidates included references to impacts on people (e.g. decline in tourism) which were also not relevant.

Question 4

(a) (i) The majority of candidates correctly identified volcano **B** as a shield volcano. A strato-volcano was the most common incorrect answer.

(ii) The vent was defined well with candidates recognising that this was the opening for the magma to escape. A common error was to define the crater and not make the link that the magma came through an opening or tube from the magma chamber.

Fewer candidates achieved the mark for the magma chamber definition. Common responses referred to the magma chamber as ‘the place where magma is stored’. Although the storage part of their answer was correct, there was no credit for simply repeating magma; molten rock had to be referred to. Candidates should avoid simply repeating words from the question when terms have to be defined.

(iii) This question was mostly well answered. Responses needed to be comparative; some candidates achieving this by the use of statistics and others by using words such as ‘wider’, ‘higher’ and ‘steeper’. The most common error was in the ‘height’ section as volcano **A** looked much taller than **B** at a first glance. However, when looking at the scale it is clear that volcano **B** is much higher.

(iv) This was generally well answered with many candidates scoring high marks. All mark scheme ideas were seen, with the most frequent being fertile soil, employment in tourism and geothermal power. It is important that candidates do not simply list single words such as ‘farming’, ‘tourism’ or ‘energy’. They should explain how, for example, tourism benefits the people living in the area and what type of energy can be generated. Some candidates referred to scientists being able to study the volcano, but this was not valid as it is not a benefit to ‘people living in the area’. Common misconceptions from weaker answers were that that people live near volcanoes as land and housing is cheap and that they make the weather warm.

(b) (i) This was well answered by many candidates who showed very good understanding of the processes occurring at divergent boundaries, such as the one shown on Fig. 4.2. The resource was well used with many candidates referring to the plate boundaries and the idea of divergent movement enabling magma to rise to fill the gap.

A few candidates made the error of describing destructive margin processes, whilst another error was to state that the ‘plate boundaries’ moved.

(ii) This question was mostly well answered, and all mark scheme ideas were seen. As the question asked for problems these could refer to either the natural environment or people. However, simple lists of hazards (e.g. lava, ash, lahars, pyroclastic flow) were insufficient as candidates needed to indicate what specific problems they caused. The most common answers referred to damage to homes which then led to evacuation or homelessness, destruction of crops, damage to roads, death, atmospheric pollution disrupting flights and unemployment due to damage to workplaces. Whilst high-quality answers included a number of points, some being developed, weaker responses focused on a limited range of simple ideas.

(c) There were some excellent responses to this case study question. The range of examples was varied and included Montserrat, Mount Sinabung, Mount Etna, Mount St Helen's and Mount Vesuvius as well as reference to various volcanoes in Iceland. Almost all candidates understood that they needed to write about reducing problems caused by volcanic eruptions and there were a lot of well thought out ideas included, such as diversion channels, areas being evacuated, monitoring taking place, wearing face masks and education relating to how to react and respond. Often these points were developed or linked and as a result reached Level 2. However, many candidates spent too much time setting the scene by describing an eruption in detail and writing about the devastation caused, e.g. loss of lives, damage to the environment, etc. This may have addressed the required place specific element but prevented candidates from answering the question fully.

Question 5

(a) (i) This was well answered with most candidates stating the correct percentage.

(ii) A number of candidates did not attempt this question. Whilst there were a significant number of carefully constructed and fully correct pie charts which scored both marks, many candidates gained only one of the two marks. The most common reason for this was the two uses of water being in the wrong order. Other errors made were not drawing the dividing line in a sufficiently accurate position at 32% and not using the correct shading for each section.

(iii) This was generally well answered with candidates interpreting the pie charts accurately and comparing the use of water in Malawi and the UK. Many used comparative ideas, such as 'a greater percentage of water is used for agriculture in Malawi than in the UK', whilst others compared the greatest and least percentage use in the two countries. Both methods were acceptable although those who simply referred to one country only did not gain marks. Another error seen was to answer simply by using statistics, despite the instruction not to do so.

(iv) Weaker responses often simply repeated the idea of a lack of clean water without any explanation as to why this was the case, other than unqualified references to poverty or contamination of supplies. Other candidates were able to qualify their reference to poverty (e.g. many cannot afford a house tap, well or connecting pipework). More perceptive candidates also included clear reasoning, such as the use of large amounts of water for agriculture (thus a shortage for other uses), the lack of purification plants, lack of investment in rural areas and a general lack of government investment in various elements of the water supply infrastructure. Few candidates referred to the lack of reservoirs being a factor, resulting in the country potentially suffering from drought/dry seasons. Some recognised Malawi is a landlocked country, but this was not relevant as, even if it was by the sea, they would be unlikely to afford desalination plants.

(b) (i) Many candidates answered clearly describing the three methods of water supply and scoring high marks. Many others simply listed the sources (i.e. a river, a tank and a well) without making any attempt to describe them (e.g. water from underground collected from a well by using a bucket). Candidates need to pay attention command words, in this case 'describe'. Some candidates wrote about the quality of the water supply shown in the sources which was not relevant.

(ii) There were many strong answers to this question scoring high marks. All mark scheme ideas were seen. Higher scoring answers often made several points, developing some for additional credit. Weaker responses tended to make just one or two simple points, typically the idea of water being stored so that it was available for future use rather than being wasted. Some candidates also referred to multiple uses such as the generation of HEP, along with the ability to reduce flood risk in addition to water supply. This was considered valid as it makes the building of reservoirs more

financially viable. Common misconceptions included references to building a dam being easy and low cost.

(c) Various case studies were used in response to this question. Examples included Iceland, China, UK, Germany, Switzerland, Zimbabwe, Nigeria and Kenya. Energy types varied according to the country but there were many references to gas, oil, HEP, solar power, geothermal power and wind power. High scoring answers developed references to each form of power by explaining how it is supplied, adding place detail in some cases. Weaker candidates tended to simply list the energy sources and so scored within Level 1. Many candidates spent too long writing an introduction on the country and its need for energy, leaving themselves with less time to develop their ideas. Another common error was to include irrelevant details about the advantages and disadvantages of various renewable and non-renewable energy sources, along with their impacts on the environment.

Question 6

(a) (i) The majority of candidates answered correctly with farmer/agriculture and miner/mining being the most popular answers. The industry or the type of employment were both accepted.

(ii) Some candidates found reading a triangular graph challenging and gave incorrect values. A significant number of candidates did get both values correct but it was also quite common for candidates to get the value for tertiary industry correct but not secondary industry.

(iii) This was generally well answered although some candidates did use statistics in their answers despite the instruction not to do so. Typically, candidates made accurate comparisons of primary and tertiary employment in LEDCs and MEDCs. Many stated, however, that MEDCs have more employment in secondary industries rather than using the graph to identify that they are in fact very similar or only slightly larger values.

(iv) This was generally well answered. Many candidates correctly stated that primary employment would be likely to decrease and justified this assertion by reference to mechanisation of farming or the exhaustion of raw materials. Many also suggested that tertiary employment would increase in importance, with references to increased education/skills or an increase in the provision of services as disposable income increases. Some also stated that there may be a rise (or fall) in secondary employment though reasons for this tended to be less secure, with weak responses attributing it to nothing more than a fall in primary employment. A few candidates referred to industrialisation, particularly the role of TNCs. Weaker candidates tended to suggest trends, which were usually correct, but offered no reasoning.

(b) (i) The majority of candidates answered this correctly. The most common error was to transpose life expectancy and number of tourists.

(ii) Many candidates answered this question very effectively and gained full marks. Whilst weaker responses tended to refer generally to indicators of development, showing little or no specific knowledge about HDI, stronger candidates knew that it was a composite index using multiple indicators and were able to express this clearly. They also identified that there was a measure of health/life expectancy and education although knowledge of the economic aspect was not as secure. Many candidates used GDP or GNP instead of GNI or used simple phrases such as 'the money the country has' or 'how rich a country is'. There were also candidates who wrongly referred to literacy rates and birth/death rates as part of the HDI indicator. Examples of very good responses also included reference to the scale of 0 – 1, indicating this this enabled comparison between countries and changes over time.

(c) There was a wide range of responses to this question in terms of examples used, content and levels of response. Most candidates used suitable examples of TNCs with Apple, McDonalds, Tata, Nike and Walmart being popular. All of these produce physical products for sale and the best answers described where they were located, where the goods were made, where raw materials were sourced from and how the products were distributed to markets. There were some excellent details provided including statistics, although a few candidates strayed into the history of the company, which was not always relevant. It was common for candidates to reach a Level 1 response in their initial descriptions of the TNC by commenting on their home base and the fact that they manufactured or traded in many different countries globally. However, it became evident in many responses that candidates then were writing about the impacts of TNCs rather than their

features. There were many answers that focused on how the TNC brought benefits and disadvantages to LEDCs which were not relevant. Where candidates retained the correct focus, they generally developed their descriptions by reference to different elements of TNCs being located in different parts of the world. Many wrote about production being in LEDCs as the cost of labour was lower and that finished goods were then shipped to other countries for sale. They were also secure in their understanding that much of the research and development took place in the 'home nation' and that wages were higher in these jobs. Given sufficient developed ideas candidates typically were able to access Level 3 because of place specific references within their answers. Candidates must read questions carefully when writing about TNCs and not answer the question that they assume it is. Features of TNCs are clear and very different from effects of TNCs.

GEOGRAPHY

Paper 0976/22
Geographical Skills

Key messages

- Candidates approached this paper positively and in most cases this effort was effectively directed. The level of use of appropriate geographical terminology often distinguished between the candidates, for instance in **Questions 3(a) and (b)**. The more concise and focused answers tended to score more marks.
- Candidates should be reminded to take special note of emboldened words in any questions, for example instructions for the number of ticks in tick box answers, such as for **Questions 1(f) and 5(a)**.
- More practice on distance calculations, compass directions (16-point compass), and compass bearings would be beneficial.
- When candidates refer to words such as pollution and infrastructure, they should qualify what they mean. For example, air or water pollution and transport or tourism infrastructure. The use of the word 'better' should be avoided, e.g. 'better climate' in response to **Question 2(c)** where 'better' meant 'warmer'.
- Candidates should study the key words and instructions in each question carefully. For example, in **Question 1(g)** candidates were asked to 'Describe the natural features of the west coast...'. Some candidates instead described the human features as well as the area inland.
- When quoting information from graphs it is important to be specific, for instance quoting actual months from climate graphs such as **Figure 4.1**. It is also important that candidates take extra care when using data from line-graphs such as **Figure 5.2** for **Question 5(b)(i)**, where the years, number of deaths and magnitudes were often incorrectly stated.
- When using a diagram or figure such as **Figure 6.2**, candidates should avoid quoting the same words that are used on the diagram for their answer. These should have been elaborated on to answer **Question 6(c)**. For instance, the provision of sewage system links would mean a better level of sanitation.
- There was some lack of comprehension of terms used in questions, for example 'package holiday' and 'run down' in **Question 2(c)**.
- If candidates write on the additional space available at the end of the answer booklet, they should make sure that the answers have the question number and part written accurately. In addition, they should write 'Continued on extra pages' at the end of the first part of their answer. Candidates should use the additional pages to continue their answer rather than writing underneath a different question on the same page of the answer booklet as the original answer.

General comments

Most candidates made good use of geographical terminology and demonstrated their geographical skills in interpreting maps, graphs, diagrams and photographs. The general standard of mapwork skills was good.

Generally, candidates performed equally well across all the questions, with **Question parts 1(a) 1(b)** and **Question 2(b)** being done particularly well. **Question parts 1(c)(ii), 5(a)(ii)** and **6(a)(ii)** appeared more challenging for candidates.

Mostly good use was made of English grammar to convey geographical ideas, but there were issues with a minority of candidates' writing which could have been clearer.

Comments on specific questions

Question 1

(a) Most candidates scored well on this question, finding and identifying features on the map from **Figure 1.1** using the key. Feature **A** was a parking area, the type of road at **B** was a secondary road (the D26), feature **C** was a water tower, and the height above sea level at point **D** was 5 metres.

(b) The majority of candidates identified the correct grid reference, 370832, for point **D** from the four alternatives in the tick box. A small minority selected the third option, which incorrectly had the northings before the eastings.

(c) **Part C** was found to be more challenging. In (i) many correctly measured the straight-line distance from the museum at le Château-d'Oléron to the museum at Saint-Trojan-les-Bains within the tolerance of 4400 to 4900 metres. Some added some zeros on the end of their answer suggesting a difficulty in converting the kilometres in the scale line to metres. In (ii) the compass direction between the two points from the museum at le Château-d'Oléron was south-south-west, not south-west as stated by most candidates. It was clear that not all the candidature were familiar with the sixteen-point compass. They could have also used the North arrow present next to the scale line to help judge the direction. In (iii), the compass bearing between these points from the museum at le Château-d'Oléron was 199°, with a tolerance of 196 – 201° allowed. This was answered better than part (ii), although some responses were incorrect by a wide margin.

(d) This question was well answered by many candidates who stated three appropriate activities with evidence drawn from observing the map. The three most common correct answers were camping at the campsites, horse-riding at the horseback riding centre and yachting or sailing using the yachting harbour. Some candidates took evidence from the whole map and not the designated area; surfing, nautical sports and paragliding fell into this category and were therefore not credited. This indicates the importance of using the map key in conjunction with map observation instead of simply relying on the former. Some weaker responses stated the evidence as the activity: for example, the museum, rather than visiting a museum.

(e) In part (i) many candidates gave the right answer as wood or brushwood. Some weaker responses suggested the main land-use along the section was a 'cycle track or trail' and also 'roads'. Whilst they were clearly in the right area, these responses suggested a lack of understanding of the term 'land-use'. Those who stated 'forest' gave the impression that they had recognised the land-use as being green in colour but did not check this with the key. The most common response to part (ii) was 20 m which was within the tolerance of 19 – 23 metres and could be derived from **Figure 1.2**. However, 10 m was often seen; this seemed to relate to a spot height which was not far enough east on the cross-section to be the highest point.

(f) When analysing the distribution of settlements on the map many candidates correctly recognised that they were 'mostly in the north' and that there was 'more along the coast'. A smaller number stated that they were 'mostly in the east' which was also true. An almost equal number ticked the box for 'linked by main roads' but in fact the main settlements were linked by secondary roads, of which the main one was the D26. That they were 'evenly distributed' and that they were 'mostly on high land' was dismissed by the majority of candidates.

(g) Those candidates who did well focused on the key words in the question and limited their answer to the natural features of the whole length of the coastal area on the west side. The best answers tended to be concise and mentioned features such sand dunes, rocks (especially in the north), the beach and the presence of a spit. Some stated that the coast was flat and low lying and others suggested that the beach was long or extended along the whole length of the coast. It was also recognised that there was a greater area of wet sand rather than dry. Whilst there was discussion involving dry and wet sand amongst the weaker responses, it was often inaccurate. Many candidates did not recognise that these comprised a beach. Some also misread the question and compared just two grid squares, which somewhat limited their responses. Some also referred to physical features which do not exist such as headlands, cliffs and a bay, while others mentioned vegetation, brushwood, and marsh. Those candidates who focused solely on human features such as roads, surfing spots and other tourist activities were not credited.

Question 2

(a) Many candidates scored the one mark available for each of **Questions (a)(i)** and **(a)(ii)**. In (a)(i), the answer was 17.5 million, but there was a tolerance of two million either side of this. In (a)(ii) 45

years was the only creditworthy answer, since the peak was in 1955 and the decline in numbers continued until the graph ended in the year 2000. 35 years and 44 years were common errors.

(b) The four factors required to explain the rise in tourist numbers were readily identified from **Figure 2.1**, and the majority of candidates scored the two marks available. It started when the wealthy began coming to the beach and went sea bathing. It was expected that these factors should indicate a change leading to an increase, so that facilities like the tower, pier and theme park opening could be credited as well as the railway link to UK cities being built. The introduction of employment laws giving workers annual holidays and holidays with pay acted as further catalysts for tourist growth.

(c) This question required candidates to explain the impact of the growth of package holidays on a UK tourist resort. The better responses stated how package holidays being cheaper meant that more people could afford to travel to other destinations in other countries. This was aided by the cheaper air fares being made available. People wanted to experience somewhere different or more exotic and thus access to somewhere warmer than the UK aided this attraction. Some candidates also suggested that package holidays offered more activities than the resort. It was also suggested that booking 'a package' was a lot easier. Weaker responses tended to not develop their answers beyond 'cheap air transport to countries with a warmer climate', and some thought that the package holidays were to a UK resort which caused overcrowding, thus discussing the negative impacts of package holidays for no credit. A few candidates did not understand the term 'package holiday'.

The second part of the question required an explanation of why the resort becoming run down resulted in a decline in the number of visitors. Many candidates received credit for recognising that as a result the resort had become dated or lost its appeal to visitors. This was further exacerbated by the fact it had become popular with young party goers who put other groups of tourists such as families or older people, off coming to the resort due to its bad reputation or the amount of noise pollution. A few others suggested that the facilities offered had become broken and with less money coming in (due to fewer tourists), there was no maintenance and a lack of new facilities. Weaker responses tended not to go beyond the wording in the resource and did not explain the effect of being popular with young party goers, for instance. There was some repetition of similar ideas in both sections of the question and some responses were unable to demonstrate an understanding of the term 'run down'.

Question 3

(a) This question was generally answered well, despite few candidates recognising **Figure 3.1** as being a photograph of a tea plantation. This did not mean, however, that they could not give four pieces of evidence to suggest this was a commercial farm. The best responses were those that were succinct. Most identified the large area of land devoted to crops and that it was intensive with every part of the land being used. Many also identified the terraces on the steeper slopes. The use of machinery such as the tractor was also identified, as was the organised nature of the farm, with the crops planted in rows. Some recognised it as monoculture but others suggested incorrectly that there were lots of different crops. Few candidates referred to most of the farm being flat and there was a tendency for some weaker responses to refer to what was not in the photograph such as the lack of workers, and the absence of houses. A common and incorrect emphasis was on the presence of roads and the gaps between the rows of crops rather than the crops themselves.

(b) The second photograph of an agricultural area in a tropical country, **Figure 3.2**, resulted in some long accounts to describe the features of the farm. These varied in quality, with the better ones distinguished by their appropriate use of geographical terminology. They correctly identified the type of farming as subsistence, as well as being either mixed or pastoral. The livestock were named, and the status of the buildings was stated, to include a barn or shelter for the animals, made of metal sheets and thatch or straw. The farm was often recognised as small scale but there seemed a lack of certainty about which crops were grown, if any. Although there was quite a lot of comment on the vegetation and trees, few candidates referred to it as jungle, or lush, and the palm trees were rarely identified. These would have been credited. The fact the vegetation surrounded the houses was often commented upon but not credited. Although many referred to the grass or grazing land, they seldom noted that the land was fallow and overgrown. Some weaker responses also concentrated on the proximity to houses or roads which did not gain credit. If they mentioned that there were dirt or earth tracks or paths present, this would have been appropriate.

Question 4

(a) (i) This question was well answered with most candidates selecting the correct tick box of 258 mm. The answer could have been estimated since the nearest values either side were over 100 mm away from this total. There were, however, many examples of candidates writing the monthly totals down and adding them up on the examination paper.

(ii) The best responses were from candidates who were able to identify the most striking patterns from the climate graph (**Figure 4.1**), for example the highest and lowest period of rainfall or the largest drop. Many identified that the highest period of rainfall was from December to February or in winter, whilst the lowest period was from April to June. Alternatively, the highest rainfall was in February and the lowest in June. Some candidates were able to provide an overview, stating that the rainfall pattern was uneven or fluctuated throughout the whole year. Many responses were not specific enough with names of actual months lacking, for example, 'There was an increase followed by a decrease and then an increase', or 'In the first few months the rainfall was highest'. Increase and decrease were frequently used terms, but rarely with any qualification, for instance, 'A rapid increase in July' or 'A steady decrease from August to November' would have both gained credit. A common error was to mix up the temperature line and the rainfall bars, or to link temperature and rainfall. There were also a limited number of month-to-month accounts which gained no credit. Very few candidates pointed out that there were two peaks to the rainfall, or that there was rainfall in every month.

(b) This question was well answered with candidates using their own knowledge and **Figure 4.2** as a prompt. Technical terms were used well and the best responses avoided the repetition of 'prevents water loss' explanations by choosing adaptions with different purposes. A common response was to refer to cactus having spines instead of leaves to reduce transpiration and then to refer to the possession of long roots to reach groundwater. Some candidates also referred to large or fleshy bodies or stem to store water for use in dry periods. Two adaptions which were evident in **Figure 4.2** were that many of the plants were low growing to avoid exposure to the intense heat, and that much of the vegetation seemed dead, staying dormant until the rains arrived when they would shoot and flower. Some responses gave explanations but did not state the adaption or gave it too vaguely, for instance reference to plants storing water without saying how this was achieved. A common error was to refer to plants having thorns to deter predators, which was not an adaption to climate.

Question 5

(a) Most candidates selected the correct three statements about the location of the largest magnitude earthquakes in 2022 from **Figure 5.1**. They were that 'Most earthquakes occur on or near to the coast', 'The Atlantic and Indian Oceans each have one earthquake' and 'The biggest concentration of earthquakes is in the South Pacific Ocean'.

(b) (i) Many candidates found this question challenging and few achieved two marks although some good responses were seen. Any statement or accurate data which supported a weak relationship, or why the positive relationship between the magnitude and number of deaths was far from perfect, was credited. Many candidates made good data choices from **Figure 5.2**. The best answers tended to focus on the outcomes of the two strongest earthquakes, or compared 2010 with 2011, or compared the outcomes of the two earthquakes with a magnitude of 7.0. General statements such as 'The number of deaths and magnitude both fluctuate', or 'Many years have no deaths, but the magnitude varies', were also credited. Many candidates tried to prove a strong relationship rather than saying why it was weak. Others did not study the graph carefully enough and quoted incorrect figures despite the tolerance afforded.

(ii) Candidates who focused on the wording in the question stem did well on this question. Many stated that earthquakes often occurred in the sea or away from large centres of population. Some also referred to those earthquakes with a deeper focus, causing no deaths. Reference to strong construction methods or earthquake proofing were also relevant. In the latter case, the term infrastructure was often used instead of buildings and was not credited, since it was considered too vague. Too often candidates focused on prediction and evacuation drills as well as the degree of preparedness and medical back-up. There was a lack of understanding that there is little or no warning with an earthquake unlike a volcano.

(c) Most candidates recognised that it was convection that causes tectonic plate movement. The minority of incorrect responses ticked either conduction or radiation in equal measure.

Question 6

(a) (i) Candidates who studied **Figure 6.1** in detail identified 'no legal rights to land' as the correct answer. The question stem suggested that the residents faced the threat of being forcibly removed, and thus 'land liable to flooding' and 'unstable ground' were not credited.

(ii) Many candidates appeared to find the idea of what made up the squatter settlement environment challenging. However, there were many who suggested air, water or land pollution (litter) which were credited. A few candidates referred to the site itself suggesting sloping or steep land, although a lack of fertile soil was not credited. Others mentioned the poor state of the houses around them suggesting they were unstable or that they were too close to each other leaving a shortage of space. Weaker responses tended to repeat ideas from **Figure 6.1** or simply state pollution without any further elaboration.

(b) Many candidates recognised that people had no choice but to move to squatter settlements since they were unemployed and housing in the city was too expensive. Others referred to the increasing birth rate or increase in population as well as migration (regardless of source) as causes of squatter settlement growth. A few suggested that their family was already living there so they moved to join them. Weaker responses listed the perceived benefits of living in a squatter settlement, rather than the reasons why they could not live elsewhere. They also tended to lift ideas from **Figure 6.1**, for example 'a strong sense of community'.

(c) Stronger responses made clear the advantages and disadvantages of the self-build site-and-services scheme house compared with the previous squatter settlement in the CBD. They recognised the better provision of services such as schools which would lead to a better education for their children, and a water supply and sewage works which meant a better level of sanitation and a healthier environment. The presence of the police station meant a safer environment and a lower level of crime. Some suggested that employment opportunities might be improved with the presence of small-scale industry and other services. They also recognised that since they now owned their home legally, they did not run the risk of being thrown out. A range of points were made in response to possible disadvantages. These included the loss of the sense of community where they had come from, and the increased distance, and therefore transport costs, to commute to their job in the CBD. It was also pointed out that many migrants were still unable to pay for such a house in a site-and-services scheme as well as the materials. Further points were that the new residents might not have the skills to finish their houses themselves or might not be physically fit enough to carry out the work. In addition, some pointed out that the scheme had no provision for healthcare.

Weaker candidates found it challenging to make use of **Figure 6.2**, beyond directly lifting descriptions or single features. These included the statements on the left side of the map which were not elaborated. There were some brief but appropriate statements about the services for instance the closeness to shops from some candidates. Some candidates did not comprehend that the scheme was on the edge of the city, so made incorrect assumptions about proximity to the CBD. For disadvantages, many stated that you would be finishing the home yourself but did not expand on this, whilst others were concerned about proximity to the sewage station. Others thought that low-cost building materials meant that the houses themselves would be poor quality. The fact it would cost more for a Type E plot was mentioned but seldom developed, for example, by suggesting that it would reinforce inequalities.

GEOGRAPHY

Paper 0976/03

Coursework

General comments

While this is a report for the June 2025 examination series, the comments made here will be of use to centres making their entries for the first time in November 2025 or during 2026.

The range of topics undertaken by centres was very similar to that in the previous June series. Please see the following table:

	topic
human	population and migration
	settlement and service provision
	tourism and recreation
	transport
	urban settlement and land-use
physical	coasts
	rivers
	weather and climate
others*	

*Includes conservation v development, vegetation, and waste management.

Human topics were more popular than physical, with both urban settlement and land-use and tourism being the most common. Please note that a very small number of centres elected to allocate completely different topics to each of their candidates. This makes group data collection either very difficult or impossible with only limited primary data likely to be collected by each individual. In this case, there is unlikely to be enough data for an in-depth analysis and this approach is therefore not recommended.

It is strongly recommended that centres read and take note of this report's content together with the *Moderator's Comments on school-based assessment of coursework* which each centre receives.

There is training available online for teachers who are new to the coursework option. There is also a Coursework Handbook available from the School Support Hub which includes examples of coursework which are annotated to show how they should be marked.

Every centre which entered candidates had the opportunity to conduct their fieldwork 'in the field' and therefore collect primary data. Secondary data can still be used for comparison purposes, for example past data collected by a former cohort. Otherwise, information from secondary sources can be used to provide a context for the study in the introduction, to demonstrate the theoretical basis of the study and the methodology and to aid explanation of the findings.

It is expected that primary data is collected as part of a group exercise and was collated by a teacher when candidates return to school. The complete data set(s) should then made available to all candidates for each to work on their own individual hypotheses. There remain some centres where candidates collect their data either individually or in small groups. In many cases this resulted in less data being collected, which was not sufficient for an in-depth analysis. For safety reasons Cambridge International Education does **not** endorse candidates being allowed to collect data on their own 'in the field'. Should a candidate need to add extra data for their own study to that which has already been collected as a group, it is expected that they are accompanied by an adult, especially when administering questionnaires or collecting data in urban or rural areas or collecting data on a river or along a beach.

While the data collection must be a collaborative exercise, individuality is the key to achieving the highest marks. Centres should avoid offering too much teacher guidance. Centres should also avoid candidates using the same computer-generated graphs in every study. Individuality can be enhanced by candidates researching their own background information and attempting at least one hypothesis which is not attempted by other candidates. In addition, candidates should be encouraged to take and use their own photographs as well as graphs, maps, and field sketches.

Key messages

- Some very good Geography was seen. The production of coursework is a positive experience for candidates. As one of the team of Moderators states: 'The majority of candidates have expended a huge amount of effort and have produced informative, engaging and well-presented pieces of coursework, in which they have taken a lot of pride. In addition, the marking was generally consistent and followed the assessment criteria very well'.
- Most centres demonstrated a very good grasp of their chosen topic, with candidates undertaking appropriate hypotheses. A clear understanding was demonstrated by most candidates of the 'Route to Geographical Enquiry', resulting in well organised studies containing the five sections outlined in the syllabus, often with an accurate table of contents. However, some centres' coursework was imbalanced, typically with a long *Introduction* and *Observation and Data Collection* section at the expense of *Analysis* which was relatively short. Some tables of contents contained page numbers, but these were not always accurate, or in others there were no page numbers.
- While a good understanding of geographical theory was demonstrated, it tended to be more focused where the hypotheses appeared first, and the theory could be utilised to justify the hypothesis. In the more successful studies, geographical models outlined in the introduction were also referred to in detail in the analysis and conclusion.
- The most successful conclusions were reached because of clear hypotheses laid out at the beginning of the enquiries. Two or three hypotheses are enough to ensure a sufficient depth of reasoning in the analysis. Many hypotheses and data collected on too many parameters often leads to a simplistic analysis or overlong enquiries which lose focus.
- It is important that enough primary data on any one parameter is collected to allow candidates to exhibit a depth of understanding in their analysis. Not all data collection exercises produced enough data to allow the identification of clear trends and anomalies, as well as the opportunity to perform statistical analysis.
- Data collection methods were well described and understood. Sampling procedures, however, were often inadequately described or understood and there was limited justification for the selection of data collection sites.
- All relevant primary numerical data that is used in the study should be included in tabular form. This was absent in some studies, despite the description of data collection methods.
- Some centres demonstrated an impressive range of data presentation methods. By contrast, in some other cases, a large number were rendered ineffective by the absence of correctly labelled axes (to include units). Line-graphs were often used inappropriately.
- All maps should have a scale and orientation, and those originally from secondary sources such as Google Maps must be clearly utilised. There was sometimes an overreliance on Google Maps which were not adapted for the purpose by the candidate.
- The inclusion of photographs considerably enhanced many enquiries. However, to be worthy of credit they must be well annotated as well as having a title. They should also be individual and not appear in other studies.
- The best responses gave well-reasoned explanations to support their findings. In weaker studies, reasons given were often too speculative and were not supported by one or more of secondary data, geographical theory, or personal observations.
- Most studies clearly confirmed or rejected their hypotheses in the concluding section. The strongest responses supported this up with key numerical data or reference to graphs and valid explanation.
- Evaluations were variable in quality, although most demonstrated that they understood some limitations of the study undertaken. More attention could be paid to what went well and why. Feasible suggestions for improvement or extension if the study were to be undertaken again tended to lack detail.
- References to shortcomings in the methodology should only be written in the evaluation and not in the data collection section.
- While most candidates adhered to the word limit of 2000 words, there were some submissions which were excessively long (up to 10 000 words) and lost focus. All candidates should declare a word count on their title page. Please remember that text placed in tables still counts towards the word limit.

- The majority of centres are to be complimented for the conscientious and detailed comments made on scripts and/or comments sheets attached to each piece of coursework. New centres should note that they are expected to justify how the marks were awarded. Phrases from the *Generic Mark Scheme for Coursework Assessment*, which was used by every centre, can be utilised for this.
- Generally, the marking by centres was accurate and there was agreement over the rank order of candidates. Where there were disparities, it was usually due to the undermarking of *Organisation and Presentation* and overmarking of the *Analysis and Conclusion*, and sometimes the *Knowledge with Understanding*, criteria. Any changes required usually occurred at the top and lower end of the mark distribution. It is important not to overmark candidates who do not collect any data but use only texts from the internet.

Comments on specific assessment criteria

Many of these comments are similar to those in previous examination series. It is hoped these will be of particular benefit to new centres as well as more established ones.

The criterion of *Knowledge with Understanding* tended to be assessed accurately. Where disparities occurred, it was often because the marker seemed to take only the candidate's introduction into account. This is largely the *Knowledge* element, but *Knowledge* can also be applied elsewhere, for instance for the explanation of trends and anomalies in the data. The level of *Understanding* can be demonstrated throughout the study. For instance, a judgement can be made on how well the theory has been applied such as in the provision of reasoned explanation in the *Analysis* or in how perceptive the candidate has been in stating the limitations of the study in the *Evaluation*. For example, the level of *Understanding* can be derived from comments on how well urban models, outlined at the start, fit the data. These can be highlighted by markers in their comments on the scripts.

Most enquiries were well organised with clearly stated aims and hypotheses and positive use of geographical terminology. These were often accompanied by the expected outcomes which were related to theory. Greater focus was achieved when candidates placed the theory after their hypotheses, rather than the other way round. Where the word count is exceeded, introductions are still too long. Many followed some initial aims with a prolonged background information section. There are some candidates who write all they know about rivers or include a generic section on the development of tourism, for instance, rather than carefully selecting their information to justify their hypotheses. Extended paragraphs about the history of the locality are often irrelevant, and a glossary of geographical terms is unnecessary, since many of the terms are not referred to in the later sections. Similarly, it is often not unnecessary to give detail on three urban models when only one is referred to in the later sections. On the other hand, some candidates tend to be far too brief in their use of theory; this was common in using Bradshaw's Model or the Butler Model, where once having scanned the diagram(s), only a few simple sentences (if any) were written to explain the relevance to the hypotheses. The stronger studies related these models directly to the study location with good comparisons to the data collected. In essence, the strongest responses were highly selective regarding their use of theory, but still able to provide appropriate detail while relating it to the study area.

The wording of the hypotheses is important. Nearly all of those that were stated were plausible and investigable. The simpler the wording, the more testable they seemed to be, for example, 'Blackpool conforms to the rejuvenation stage of the Butler Model', or 'The discharge of the River Harbourne, decreases downstream'. The most successful formula seemed to encourage candidates to use two core hypotheses and a third chosen by the candidate themselves. This resulted in a more focused study with greater evidence of individual work. The use of four or five hypotheses or a generic guiding question was usually associated with a superficial analysis. Furthermore, it is questionable whether some candidates understood the nature of a hypothesis. Some expressed their hypotheses as questions rather than statements, which often seemed to prevent a full exploration of the findings, with a brief 'yes' or 'no' in the concluding section.

Location maps placed in the introduction often required more detail. To be effective, scale and orientation is essential; writing 'not to scale' is not helpful. It is also expected that any map, from whatever source, is well utilised by the candidate. This is usually achieved by locating the sites of data collection with an appropriate key. The stronger examples are usually well annotated and possess clarity so that relevant detail is easily accessed. However, there are candidates who include a plethora of maps at different scales (e.g. world, regional and local) with little or no customisation to the area of study. More attention should also be paid to the quality of scanning since in many cases much of the detail, such as the scale, is illegible. This seems to be most common when Google Maps are downloaded. Some maps which were originally in colour but were downloaded in black and white meant that some features were difficult to identify.

The criterion *Observation and Collection of Data* was generally assessed well by the markers and very few adjustments had to be made. Indeed, the markers are in the best position to judge an individual candidate's contribution to a group data collection exercise.

A positive range of data collection methods were employed and carried out appropriately. It must be stressed that it is essential to collect enough data to ensure the opportunity for sufficient depth of understanding and detail to be demonstrated in the analysis. Not all centres managed to collect questionnaires from the recommended number of fifty respondents. Often this was because of single groups of three or four candidates working on their own and not as part of a larger class where data is pooled. There remained some surveys where a group asked questionnaires to only five people without their data being shared with the other groups. This lack of data inevitably leads to a very limited analysis.

For river studies, ten locations are ideal. While this might not always be achievable due to constraints of candidate safety or of time, in river studies there is a large number of different parameters that can be measured, thus generating many different hypotheses which help to make each candidate's coursework more individual. Where the number of sites is under six, a centre might consider measuring each site at three different cross sections, each a minimum of 100 m – 200 m apart. However, to show worthwhile trends in the parameters measured, individual sites should, at the very least, be several kilometres apart. Only three hypotheses should be chosen and thus this makes collection of data at six to ten different sites essential. With a group data collection exercise such as this, candidates should only describe methods of data collection which were used to answer their hypotheses.

Whilst more centres are encouraging candidates to refer to the sampling strategies that have been used, few included any depth of discussion, or indeed, their justification. This was particularly common for those undertaking questionnaires in urban environments. If respondents were accessed on an opportunity basis, then it needs to be stated and justified. Few centres explained their choice of data collection sites; for instance, stratified sampling to represent the three stages of a river, or systematic transects every x metres along a beach. This also applies to traffic surveys and pedestrian counts. Overall, it appears that methods of sampling are often not fully understood. On the other hand, the description of the use of equipment for data collection tend to be quite detailed and reflects a high level of understanding. More candidates are now linking their methods to their hypotheses which helps demonstrate their level of understanding. This is particularly the case where the data collection methodology is well set out in tabular form. However, many of these tables also include some evaluation of each data collection technique. Since all wordage in tables counts towards the overall word count, this is best left for the concluding section of each study.

The time given over to data collection is another issue, especially when the time available on the centre's timetable is limited. A surprising amount of data can be collected in a relatively short space of time when many candidates are divided into small groups to cover a large area, each coordinated to do similar activities at similar times, such as a pedestrian or traffic count. On return to the centre the data is then coordinated centrally and shared. Even so, centres that allocated more than half a day for data collection almost inevitably achieved much better results than those which attempted to collect data in one or two hours.

The use of secondary data can play a valuable role in supporting the findings of the primary data collection. Comparing data collected at the present with that collected on the same topic in the past would be an example. Where a centre is unable to collect primary data, then secondary numerical data such as from weather stations or censuses can be used. However, Cambridge International Education must be informed before the data is utilised. The use of secondary data does not extend to synthesising written information taken from the internet or textbooks and putting it together in essay format. This would not gain any credit for *Organisation and Collection of Data, Presentation of Data or Analysis*.

Centres should ensure that candidates include tables of the collected data. These are essential to prove the candidates took part in a fieldwork data collection exercise as well as for reference in the analysis. The strongest studies integrate these tables with the methods of presentation or analysis. Since it is likely that parts of the data will be referred to in the text of the study, candidates should avoid placing it in an appendix.

Organisation and Presentation was the criterion which resulted in the greatest disparity between markers and Moderators, especially at the lower end of the mark distribution. Some studies which scored higher marks were overmarked due to the lack of complex methods of data presentation and/or the absence of a location map which had either not been utilised by the candidate or did not possess both scale and orientation. Meanwhile, some lower scoring studies which used at least three different simple techniques or included one complex technique tended to be undermarked. These techniques must be effective in portraying the data; for instance, there were examples of line graphs used for discrete rather than continuous

data which meant they were inappropriate. Bar graphs were seen in many guises but only count as one technique. The same data presented in several different ways only counts as one technique. Only the three most complex and effective graphs should be considered by markers. If techniques are not effective then they cannot be credited at the top of the level; for example, a bar graph with a Y axis label missing or incomplete. Since the emphasis must be on positive marking when assessing the data presentation, only the three most complex and effective graphs should be considered by markers. Candidates clearly spent a lot of time on their data presentation and once again it was the criterion where, on average, candidates scored the most marks. If candidates use many more than three techniques (in addition to a location map) it means that their time could probably be used more effectively, for example on a more detailed analysis. Markers should note that a piece of coursework cannot reach the top of Level 3 for *Organisation and Presentation* without a well utilised map complete with scale and a north sign.

A list of simple and complex presentation techniques for reference by markers is found in the appendix to this document.

Most candidates followed the 'Route to Geographical Enquiry' and therefore produced studies with an appropriate structure; thus, little comment is required on the *Organisation*. A few neglected to write an evaluation or left this to comments on the methodology in the data collection section. It is expected that an evaluation should follow on from the Conclusion. Similarly, concluding comments are sometimes made after each hypothesis is dealt with in the *Analysis*. Again, a summary section entitled 'Conclusion' is still required. Most candidates integrate their graphs and diagrams with the text of the *Analysis*. This helps to ensure that they analyse the data shown by each graph/diagram/map in turn, making sure that none are redundant. Candidates should be discouraged from placing all their graphs together in one section, whether it is before the *Analysis* or in an appendix at the end. This also includes statistical tests.

Many candidates now provide a table of contents at the beginning of the study. This should contain page numbers for each section of the study, but for a significant number of studies these were inaccurate especially where amendments had been made. In some cases, the pages numbers were listed in an index of contents but there was no pagination. It is recommended that candidates should check this as one of the last jobs before submission of their work. More candidates included risk assessments which undoubtedly demonstrates their organisation. Few candidates mentioned a pilot study being carried out, prior to the main data collection exercise, which also would have added to the *Organisation*. In many cases questionnaires could be tested in advance at the school, and elements of microclimate, for instance, in the school grounds.

A wide range of appropriate techniques was demonstrated by the candidates. Some centres encouraged their candidates to produce graphs and maps which were more complex, and this was largely successful. Where this was not the case, there was still a reliance on basic bar charts, line graphs, pictographs, and pie charts. These techniques can often be located on maps at the sites studied to make the technique more complex. Scatter graphs with appropriate lines of best fit, divided and stacked bar graphs and radar graphs are other techniques used by candidates which have the appropriate level of complexity. Cross sections produced in river studies are considered a higher-level skill, although these must be carefully created to the same scale to facilitate ready comparison. This also applies to beach profiles. Field sketches were rarely seen, but the few that were drawn, tended to be clearly linked to one of the hypotheses and were very well annotated. However, despite being mentioned in their methodology, many candidates chose not to include them in their final study. Any produced during the fieldwork should be tidied up and suitably annotated to show evidence that can be referred to in the *Analysis*. Some centres encouraged their learners to make use of statistical techniques in their analysis. Spearman's Rank Correlation was the most common of these, although Analysis of Variance, Nearest Neighbour analysis and Chi-Squared were also seen. Centres are reminded that these can count as a complex presentation technique if the candidates demonstrate the complete working themselves and do not just rely on the press of a computer key for the result. On some occasions, the working for Spearman's Rank Correlation was incomplete; for example, the formula was not entirely filled out correctly with the data.

Many bar graphs, line graphs and scatter graphs were rendered ineffective by the lack of, or incomplete, labelling, particularly on the Y axis. Such labelling should include the name of the parameter along with the units of measurement. On some occasions, titles were also missing. Since most graphs are produced by using computer programmes, all centres should advise their candidates that having input the data, they should inspect the results carefully and make any necessary changes.

Some centres' candidates produced some very well annotated photographs, graphs, and maps. Anomalies on graphs, for instance, were highlighted by a circle leading to an arrow and relevant comment. However, in many studies photographs were submitted without annotations and were not referred to in the text. Many others had just a title and/or simple labels which would not count as complex. These served little purpose.

Centres should ensure that their candidates know exactly what is expected by annotations; a paragraph written underneath the photograph, for instance, does not count. Three appropriate annotations are expected on any one photograph for it to be complex.

It is best for the original hand-drawn graphs, field sketches, maps, and diagrams to be included in any study rather than being scanned in, albeit at an appropriate place. These become more difficult to read, especially when they are scanned in monochrome. Candidates are reminded that each graph or map should be drawn by themselves and not by one person in their original group, with the rest scanning it. Furthermore, since it is expected that individual initiative is demonstrated in the use of presentation techniques, it is important to avoid the same range of computer-generated graphs appearing in every study that a centre's candidates submit.

The *Analysis* was overmarked by a number of centres, especially at the top end of the mark distribution. The requirement for reasoned explanations at Level 3 was sometimes overlooked by markers when the reasons given were very short and tenuous. Some of the marker comments on the scripts revealed that the higher marks were being given for explanations which were not fully developed. The *Analysis* section is where candidates can really demonstrate their level of understanding. However, the depth of analysis can be severely limited by the lack of a sufficient amount of raw data on any one variable for interpretation purposes. Here, the onus is on the centre to make sure their candidates have enough data at their disposal to achieve their potential.

A clear improvement in the *Analysis* has been demonstrated over recent June sessions by many centres, with many candidates able to interpret rather than just describe their findings and provide clear links to their hypotheses. Nevertheless, the *Analysis* continues to be the lowest scoring criterion for many candidates, particularly in terms of the level of explanation. Most analyses consisted of description derived from graphs with all those presented being utilised. There was a clear effort to interpret the trends or patterns identified as well as identify anomalies. Few responses remained at Level 1, but most remained in Level 2 or the bottom of Level 3 due to a lack of viable or detailed explanation. There were some thorough descriptions with effective use of data as support, and the more able candidates used one or more of geographical theory, secondary data or personal observation to support their explanations. In addition, having identified anomalies, some used numerical values to show why they were anomalies, and explained them with reasons that were creditable. Some manipulated their data, producing averages, for instance. However, in general, explanation was speculative and although tenable and sometimes worthy of some credit, there was no clear proof. Some candidates who identified an anomaly put it down to candidate errors which were not substantiated. Phrases such as 'The reason might be/could be/may have been' were very common.

There was some valid use of statistical techniques, principally Spearman's Rank Correlation. Although scatter graphs with best fit lines were often used as a pre-cursor to the testing, there tended to be a lack of a full statistical analysis. Many candidates did not really explore the implications of what their statistical work indicated or display a clear understanding of the technique they had used. The correlation coefficient value itself was often interpreted in a limited way, especially when a correlation coefficient was computer generated, and no workings were shown. This lack of understanding also extended to tests for the level of significance. It is therefore important that centres make sure that their candidates not only understand how to use statistical testing, but also why they are using it.

The *Conclusion and Evaluation* was marked accurately apart from in some studies where there was a tendency for it to be overmarked, especially the higher scoring studies. In the latter, too much credit was given for accounts which lacked key data. The Level 3 statement in the Generic Mark Scheme for Coursework Assessment states that conclusions should be 'clearly related to evidence collected'. This evidence should be either examples of numerical data or stated characteristics shown on graphs, maps and tables which are clearly referenced; for example, 'On Fig. 5 it can be seen that...'. Some responses were given high marks even though they used this evidence very sparingly or not at all and generally lacked the expected depth of discussion and explanation.

Most candidates summarised their findings well, although many were rather brief. Some Moderators observed that the candidates that produced the strongest conclusions had very precise hypotheses. All the hypotheses tended to be either confirmed or rejected. The higher scoring responses quoted key data or referred to figures (graphs, maps, and statistical tests) used earlier in the study, as well as providing some explanations. But many other responses lacked the evidence to support their assertions, and explanation was rather superficial. Models or theory quoted in their introduction were often not mentioned. This particularly applied to the Butler Model or models of urban land use. Although Bradshaw was an exception, statements were still limited in many cases. Most common was the lack of key data which limited progression to the higher Level 3 marks. Some candidates introduced new ideas in their conclusions, and it was felt that

these would have been better in the *Analysis*. Some candidates chose to make simple conclusions after each section of their *Analysis*. These must be considered by markers, although a separate Conclusion section is still required. The latter can be a separate paragraph entitled 'Conclusion', after the analysis of each hypothesis in turn, but an Evaluation section at the end of the study would still be required.

As part of the *Evaluation*, markers are reminded that they should consider comments made in the methodology section, which usually refer to the effectiveness of the equipment used. Candidates tended to make some valid criticism of their data collection strategies, and many came up with one or more realistic improvements. Some suggested how their study could be extended and a few suggested how it might be used in future, for example, by planning authorities. Weaker responses tended to suggest generic improvements which needed some development, for example, 'We needed more time' or 'We should have sampled more sites'. Most of the evaluation concentrated on negative comments rather than stating what went well and why it was effective. The weaker responses seemed more likely to make positive comments, but these were rather superficial, for example, 'The group worked well together, and we were able to prove our hypotheses'. The *Evaluation* remains a good gauge of a candidate's level of understanding of the fieldwork undertaken. It should therefore also be considered by markers when assessing *Knowledge with Understanding*.

Administration

Centres are to be praised for the hard work of their markers and their accuracy in utilising the *Generic Mark Scheme for Coursework Assessment*. In nearly all centres it was applied consistently with the order of candidates largely remaining unchanged. This made applying adjustments relatively easy, and for some centres this meant there was no change. For those that were adjusted, this was not always across all of the mark distribution. There seemed to be a pattern of negative adjustments above 50 marks and positive ones for those below 37 marks. Some centres were a little harsh and a small positive adjustment was made. Those very few centres which a large negative adjustment applied were generally relatively new to the moderation process; the reasons are detailed in the document *Moderator's Comments on School-based Assessment of Coursework* which each centre receives.

Most centres were conscientious in their approach to adding comments to their candidates' scripts to justify the marks awarded. Those who added a cover sheet with some overall comments must also be thanked. These generally used the wording from the *Generic Mark Scheme for Coursework Assessment* and facilitated the smooth running of the moderation process. Very occasionally, it highlighted when a marker had misinterpreted the mark scheme. If centres have not done so in the past, it is expected that markers make these comments (in pencil) on the scripts for their next submission.

Please note that only one piece of coursework is required for each candidate. Where two different fieldwork exercises have been carried out, it is for the centre to ensure that only the one attaining the highest marks according to the *Generic Mark Scheme for Coursework Assessment* is sent to be moderated. The centre must also ensure that coursework based on different topics are of equal value in giving candidates the opportunity to achieve their full potential. A fair proportion of each should comprise the sample that is sent for moderation.

Please ensure you check the latest documentation from the School Support Hub to ascertain the exact number of scripts that you should send for your centre's sample. There were a small number of centres which did not send enough sample scripts, and this delayed the moderation process.

Almost all centres submitted their coursework samples to Cambridge International Education on time before the deadline, with the appropriate paperwork completed. The latter consisted of the Coursework Assessment Summary Form together with the MS1 Form or the Internally Assessed Marks Report. Please make sure that an Individual Candidate Record Card is attached to the front of each script and not sent in the overall package in one pile. In addition, please make sure that candidates are listed in candidate number order on the Coursework Assessment Summary Form.

Most of the paperwork was completed accurately and included with the sample. In almost all cases the sample included an appropriate number of scripts representing a fair cross section of the marks awarded (to include the top and bottom of the mark distribution). Just occasionally there may be many candidates on one particular mark; in this instance at least two scripts on this mark should be included in the sample. Where Cambridge International Education have requested the candidate numbers of the scripts to be sent, please adhere to this.

Please continue to double check the paperwork to make sure there are no mathematical errors. Some errors were detected in this session. Errors usually take place in one of the following instances:

- Where the addition of the assessment criteria marks on the Individual Candidate Record Card is incorrect and is subsequently transferred to the Coursework Assessment Summary Form and then to the MS1.
- Transcription errors from the Coursework Assessment Summary Forms to the MS1 Forms. This may occur where an internal moderation has taken place, and the candidate's original marks have been entered instead of the changed mark.

All centres should have their candidates' marks double checked before submission.

Where a centre has more than one marker, it is essential that an internal moderation takes place. There is evidence that these have been conscientiously carried out by most centres and marks changed accordingly. However, the change for an individual candidate is not always reflected in the change in marks for individual assessment criteria, only the overall total out of 60. This information is essential for the Moderator's job to be carried out effectively. There have been occasions when one marker's marks from a centre has differed markedly in standard from those of the other markers, and an internal moderation is the best way to resolve this problem. Where an internal moderation has resulted in no change of marks this should be stated on the Coursework Assessment Summary Form.

It is worth reiterating that where changes have been made due to an internal moderation:

- It is the marks resulting from the internal moderation that are entered on the MS1 Forms and not the original mark. This resulted in a number of errors during this exam session.
- Where a candidate's overall total mark has been changed, the individual marks for the assessment criteria on the Coursework Assessment Summary Form must also be changed, in order that they add up to the new total.

Appendix

Simple and complex presentation techniques.

Simple techniques = bar charts, pie charts, doughnut graphs, line graphs, scatter graphs, pictographs. Appropriate photographs on their own do not count, but with labels = a simple technique. Appropriate photograph(s) (with a title or description) and tables of data = Max. 2 marks in the absence of other techniques only in Level 1.

Complex techniques = located bars or pie charts, desire lines, flow lines, radar graphs, wind roses, river cross sections (need same scale), beach profiles (need same scale), bipolar graphs, isoline graphs (techniques must be effective), annotated photos (at least 3 appropriate/relevant annotations), well annotated line graph (for example, to show anomalies), a scatter graph with a line of best fit, compound/divided/stacked bar graphs and age/sex pyramids. Candidates may include a complete and well worked example of a statistical technique, for example, Spearman's Rank Correlation as complex. Any map, whether hand drawn or otherwise, can qualify as a complex technique if it is well annotated (at least 3 appropriate/original annotations). A well labelled field sketch can also be included here.

GEOGRAPHY

Paper 0976/42
Alternative to Coursework

Key messages

To perform well on this paper candidates should:

- When answering hypotheses questions that ask whether they agree or not, always give their opinion first before any supporting evidence. This will usually be 'Yes', 'No' or 'Partially/To some extent'. Candidates should make a clear decision and provide the data or evidence for their choice. Expressions such as 'might be true', 'could be false' and 'true and false' are too vague.
- Support the decision made with evidence. If they are provided with a decision about a hypothesis, such as in **Question 2(d)(i)** where candidates were told that the students decided the hypothesis was true, they should not then try to justify a different decision.
- Note that if evidence is asked for, this can include numbers and descriptive statements. If the question says, 'Support your decision with data', as in **Question 1(f)(iii)**, then they must use statistics.
- When giving figures in an answer, always give the units if they are not stated.
- Ensure that any numbers they write are clear. Writing must be legible; credit cannot be given if the answer cannot be read.
- When shading or completing graphs, use the same style as that provided in the question and use a sharp pencil to give a good dark image. Candidates should also check that they understand the scales used and the importance of any plots provided. If adding plots to a graph, use the same style as the plots already on the graph.
- When completing bar graphs, make sure their shading matches the key or other bars already completed.
- Use the exact figures from the table rather than make erroneous judgements from the graph if they need to refer to data from a table or graph.
- Read questions carefully and identify the command word.
- Check they are using the resources that the question refers to.
- Be careful with the use of terms such as 'majority' when the correct term would be 'highest' or 'most'. The 'majority' must be more than 50% of the statistics being described and is not a term that will be accepted if the data involved is less than 50%.
- When they think that they are finished, go back and check that all questions, including those where they are asked to complete tables, diagrams, graphs or maps, have been completed.
- Use the extra pages provided if they need to add extra work. It is important that candidates signal this by writing something like 'continued on page 15'. Candidates should also give the correct sub-section number to their extra work to enable it to be matched to their earlier answer.
- Ensure they have the correct equipment for the examination. In this case, a calculator and a ruler.

General comments

Most candidates found this examination enabled them to demonstrate what they knew, understood and could do.

For teachers preparing candidates for this Paper, most matters to consider relate to candidates misunderstanding or ignoring command words and to the importance of experiencing fieldwork – even if it is only in the school grounds or simulated in the classroom.

Where candidates did not score well, it was often related to them not fully reading the question or missing out straightforward graph completions.

Although this is an *Alternative to Coursework* examination, candidates are still be expected to show that they know about fieldwork equipment, how it is used and fieldwork techniques. Any fieldwork experience is beneficial, even if there is limited opportunity within the centre. Familiarity with maps, tables, sampling methods, measuring instruments and the various graphs and other refining techniques listed in the syllabus are also important for success in this examination. Sampling techniques remain an important part of fieldwork that can easily be taught and demonstrated within the classroom or school and yet they are often not performed well by many candidates. Questionnaires and sampling exercises can be carried out and demonstrated without leaving the school, e.g. sampling of candidates using random, systematic or stratified techniques or using internal questionnaires.

Comments on specific questions

Question 1

Question 1 focused on fieldwork using various weather instruments to collect data in a city. Candidates needed to know the features of a Stevenson Screen, a barometer, a traditional rain gauge, and a wind vane. They also needed to be able to look at weather data in tables and make judgements about relationships between atmospheric pressure, temperature and rainfall. Candidates needed to make decisions about two hypotheses as well as applying knowledge and understanding to support and justify the decisions with evidence. Completing a table, line graphs and a bar graph tested practical skills.

- (a)** The majority of candidates knew what the Stevenson Screen was and could identify features and explain why they were important. The strongest answers noted that it was painted white to reflect sunlight and prevent instruments being influenced by heat and that it was raised off the ground on legs or stilts between 1 – 1.5 metres to avoid it receiving ground radiation. It was not sufficient to simply say it was ‘above the ground’. A few answers thought the Stevenson Screen was raised to avoid floods or animal damage. Some candidates missed out on marks by describing site factors rather than the features such as it being placed on grass or away from obstacles; these were inappropriate. The question required physical features to be explained such as the vents/slats that allowed air flow in and out – not wind! Only a few referred to the sloping roof or that the Stevenson Screen was made of wood. References to the padlock were also irrelevant.
- (b)** Almost all candidates knew that the two instruments would be used outside the Stevenson Screen for one mark. The sunshine recorder and anemometer were seen frequently for two marks, although in some answers the sunshine recorder was often either omitted, or the instrument was called a sun dial or sun meter. The anemometer was usually listed for measuring wind speed though wind meter and wind vane were often incorrect answers.
- (c)** This was the least well-attempted question on the whole Paper. The question stem stated that the barometer was used to measure atmospheric pressure so the many candidates that gave the answer that the measuring hand measured ‘atmospheric pressure’ gained no mark. The measuring hand shown was measuring the current pressure or the pressure that existed at that moment. Credit was given for candidates who stated the current pressure was 1012 mb providing the units were present. Many candidates thought the moveable pointer showed what the weather was or would be rather than its correct use indicating the previous day’s pressure or if there is any change – rising or falling – compared with the existing pressure. A few candidates thought it measured temperature.
- (d) (i)** While most candidates plotted the two statistics correctly, many missed this out despite the straightforward plots. Any errors were mostly caused by misreading the lines using the horizontal scale for the atmospheric pressure figures of 1008 mb and 1012 mb. It was important candidates plotted with crosses as seen on the graph – a few chose to use dots. A sharper pencil would have benefitted some candidates.
- (ii)** Just over half of the candidates recognised that there was no trend, correlation or pattern or that data fluctuated on the graph leading to the correct decision that the hypothesis was incorrect or false. There were two marks for supporting these observations with data. The most common statistics used was where the highest atmospheric pressure of 1022 mb was seen at the lowest temperature of 4 °C; where the same pressure of 1017 mb had different temperatures of 5 °C, 6 °C or 7 °C; and where various examples of paired data showed where pressure increased but temperature stayed the same or decreased.

(e) (i) In answering this question, there was too much emphasis on site factors by some candidates; one mark was the maximum allowed for any site factor. The question was about how the candidates would use a traditional rain gauge to get daily rainfall measurements; a few wasted time writing about how the instrument worked. Leaving the gauge in the open/unobstructed were popular site factors. More relevant to the gauge's use were factors such as placing it in the ground (not underground!) to allow rain to collect in it and checking every 24 hours or each day at the same time by pouring the water into a measuring cylinder, measuring it in mm/ml, then emptying it out and resetting it for the next day. Most candidates did this well and scored 3 or 4 marks. The biggest error seen was by candidates who thought the gauge was put out when it rained and fetched in for measuring when the rain stopped.

(ii) This question was answered well by a significant majority of candidates who were aware that if the gauge was sited below trees, there would be inaccurate results due to the trees intercepting or blocking rain even if falling leaves blocked the gauge too. Both would give inaccurate and possibly reduced readings. A few candidates thought the trees and their roots would absorb water, but this would not affect rain falling into the gauge from above. There was also a popular view that placing the gauge close to a footpath might lead to it being tampered with, damaged or knocked over. It was not accepted though that rain could cause the gauge to be flooded as, if correctly raised above the ground, its contents would not be affected.

(f) (i) Almost all candidates correctly chose day 14 as the one with the highest rainfall amount recorded. A few gave day 9 which was the correct answer for the highest atmospheric pressure and not rainfall. A few gave the highest rainfall amount of 9.3 mm instead of the day this occurred.

(ii) A significant minority of candidates did not attempt the two plots; those that did plotted the point and bar well. To achieve the first mark a cross – not a dot – was needed at 1017 mb and the line needed completing with the other lines already drawn; not every candidate joined the points together. The second mark was for plotting a 4.1 mm rainfall bar for day 1; a few candidates misread the scale and plotted the 4.1 bar at 4.2 mm. Most plotted the bar correctly between 4.0 mm and 4.2 mm.

(iii) Most candidates recognised that the hypothesis was true, and that the highest rainfall took place at the lowest atmospheric pressure or vice versa. They supported this by giving statistics showing that pressure decreased when the rainfall increased, e.g. 1020 mb pressure with 0 mm rainfall compared with 1003 mb pressure and 9.3 mm rainfall. It was important that candidates gave two sets of paired data; one pair on its own cannot prove the hypothesis. A few stated the hypothesis was wrong but then gave data that proved there was a negative relationship.

(g) Many candidates did not attempt this question. Wind vanes are listed in the syllabus so candidates should have been able to suggest measuring the direction (not the speed) with a wind or weather vane, placing it on the top of a roof/building or at an unobstructed height and then observing the direction the arrow (not the vane) was pointing to which indicates which way the wind was coming from. More than half of the candidates did this well. The use of a windsock was also credited but throwing grass or leaves up in the air, observing a candidate's long hair blowing in the wind or the 'wet finger' test were not regarded as measuring equipment. A few candidates also discussed using a rain gauge which was not a requirement of the question.

Question 2

Question 2 was about students in Tokyo carrying out fieldwork in the city's Central Business District. Candidates needed to understand what features were found in a CBD, how to go about carrying out a pedestrian count in groups within a CBD and what a high-order service was with an example. They were also required to make one hypothesis decision and justify it and were told another hypothesis decision which they needed to provide supporting evidence for. They also needed to complete practical tasks including devising a recording sheet to record pedestrians and completing a map using a key.

(a) (i) Almost all candidates knew that CBD stood for 'Central Business District'.

(ii) Candidates were asked to describe three features of buildings found in a typical CBD. Most did this by referring to tall/multi-storey/skyscrapers that were packed together along with an example of a CBD land-use such as shops, offices or apartments/flats. A few answers did not describe the

buildings but instead listed characteristics such as the buildings were expensive/attractive or gave vague ideas such as large/big. Weak land-uses which were not credited included supermarkets and housing which are not restricted to CBDs.

(b) (i) Candidates tended to employ two routes in answering this question. Some reasoned that the teacher had split the candidates into groups of three so that they could divide the work along each road into five different sites thereby obtaining more data and covering more area. Others focused on the teacher deciding to have groups of three rather than two or individuals – answers here focused on safety issues and being able to divide the task into three or have all three carry out the same counting task and take an average. Either approach was acceptable for credit though some answers focused too much on safety. Weak answers referred to small groups being more accurate and reliable with fewer errors.

(ii) The recording sheets created ranged from simple sheets to very complex charts. Most candidates did well and were awarded 2 or 3 marks here providing the sheet included a column for distance from the CBD/Sites along a road, a column for the number of pedestrians and a space for tallying. A few candidates drew graphs rather than recording sheets; others added in actual numbers in the tally spaces.

(iii) Candidates seemed unsure as to how they would carry out a pedestrian count and a few even referred to traffic in the answer. Several suggested splitting into groups and choosing sites but the groups and the Site locations had already been created and referred to in **Question 2(b)(i)** and **Question 2(b)(ii)** so those answers were not credited. The best answers referred to dividing the work into three different tasks and counting the pedestrians for between 5 and 15 minutes at the same time at each Site. A few suggested 30 seconds or even an hour; both of these were unrealistic extremes of measuring spans. Equipment such as using a timer/watch/phone to time the count and a tally/counter to count the number were mentioned. Some suggested all the candidates could count for the same time and take an average which was acceptable; however, it was not appropriate to keep repeating the count, for example every five minutes, and take an average as they would be measuring different numbers of pedestrians over time so an average would be invalid. Many candidates thought that systematic or random sampling would be an effective way of counting pedestrians which was incorrect. A few suggested using cameras or carrying out questionnaires; neither of which were appropriate.

(iv) Almost all candidates made the correct choice that the hypothesis was ‘true for some roads’. A few then referred to ‘some roads’ that supported it and ‘some roads’ that did not without identifying which roads they meant. To support their decision the candidates should have picked a road that supported the hypothesis and then provided supporting data taken from the centre of the CBD to the edge, e.g. ‘On Road 3 the number of pedestrians decreased from 388 to 25’. A similar answer would support either Roads 5 or 7 which did not support the hypothesis. It was important candidates used terms such as ‘increased/decreased’ when describing the data changes; too many simply said that ‘In Road 3 it went from 388 to 25’ or ‘In Road 5 it goes from 165 to 197’ without describing the change in line with the ‘decrease’ and ‘increase’ referred to in the hypothesis.

(c) (i) This question was not answered well. Very few candidates could suggest an advantage of counting the storeys other than vague answers such as it would be ‘easy’ and ‘quick’. A few stated that no equipment was needed and most storeys were usually the same height and that it was the best solution as it would be difficult to measure the exact height though few said why. Most gained a mark for the main disadvantage that storeys could be different heights and the fact a candidate selected only five buildings could lead to bias as well as providing an unrepresentative small sample. Few candidates perceived that building heights are usually higher than the storeys and towers/spires and pitched roofs could not be counted as storeys but were part of the height. Only a small number suggested that it would be hard to count the storeys from street level; indeed, the idea that it might not have been possible to see the whole building would have been a valid answer.

(ii) Two thirds of candidates correctly identified that a floor guide on a map is a ‘secondary’ source of data. The most common incorrect answer was ‘systematic’.

(iii) The majority of candidates correctly completed the map. A few candidates chose incorrect shading, and a significant minority did not attempt it. Candidates must ensure that they check carefully if a question requires them to complete a map shading or graph.

(d) (i) Candidates needed to recognise that, at the CBD's centre, the height on Road 3 was >16 storeys and that it decreased to 4 – 8 storeys at the edge. There was no requirement to refer to the distance, just the change in the number of storeys so most candidates gained the mark. Those that did not usually just stated that the storeys decreased or ignored Road 3 and used the key to state that the storeys were <4 on the edge. Candidates needed to look at Road 3 on Fig. 2.2, the map to which they were referred. Some ignored the Road 3 reference in the question and described changes on a different road often Road 8.

(ii) Most candidates answered this question correctly to gain 2 marks. The majority of correct answers chose Road 5 though Road 6 was also correct. A reference to distance was required as well as the number of storeys and how they changed. In the case of Road 5 an acceptable answer would be that there were 13 – 16 storeys at 175 m/centre of the CBD and >16 storeys at 875 m/edge of the CBD. In the case of Road 6 the answer needed to recognise that there were >16 storeys at 175 m/the centre and also at 875 m/the edge so there was no change. Weak answers simply said that there were more storeys at the end of Road 5 or that there were the same number at the start and end of Road 6.

(e) (i) There was a mixed response to this question. Those candidates with a knowledge of high-order services usually mentioned that they were expensive, rarely purchased and had a high range or sphere of influence. Some candidates defined a low-order service and gave an example of this instead. It was important to note the question was about high-order services and not goods. For example, manufacturing cars is not a high order service but selling designer branded goods could be. Jewellery shops, airports, luxury car dealers, and 5-star hotels were common examples seen. Restaurants, supermarkets, and offices were examples that were deemed inappropriate.

(ii) Most candidates answered this question well and recognised that the majority of high-order services were located around the centre of the CBD and the station and that there were two on the edge of the CBD at the end of Roads 5 and 7. Those were the most seen descriptions for 2 marks; the additional mark was for a reference to a distance, e.g. Road 8 had three high-order services within 525 m of the centre.