

Principal examiner reports for teachers

Principal examiner reports for teachers summarise what candidates did well and what candidates needed to improve for this examination series only.

This report is to be used in conjunction with the question paper and mark scheme.

For guidance on teaching and learning we provide resources for many of our syllabuses.

Resource	Where to find it
Grade descriptions – Grade descriptions describe the level of performance typically demonstrated by candidates achieving the different grades awarded for a qualification.	School support hub Select: Subject > Resource finder > Syllabus and specimen materials
Schemes of work – Schemes of work are designed to support you in your teaching and lesson planning.	School support hub Select: Subject > Resource finder > Teaching and learning
Lesson planning – Guidance on how to plan a lesson.	Lesson planning
Resource plus – There may be additional resources such as teaching packs containing lesson plans, resources and worksheets and videos for aspects of your syllabus.	School support hub Select: Subject > Resource finder > Teaching and learning
Teaching tools	Teaching Tools
Exemplar candidate responses	School support hub Select: Subject > Resource finder > Teaching and learning
Learner guide – A guide for students to help them understand what the course involves.	School support hub Select: Subject > Resource finder > Teaching and learning
Community forums – Do you have a question or something to share? Our online forums are great way to keep up to date with your subject and the global Cambridge community.	Community forum on the school support hub
Access to scripts for this series.	Access to scripts service
Results analysis is available for some syllabuses.	Results analysis
Test maker is available for some subjects.	Test maker

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GEOGRAPHY

Paper 0460/12 Geographical Themes
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Key messages

What candidates did well

- Candidates followed the rubric correctly, answering three questions only, one chosen from each of **Sections A, B and C**.
- Candidates responded appropriately to command words and words which indicated the focus and context of each question.
- Candidates showed excellent knowledge and understanding of the topics being assessed.
- Candidates used accurate geographical terminology in answers, especially when referring to processes.
- Candidates used extended writing where appropriate, linking relevant ideas or developing them fully.
- Candidates planned their answers and organised extended responses logically.
- Candidates were able to use and interpret a range of different types of geographical sources to support ideas expressed in answers.
- Candidates wrote clearly and precisely, avoiding vague words or statements.
- Candidates selected suitable case studies where required in part **(c)** questions, including relevant detail and place specific information whilst succinctly answering the question set.

What candidates needed to improve

- Candidates need to read questions more carefully and ensure that they answer the questions asked.
- Candidates need to make sure they respond correctly to the command word (for example: describe, explain, compare).
- Candidates need to avoid answering using bullet points, especially where extended answers are needed.
- Candidates need to avoid using vague words and terms, such as services, pollution, overcrowding and resources.
- In part **(c)** questions candidates need to make sure that irrelevant detail is not included, such as detailed general introductions describing the location.

Comments on specific questions

Section A

Question 1

(a) (i) **Comprehensive responses**

- Candidates chose the births line and correctly interpreted Figure 1.1.

Limited responses

- Some responses chose the deaths line rather than the births line.

(ii) **Comprehensive responses**

- Candidates referred correctly to the evidence in Figure 1.1.
- Candidates referred to the changes in both births and deaths as evidence of an increase in natural population growth rate.

Limited responses

- Candidates referred to births only as evidence of natural population increase.

- Candidates referred to deaths only as evidence of natural population decline.

(iii) Comprehensive responses

- Candidates gave the correct answer and included their calculations to show that they had correctly read off and used the data from Figure 1.1.

Limited responses

- Candidates used the correct formula for population change and read off incorrect figures from Figure 1.1.
- Candidates did not show how to calculate population change, dividing births by deaths, rather than subtracting.

(iv) Comprehensive responses

- Many candidates gave at least four valid reasons for low birth rates in MEDCs, referring to a variety of factors.
- Answers were clear and concise, with no irrelevant information included.

Limited responses

- Some candidates only gave one or two reasons, typically referring just to contraception or family planning.
- Other candidates wrote about education without making precise reference to education of women or education about birth control.
- Some candidates wrote about government policies, migration or death rates.

(b)(i) Comprehensive responses

- Candidates gave three correct changes and used the data from Figure 1.2.

Limited responses

- Candidates referred to each year in turn rather than identifying changes in the origin of migrants between 2012 and 2022.
- Candidates only wrote about the change in the total number of migrants rather than changes in their origin.

(ii) Comprehensive responses

- Candidates wrote about several valid problems migrants may experience, some developing one or more of their ideas.
- Candidates showed excellent knowledge of problems caused by discrimination, language and cultural issues, especially in relation to employment.

Limited responses

- Candidates wrote briefly about only one or two problems.
- Some candidates gave vague ideas such as high living costs or conflict, and insignificant issues (for example different food or weather).

(c) Comprehensive responses

- Candidates used an appropriate case study, typically India, Bangladesh or Nigeria.
- Candidates wrote about a variety of consequences of over-population, linking ideas or developing each idea.
- Candidates included place specific information, usually the names of cities within their chosen country or accurate and up to date population statistics.

Limited responses

- Candidates gave brief lists of relevant consequences, many using bullet points, rather than developing each idea.
- Candidates introduced their answers by writing long introductions, including irrelevant details about what causes over-population before describing any consequences.
- Candidates gave generic answers, without including any place specific information.

Question 2

(a) (i) **Comprehensive responses**

- This question was well answered by candidates who gave the correct number.

Limited responses

- A few candidates gave incorrect answers, some because they incorrectly interpreted the figure from the rural population line rather than the total population.

(ii) **Comprehensive responses**

- Candidates plotted the two values accurately and completed the lines and shading on the graph.

Limited responses

- Some candidates plotted the points inaccurately.
- Some candidates needed to join up the accurate 2020 point with the lines which ended at 2016.
- Some candidates needed to shade one or both segments of the graph.

(iii) **Comprehensive responses**

- Candidates correctly stated that the percentage of population living in urban areas increase over the period shown in Figure 2.1 and used accurate statistics to support this statement.

Limited responses

- Few candidates referred to the increase in urban population being continuous or greater after 1980.
- Some candidates needed to make a general statement about the urban population increase, to demonstrate understanding of the quoted accurate statistics.

(iv) **Comprehensive responses**

- Candidates stated two problems caused in rural areas by people migrating from them, elaborating and explaining each one in more detail.

Limited responses

- Some candidates wrote about problems faced by the migrants or by people living in urban areas.
- Some candidates stated the two problems without any further explanation.
- Some candidates wrote vague statements such as 'lack of development', 'population declines' or 'conditions get worse' without focusing on specific problems faced by the people living in rural areas.

(b) (i) **Comprehensive responses**

- Candidates directly used evidence from Figure 2.2 to describe at least three characteristics of the homes with precision and in detail.

Limited responses

- Some candidates gave vague ideas (for example weak, poor quality, unhygienic, dirty) or described characteristics which were not evident from Figure 2.2 for example no water supply, poor sanitation).

(ii) **Comprehensive responses**

- Candidates wrote about several ways people have improved the quality of the area where they live, some developing one or more of their ideas.
- Candidates used direct evidence from Figure 2.3, such as specific building materials, windows, cables and clean or paved streets.

Limited responses

- Candidates wrote briefly about only one or two improvements which had been made to the area.
- Some candidates gave vague ideas (for example higher quality building materials, more attractive) or made suggestions which were not directly supported by the evidence in Figure 2.3 (for example piped water).

(c) Comprehensive responses

- Candidates used an appropriate case study, typically an urban area in India (for example Delhi, Mumbai) or Malé in the Maldives.
- Candidates wrote about a variety of pushes and pulls explaining why many people have moved to the urban area, linking ideas or developing each idea.
- Candidates included place specific information, usually the names of parts of their chosen cities or specific features within that city.

Limited responses

- Candidates gave brief lists of pulls or pushes, many using bullet points, rather than developing each idea.
- Candidates introduced their answers by writing long introductions, including irrelevant details about the location of the urban area and other information, such as strategies used to reduce problems in their chosen urban area.
- Candidates gave generic answers, without including any place specific information.

Section B

Question 3

(a) (i) Comprehensive responses

- This question was well answered by candidates who gave the correct direction, South or North to South.

Limited responses

- A few candidates gave incorrect answers as they reversed the direction to answer 'North'.

(ii) Comprehensive responses

- Many candidates correctly named Utah as the state where the confluence of the Colorado river and Green rivers are located.

Limited responses

- Some candidates did not study the key carefully, especially the symbols for the different types of boundary, incorrectly naming Arizona as the source of the Gila river.
- In some cases, incorrect answers were written by candidates who did not know the terms 'confluence' and 'source'.

(iii) Comprehensive responses

- Candidates stated three different reasons for the construction of dams, typically three of domestic supply, HEP, use in agriculture and flood control.

Limited responses

- Some candidates wrote vague answers about transferring water from place to place without suggesting reasons.

(iv) Comprehensive responses

- Candidates directly used evidence from Figure 3.2 to describe characteristics of both the river and its valley.
- Candidates used geographical terminology effectively for example long profile, banks, valley sides.

Limited responses

- Candidates made general comments about the area shown in the image, rather than focusing on the river and its valley.

- Candidates used words like 'dirty' rather than stating that the river was carrying sediment.
- Candidates made value judgements for example the river is wide/narrow, deep/shallow.
- Candidates used the word 'steep' without indicating whether they were referring to the river's long profile or the valley sides.

(b)(i) Comprehensive responses

- Candidates gave clear descriptions of the waterfall, referring in some detail to the rocks (for example stepped, split by a rock in the centre) and the water itself (for example fast flowing, white water).

Limited responses

- Some candidates wrote about the surrounding vegetation or how the waterfall was formed.
- Some candidates described the features they expected to see (for example overhang, gorge) rather than carefully studying the image.

(ii) Comprehensive responses

- Candidates gave clear and detailed explanations of waterfall formation by stating the two methods of erosion and referred to them correctly to describe the stages of formation of the waterfall in sequence.
- Candidates used geographical terminology throughout their explanation (for example hydraulic action and abrasion, plunge pool, undercutting), recognising the significance of the presence of rock layers with different resistances to erosion.

Limited responses

- Candidates wrote vaguely about erosion without mentioning specific processes.
- Candidates either did not refer to different rock types, or they incorrectly stated that soft rocks were on top of hard rocks.

(c) Comprehensive responses

- Candidates described the features (often with the help of a clear, labelled diagram) and explained how they are formed.
- Candidates wrote in detail, linking ideas together (for example speed of flow reducing which leads to the deposition of the load) or developing each idea.
- Candidates used geographical terminology to describe the features of a delta (for example distributaries) and the processes responsible for their formation (for example flocculation).

Limited responses

- Some candidates needed to explain the formation of a delta, as well as describing features.
- Diagrams needed more detail, and clarity.
- Some responses needed accurate terminology (for example distributaries were referred to as tributaries).

Question 4

(a)(i) Comprehensive responses

- This question was well answered with almost all candidates giving the correct answer.

Limited responses

- There were too few responses to provide a meaningful comment.

(ii) Comprehensive responses

- Most candidates correctly identified Mount Baker and Mount St Helens.

Limited responses

- Some candidates did not identify the correct volcanoes as they misinterpreted the scale representing years on the y axis.

(iii) Comprehensive responses

- Candidates compared the number of lahars effectively using comparative words such as 'more' or a 'greater number'.

- In addition to comparing the total number of volcanoes and lahars over the entire period of 6000 years candidates referred to one or more specific time periods (for example within the last 1000 years).

Limited responses

- Candidates only compared specific time periods and did not refer to the difference in the overall number of volcanoes and lahars.
- Candidates did not identify precise time periods, using vague terms such as 'recently'.
- Candidates wrote about each volcano in turn rather than directly comparing them.

(iv) Comprehensive responses

- Candidates accurately described at least four characteristics of strato-volcanoes, referring to their shape, lava and eruptions.
- Candidates used geographical terminology effectively (for example pyroclastic flows, viscous lava, secondary cone).

Limited responses

- Some candidates confused strato-volcanoes with shield volcanoes.
- Candidates wrote about where strato-volcanoes are found rather than their characteristics.
- Candidates used vague words which would describe any type of volcano (for example tall, big, dangerous).

(b)(i) Comprehensive responses

- Candidates wrote a clear explanation of the processes which occur at destructive plate boundaries, in the correct sequence.
- Candidates understood subduction and used geographical terminology to explain how it causes volcanoes to erupt.

Limited responses

- Candidates referred to 'plates colliding' or 'plate boundaries converging', neither of which are accurate.
- Some candidates referred to subduction and needed to clarify why it causes volcanoes to erupt.

(ii) Comprehensive responses

- Candidates described several opportunities provided by volcanoes and developed some of their ideas (for example by giving examples of tourism jobs and minerals extracted).
- Candidates referred to opportunities to generate geothermal power in areas close to volcanoes, mentioning the benefits of this renewable form of energy.

Limited responses

- Candidates referred to tourism and minerals and needed to describe the benefits of these for local people.
- Candidates only referred to a limited number of benefits, some using brief bullet points.

(c) Comprehensive responses

- Candidates used an appropriate case study, Mount Merapi, Eyjafjallajökull, Mount St Helens, and Soufriere Hills in Montserrat being popular choices.
- Candidates wrote about a variety of negative impacts of a volcanic eruption on people and the natural environment, linking ideas or developing each idea.
- Candidates included place specific information, usually the names of places impacted by the volcano or accurate dates and statistics.

Limited responses

- Candidates gave brief lists of impacts, many using bullet points, rather than developing each idea.
- Candidates introduced their answers by writing long introductions, including irrelevant details about the location and cause of the eruption before describing any impacts.
- Candidates gave generic answers, without including any place details.



Section C

Question 5

(a) (i) Comprehensive responses

- Most candidates correctly identified the location of Corfu.

Limited responses

- A few candidates gave incorrect answers as they ticked 'in eastern Greece'.

(ii) Comprehensive responses

- Candidates used the linear scale correctly to work out the correct distance.
- Candidates correctly identified the direction as north-west or west-north-west.

Limited responses

- Some candidates did not use the scale correctly and gave answers which were well outside the tolerance.
- Some candidates reversed the direction or wrongly answered 'north-north-west' or 'west-north'.

(iii) Comprehensive responses

- Candidates suggested three clear ways in which local people may benefit from tourism, including economic and social benefits.

Limited responses

- Candidates did not read the question carefully enough and wrote about the benefits to tourist of visiting Palaiokeastritsa.
- Candidates referred to limited ideas, typically that of employment and making money.
- Candidates referred vaguely to the 'infrastructure' rather than precise elements of it.

(iv) Comprehensive responses

- Candidates used the image effectively to identify and describe four different natural features which attract tourists.
- Candidates used appropriate adjectives where necessary in their descriptions (for example blue, clean sea).
- Candidates identified named geographical features (for example beach, cliff, bays).

Limited responses

- Some candidates only referred to one or two natural features, in some cases with imprecise description (for example water, vegetation).
- Some candidates wrote about features which were not natural (for example roads, car parks and hotels).
- Some candidates wrote irrelevant details about activities that tourists may participate in when on holiday in the area rather than describing the natural features.

(b) (i) Comprehensive responses

- Candidates described the variation by referring to March and July as the lowest and highest months for tourist numbers.
- Candidates gave accurate supporting figures from Figure 5.3.

Limited responses

- Candidates just compared March and October and needed to include the increase and decrease throughout the eight-month period shown on Figure 5.3.
- Some candidates read and wrote down monthly statistics from the graph and then needed to describe any variation in tourist arrivals.

(ii) Comprehensive responses

- Candidates wrote about several potential problems caused by tourism, for either or both of people and the natural environment, some developing one or more of their ideas.

- Candidates showed excellent knowledge of problems caused by tourism, including various named types of pollution, cultural issues and the impacts and pressures on named utilities and resources.

Limited responses

- Candidates wrote briefly about only one or two problems
- Some candidates gave vague ideas such as discrimination and overcrowding or referred to 'pollution' and its impacts without precision.

(c) Comprehensive responses

- Candidates used an appropriate case study, Jamaica or Bali or a specific area in India such as Goa being popular choices.
- Candidates wrote about a variety of management techniques which focused on sustainability, linking ideas or developing each idea.
- Candidates included place specific information, usually the names of locations within the chosen area, or named management strategies.
- Candidates showed an excellent understanding of the concept of sustainability, and how it can be achieved within an area where tourism is important.

Limited responses

- Candidates gave brief lists of methods of tourism management with no details on how they helped to make tourism sustainable.
- Many used bullet points with no attempt to develop or link their ideas.
- Some candidates introduced their answers by writing long introductions, including irrelevant details about the growth of tourism and problems it causes, without any reference to its management.
- Some candidates named entire large countries as their examples rather than naming a smaller area within it or a small island nation, many giving generic answers with no place details.

Question 6

(a) (i) Comprehensive responses

- Many candidates calculated the correct percentage.

Limited responses

- Some candidates gave incorrect answers, some because they incorrectly read their answer from the top of the 'oil' segment rather than using the scale to calculate the length of the 'oil' segment of the bar for Denmark.

(ii) Comprehensive responses

- Candidates read Figure 6.1 accurately and most wrote the correct rank order.

Limited responses

- A few candidates read the incorrect values from the graph, hence their rank order was incorrect.

(iii) Comprehensive responses

- Candidates referred to three clear ideas, typically that nuclear power stations have low running costs and generate large amounts of electricity with little atmospheric pollution.

Limited response

- Some candidates wrote just one idea, using vague terms (for example it is 'cheap', 'efficient' or 'clean' energy).
- Some candidates referred to nuclear power as 'renewable'.

(iv) Comprehensive responses

- Candidates suggested several valid ideas, many referring to the risks of radiation and nuclear waste, the high costs of building nuclear power stations, and the lack of skills and technology in some countries.

Limited responses

- Candidates were vague in describing problems such as pollution, danger and expense.

(b)(i) Comprehensive responses

- Candidates directly used evidence from Figure 6.2 to suggest at least three reasons why the area shown may be suitable for generating wind power.
- Candidates showed excellent knowledge of the site requirements of wind generators.

Limited responses

- Some candidates gave vague ideas (for example near the sea, flat land, away from people) not all of which were relevant.
- Some candidates suggested generic reasons (for example high land) although this was not supported by evidence in Figure 6.2.

(ii) Comprehensive responses

- Candidates including several different ideas to explain why many countries are investing in renewable energy, some explaining in detail by developing their ideas fully.
- Candidates showed excellent knowledge of the benefits of renewable energy supplies, not only in terms of their economic benefits but also of their environmental benefits, especially the benefits of the reduction of greenhouse gases.

Limited responses

- Candidates wrote briefly about only one or two problems.
- Some candidates gave vague ideas such as 'cheaper' or referred to 'less pollution' and 'good for the environment' without precision.
- Some candidates suggested that being 'renewable' was a benefit, without showing that they knew the meaning of this term which was used in the question.

(c) Comprehensive responses

- Candidates used an appropriate case study, India, China and Lesotho being popular choices.
- Candidates developed or linked their ideas about a variety of methods of water supply, explaining each one's importance by referring to domestic supply and the supply of water for agriculture and industry.
- Candidates included place specific information, usually the names of locations within the chosen country or area.

Limited responses

- Candidates gave brief lists of generic methods of water supply with no reference to their importance.
- Many used bullet points with no attempt to develop or link their ideas.
- Some candidates introduced their answers by writing long introductions, including irrelevant details about the country.



GEOGRAPHY

Paper 0460/22
Geographical Skills

Key messages

What candidates did well

- Most candidates were able to locate features on a map accurately and identify them using the key.
- The concept of relief was understood by most candidates resulting in contour patterns and other relief features being recognised.
- Most candidates were able to make valid statements about the distribution of settlements from the topographical map.
- Most candidates were able to interpret photographic resources correctly with respect to the requirements of the question (**Questions 2(b), 3(a), 4(b), 5 and 6(b)(iii)**).
- Comprehensive responses fully addressed the question's requirements, using skills such as description from observation, explanation and evaluation.

What candidates needed to improve

- Some candidates need to be more precise when measuring distance, directions and bearings on a map.
- Some candidates need to take greater care when measuring angles on a pie chart and making simple calculations from graphs.
- Some candidates need to demonstrate a greater understanding of key terms when giving a definition for example in **Questions 4(a)(i) and (ii)**.
- Some candidates need to read questions carefully and ensure their answers directly address what is being asked; for example, **Question 4(b)** referred to 'local people' and not tourists.
- Many responses repeated the same ideas for instance reference to injury for each of **Figures 4.1, 4.2 and 4.3 in Question 4(b)**.
- When interpreting photographs candidates should refer to what they can observe, not what is not present.

Comments on specific questions

Question 1

(a) (i)–(v) Comprehensive responses

- Most candidates gave single and precise answers in finding features and identifying them using the key.

Limited responses

- Some candidates incorrectly identified the sports ground as the land-use in **part (ii)** while others gave the incorrect spot height in **part (iv)**.

(b) Comprehensive responses

- Most candidates stated an appropriate six-figure grid reference from quite a wide tolerance given the size of the symbol for the viewpoint.

Limited responses

- Some candidates need to be more accurate when giving a six-figure grid reference, making sure that the third and/or sixth figure are determined correctly.
- Some candidates need to make sure they state the eastings and the northings the right way round.



(c) (i) Comprehensive responses

- Candidates correctly identified the compass direction.

Limited responses

- Most candidates need to be more familiar with the 16-point compass and apply it accurately to calculate the compass direction from one point to another, in this case, the two lighthouses.
- Most candidates stated the compass direction as north-east which needed to be more precise.

(ii) Comprehensive responses

- Most candidates precisely measured the distance using the scale line.
- Some candidates correctly stated a distance within the tolerance of 3.1 to 3.4 kilometres.

Limited responses

- Candidates need to be aware of where to place the decimal point in the answer.
- Common examples of incorrect responses included 32.5 and 325 kilometres.

(iii) Comprehensive responses

- Candidates correctly stated a bearing within the tolerance.

Limited responses

- Some candidates need practice calculating the compass bearing precisely from one point to another, since some responses were just outside the tolerance, while others were a long way from it.

(d) Comprehensive responses

- Most candidates suggested two appropriate pieces of evidence, demonstrating accurate interpretation of the map key, using symbols found on the map.

Limited responses

- Some responses were land based, such as sports ground, rather than activities which took place in the sea.
- Some responses needed to be linked to tourism, such as harbour and ship.

(e) Comprehensive responses

- Most candidates gave two appropriate pieces of map evidence, one each for land and sea travel.
- Many candidates recognised that there were no roads crossing the island of Stromboli and therefore looked for alternate means of getting from the south-west to the north-east.

Limited responses

- Some candidates made suggestions that were imprecise, for instance suggesting going on foot. They needed to state the evidence regarding how.
- Many suggestions for sea travel were inappropriate, such as by ship, by boat and harbour, because they also needed to specifically refer to map evidence, such as the car ferry.

(f) Comprehensive responses

- Looking at the Island as a whole, many candidates correctly described at least two aspects of settlement distribution and were able to relate this to the physical geography.
- Common examples included reference to different parts of the island such the north-east and south-west, and referred to coastal, lower and flatter areas.

Limited responses

- Some candidates needed to understand the key term 'settlement distribution', because they referred to types of settlement, such as linear or clustered, or were vague, using terms such as uneven.
- Some responses misinterpreted the key word settlement as individual types of buildings, leisure and recreational activities, such as guest houses, hotels and churches.



(g) Comprehensive responses

- Some responses correctly described at least three aspects of the relief. These were able to interpret the patterns of the contour lines and spot heights to conclude that the island was both steep and high, and they quoted the height of the highest point.
- Some candidates were also able to accurately identify the location of the steeper or gentler slopes.

Limited responses

- A few candidates need to have a more accurate understanding of the key term 'relief', because they described human features, such as roads, settlements and tourist attractions.
- Some candidates defined gradient with respect to the closeness of the contour lines, rather than describe where gradient differed.
- Some candidates need to make sure they always quote units when quoting a height from the map.

Question 2

(a) Comprehensive responses

- Most candidates correctly described two characteristics of the settlement hierarchy usually referring to changes as one moves up or down **Table 2.1**. For instance, the rural villages have a small population, but this increases further up the hierarchy.
- Some candidates linked one numerical variable to another, pointing out the relationship between the two.

Limited responses

- Some candidates needed to make sure their statements referred to the whole hierarchy. For instance, 'rural areas have the most settlements', does not describe the number of settlements further up the hierarchy.
- Some responses need to make sure the points they make are relevant, thus reference to the number of services at each level is drawn from the candidate's knowledge and not information derived from **Table 2.1**.
- Some candidates attempted to explain rather than describe the hierarchy. For example, 'more people live in major urban areas because of better facilities and a higher standard of living'.

(b)(i) Comprehensive responses

- Many candidates clearly understood the term 'function' as applied to settlements and suggested two relevant functions with appropriate evidence drawn from **Figure 2.1**.
- The evidence was wide-ranging and could be clearly seen on the photograph of Wellington, New Zealand.

Limited responses

- Candidates gave vague answers for example green vegetation, for a relevant function such as tourism.
- Candidates should only state evidence that can be seen in **Figure 2.1**, not what they deduce is present such as hotels (related to the function of tourism).
- Some candidates used the same evidence for both functions, such as boats for tourism and port, rather than provide different evidence for each function.
- Some suggested vague functions, such as jobs or parking.

(ii) Comprehensive responses

- Many candidates suggested two relevant physical factors.
- Many physical factors were well linked to its function.

Limited responses

- Many candidates suggested physical factors which were incomplete, such as 'there is a mountain' which does not refer to the land being too steep to build on, or that the place is surrounded by mountains for shelter.
- Some candidates suggested physical factors which could not be determined from the photograph, such as a fresh water supply.



Question 3

(a) Comprehensive responses

- Many candidates described three different impacts, using direct observation from **Figure 3.1**.
- There was a mix of impacts both on the physical and human environment.
- Some candidates suggested impacts which were not directly seen but could be derived from the photograph such as the water supply being contaminated as a result of the colour of the water.

Limited responses

- Some candidates gave more than one example of the same impact. For example, the roads were cut off, transportation was stopped and there were traffic delays.
- Some candidates gave more generic responses, such as infrastructure was damaged, which does not refer specifically to roads.

(b)(i) Comprehensive responses

- Many candidates were able to calculate the storm discharge from the storm hydrograph, **Figure 3.2**, within the given tolerance.

Limited responses

- Some candidates need to ensure greater accuracy, for instance by using a ruler to help read off the value from the Y axis, since they tended to underestimate the storm discharge, such as between 40 and 46 cumecs.

(ii) Comprehensive responses

- Most candidates calculated the lag time accurately, a concept with which they seemed familiar.

Limited responses

- Some candidates need to be more accurate when making the calculation.
- Some incorrect responses were 8, 11 and 12 hours.

(iii) Comprehensive responses

- Some candidates correctly identified two factors which could cause flooding.

Limited responses

- Candidates need to improve their knowledge regarding physical factors which are responsible for flooding, since many identified gentle slopes and/or a large drainage basin as the cause.

(iv) Comprehensive responses

- Some responses correctly identified a way.

Limited responses

- Many candidates were not familiar with the hydrological cycle and answered for example, steep slopes, tributaries, glaciers and dams.
- Many responses gave factors which contribute to surface runoff, rather than answered the question.

Question 4

(a) (i) Comprehensive responses

- Many responses stated a correct definition.

Limited responses

- Some responses were vague, such as 'areas where the earthquake reaches', and 'where the earthquake is strongest'.

(ii) Comprehensive responses

- Some responses stated a correct definition.



Limited responses

- Many responses gave the definition of the focus having got the two definitions for an earthquake's focus and epicentre the wrong way round.
- Many responses gave a partial definition, such as 'directly above the focus', which also needed to refer to the earth's surface.
- Some responses were imprecise, for example, 'above the earth's surface'; some responses were inaccurate, for example, 'where the earthquake is greatest'.

(b) Comprehensive responses

- Many candidates provided a range of different explanations which addressed all three resources.
- Some candidates discussed a course of events in which further implications were stated. For instance, for **Figure 4.3** it was suggested that people would not be able to go to work due to the road being blocked 'which would lead people making long diversions' and/or 'this would cause traffic congestion'.

Limited responses

- Some candidates gave more than one example of the same effect on local people, such as references to people being killed or injured, or giving more than one reference to job losses, these responses needed to show and explain a wider range of effects.
- Some candidates gave a description (which was not a command word in the question) before the explanation, such as 'the school has collapsed' or 'the road has a large crack along it due to the earthquake'.
- For **Figure 4.1**, many candidates needed to read the title of the photograph more carefully, because they referred to the effects on housing and not the school.
- For **Figure 4.2**, some candidates needed to pay more attention to the key terms in the question, because they referred to the impact on tourists not on local people.

Question 5

(a) Comprehensive responses

- Most candidates described several relevant features of the farm in **Figure 5.1**.
- They employed a range of appropriate geographical terminology in their descriptions.

Limited responses

- Some candidates described a few relevant features.
- Some responses described features which were not present, for example machinery, or which could not be determined from **Figure 5.1** such as 'drip irrigation is taking place' or 'the soil is fertile'. Candidates should focus only on features they can observe.
- Some responses were vague, such as there is a wall, or a lot of greenery is found. Candidates should state how these are part of the farming system, for instance 'the wall surrounds the farm and provides shelter'.

(b)(i) Comprehensive responses

- Some candidates clearly stated two relevant differences either by using comparative terms or describing each farm in turn using certain criteria, for example size or the number of different crops grown.

Limited responses

- Many responses partly addressed the question.
- Many candidates stated how the land is used in **Figure 5.2**, but not in **Figure 5.1**, such as 'the farm in **Figure 5.2** is large', or 'the farm only grows one crop'. Where a question asks for differences then candidates should identify this as a key term and be prepared to use comparative statements.



(ii) Comprehensive responses

- Some candidates gave two relevant reasons which demonstrated an understanding of how the production of a single crop which is usually for export, can mean there is a shortage of land and food for local people.

Limited responses

- Many responses were incomplete and needed further explanation, Statements such as 'only one crop is grown', should be more specific about the case of sugar cane, and 'the land is over cultivated', needs to refer to the impact on soil quality.
- Some responses introduced factors which were not relevant, such as 'a change in the weather damages the crop so there will no food to eat', and 'disease could destroy the whole crop'.

Question 6

(a) Comprehensive responses

- Many candidates correctly completed the pie chart, **Figure 6.1**, accurately using appropriate shading in the correct order from the key.

Limited responses

- Some candidates incorrectly drew a line outside the tolerance.
- Some candidates completed the figure in the wrong order, because the services were placed to the right of the agriculture sector.
- A few candidates did not use correct shading, such as the dashes for industry not being horizontal or the diagonal lines for services being incorrect by 90°.

(b)(i) Comprehensive responses

- Many candidates gave a correct definition of secondary industry.

Limited responses

- Some responses referred to the service sector rather than the secondary sector.
- Some responses referred to the use of labour, without referring to secondary industry.

(ii) Comprehensive responses

- Some candidates stated a method which was appropriate for a map.

Limited responses

- Many candidates did not state a method applied to a map, such as 'bar graphs' suggesting they need to read the question more carefully.
- Some candidates gave vague answers, such as 'colouring', or 'shading' rather than suggest a named technique.

(iii) Comprehensive responses

- Some responses comprehensively evaluated the location using the features shown in **Figure 6.2** in a National Park setting as a stimulus. This resulted in a range of both economic advantages and environmental disadvantages.

Limited responses

- Many candidates described some appropriate advantages and/or disadvantages.
- Some points needed to be more clearly linked to Figure 6.1. for instance, it was stated by some candidates that woodchips were easy to export, the responses then needed to explain whether this would be done by sea or ship.
- Some candidates suggested that economic advantages would occur because of increased tourism due to the wood chip industry, which was inappropriate.
- Candidates needed to state the source of pollution, such as dust from processing of wood chips, or the impact on the environment, such as the wildlife being disturbed by noise.

GEOGRAPHY

Paper 0460/03
Coursework

Key messages

The Route to Geographical Enquiry

What candidates did well

- Candidates followed the Route to Geographical Enquiry and therefore produced well-structured coursework reports.
- All reports were hypothesis based. Hypotheses could then be revisited in the analysis and concluding sections and formed a central theme.
- Reports were clearly individual with candidates for instance, researching their own background information and producing their own graphs.
- Most candidates kept to the word limit and therefore kept focus on their aims.

What candidates needed to improve

- Some candidates coursework reports were imbalanced with a long introduction and an analysis which was too short.
- It is essential that enough numerical primary data should be collected to allow candidates to exhibit a depth of understanding and detail in their analysis.
- Candidates need to make sure that all data that has been collected, and is used to construct graphs and diagrams, is present in tables.
- Candidates should check over all graphs to make sure they effectively portray the data, for instance by seeing that all axes are clearly labelled to include the units.
- Explanations for findings should be based on theory or observations specific to the area of study; they should avoid speculation.
- Candidate should ensure they include key data or specific reference to figures such as graphs in their conclusions.

Comments on specific tasks/activities

Knowledge with understanding

What candidates did well

- Background information about the study area demonstrated good secondary data research skills.
- Geographical theory that was included in the studies was well understood and linked to the aims of the investigation, for instance push and pull factors linked to the study of migration patterns.

What candidates needed to improve

- Geographical theory was not always included and reference to geographical models in the introduction, for instance the Butler Model, should be clearly linked to the hypotheses and referred to in the analysis and conclusions.
- Geographical theory should appear after the hypotheses and form part of their justification.

Observation and collection of data

What candidates did well

- Candidates collected appropriate primary data during their fieldwork such as from questionnaires, pedestrian and traffic counts, and interviews.
- Many candidates achieved a good balance of primary data, with secondary data from a variety of sources.

What candidates needed to improve

- Candidates need to ensure the types of sampling (for example random), along with the sites selected for data collection are justified.
- To collect primary data effectively, candidates should be part of a coordinated data collection exercise in which data was collated on their return to the centre.
- Those candidates who collected data on their own or in small groups, tended to describe their methods in vague terms, even if enough data was collected to allow an in-depth analysis, for instance, from 50 questionnaires.

Organisation and presentation

What candidates did well

- Most candidates integrate their graphs and diagrams with the text and therefore, all the data shown is analysed in turn.
- Pie charts were accurately drawn and some candidates used divided bar graphs and radar graphs effectively, both of which are considered as complex techniques.

What candidates needed to improve

- Many candidates include a table of contents linked to page numbers. Candidates should inspect the page numbers to ensure accuracy, especially if late changes to the contents are made.
- All maps should have a scale and orientation and be well utilised by the candidate, for example locating the data collection sites.
- Candidates should consider using more complex techniques of presentation, for instance locating simple bars on a map, or a scatter graph with a line of best fit.
- Candidates should avoid using line-graphs for non-continuous data.
- All photographs should be well-annotated in order to indicate their relevance to the presentation.
- Anomalies should be highlighted on graphs with a circle and arrow as well as with appropriate annotations.
- Candidates should consider including a fully worked example of a statistical technique rather than just quoting the end result, such as a Spearman's correlation coefficient.

Analysis and Interpretation

What candidates did well

- Candidates demonstrated that they were able to describe the data from their graphs and positively using the key data they had collected.
- Candidates who used statistical techniques such as Chi-squared or Spearman's rank correlation, showed a good understanding of how to interpret the results together with tables of significance.

What candidates needed to improve

- Candidates need to provide a more detailed discussion of their data and to include the identification of anomalies.
- Candidates should make sure they give explanations for their assertions which are tenable and with clear proof. They should avoid phrases such as 'The reason might be/could have been'.

Conclusion and Evaluation

What candidates did well

- Many candidates summarised their findings making sure they responded to each hypothesis in turn.
- Many candidates referred to both strengths and weaknesses in their evaluation.

What candidates needed to improve

- Some conclusions needed to be more detailed, offering explanations and to be clearly related to the evidence collected.
- Candidates should consider suggesting more detailed solutions to the problems they described along with how their coursework could be extended. This means going beyond phrases such as 'increase the study area', or 'ask more people'.

GEOGRAPHY

Paper 0460/42
Alternative to Coursework

Key messages

- Most candidates attempted the graph and table completions successfully although a minority did not attempt some of these practical questions.
- Most candidates did make the correct decisions about the hypotheses they were asked to make judgements on.

What candidates did well

- In **Question 1** most candidates recognised the types of weather instruments used such as the barometer in **Question 1(a)(i)**.
- Most candidates gave two correct advantages of using a digital anemometer to measure wind speed.
- In **Question 1(d)(i)** most candidates plotted the two points and the temperature lines correctly; the majority also chose 20 September as the correct date with the smallest temperature range.
- In **Question 2**, most candidates demonstrated a good grasp of geographical terminology particularly with terms such as Central Business District in **Question 2(a)(i)**.
- Most candidates attempted graph and table completions accurately for example **Question 2(c)(i), (d) and (f)(i)** which required a demonstration of several different practical skills.

What candidates needed to improve

- In **Question 1** some candidates did not know the names of instruments used in measuring weather variables for example **Question 1(a)(i)** barometers measure air pressure not pressure gauges or meters.
- A large number of candidates did not know that, in **Question 1(a)(ii)** the abbreviation 'mb' stood for 'millibars' as a measure of the unit of pressure.
- Many candidates were unaware of how some weather instruments are used for example the moveable pointer and the measuring hand on an anemometer in **Question 1(a)(iii)** and how the max-min thermometer measured temperatures **Question 1(c)**.
- While some candidates made correct judgements about hypotheses, their decisions did not always include a statement and supportive data taken from the resources they had been directed to.
- In **Question 2** some candidates did not show a clear understanding of land use in the CBD for example **Question 2(a)(ii)** where a minority did not choose the Bus Station.
- While many candidates knew a sampling method to use with the questionnaire in **Question 2(b)(i)**, only a few could describe the method well – usually the Systematic or Random method – not the Stratified method.
- A few candidates did not attempt some of the graph completions or tables where a choice needed making such as **Questions 1(d)(i), (iii), (c)(i), Question 2(d)(ii) and (e)(iii)**.

Comments on specific questions

Question 1

(a) (i) Comprehensive responses

- Most candidates correctly identified the instrument in Figure 1.1 as a Barometer.

Limited responses

- Some answers incorrectly named the instrument as a Pressure Gauge or Pressure Meter.
- Many candidates wrote incorrect versions of Barometer for example Barometre, Baremotre.



(ii) Comprehensive responses

- Many candidates were aware that 'mb' represented 'millibars' as the unit of pressure measurement.

Limited responses

- Quite a few candidates misunderstood the question and gave answers that were not related to 'mb'. 'Pascals' was a common incorrect answer; while it is a unit of pressure, it is not represented by 'mb'.

(iii) Comprehensive responses

- Candidates understood the distinction between the moveable pointer for measuring the previous day's pressure and the measuring hand which measures the current pressure in barometer readings.

Limited responses

- Many candidates did not know how these two parts of the instrument shown in Figure 1.1 were used for example referring to the weather symbols on the instrument as cloud cover, rain and sunshine.
- A few responses thought the moveable pointer and the measuring hand acted like a clock or timer.
- A few candidates did state that either the pointer and/or the measuring hand recorded the atmospheric pressure. They then did not add that it recorded 'previous' and 'current' atmospheric pressure or that, by comparing both, that they allowed any change to be observed.

(b)(i) Comprehensive responses

- Responses judged that the chosen anemometer was superior to the other one and gave the reason which was that it gave more accurate or detailed readings and that it was easier to read.

Limited responses

- Some responses related to the cost of the instruments, their reliability and that their choice was easier to use.

(ii) Comprehensive responses

- Most candidates stated the advantages of using a digital anemometer such as it was easy to read or use, that it was more accurate and that it gave quicker readings.

Limited responses

- Candidates should state that a digital anemometer is likely to reduce the number of mistakes in reading, rather than eliminate them entirely.

(c) Comprehensive responses

- Many candidates focused on the use of the max-min thermometer shown in Figure 1.3 and stated that it was put in a Stevenson Screen, that the left side measured the minimum temperature and that the right side measured the maximum temperature.
- Candidates were often aware that the temperatures were read at the bottom of the indices and that a magnet was used to reset the indices every day.

Limited responses

- Some candidates described how the instrument worked rather how it is used.

(d)(i) Comprehensive responses

- Most candidates accurately plotted the two points on the graph with a cross as required.

Limited responses

- Some candidates did not accurately locate the plot at 49 which required judgement in the space between lines.
- A few candidates located the second plot at 48 instead of 49; a few did not plot the second plot.



(ii) Comprehensive responses

- Most candidates made the judgement that the hypothesis was false and then added that there was no correlation between atmospheric pressure increasing and wind speed decreasing based on data in Table 1.1 and the graph plots on Figure 1.4.
- Most candidates used the data in Table 1.1 to support their decision citing that there were days when the atmospheric pressure increased and wind speed increased or that there were days when one variable stayed the same while the other changed.

Limited responses

- Some candidates judged that the scatter of points on the graph Figure 1.4 did indicate that the negative relationship stated in the hypothesis was true or partially true and then continued to choose specific data to prove this.
- A few candidates made the hypothesis decision and noted that there was no correlation. They did not then choose the right data to support this for example they made erroneous judgements from the graph or mixed up the days when quoting data from Table 1.1.

(iii) Comprehensive responses

- Many candidates recognised that they needed to plot a continuous line and a dashed line to demarcate the minimum temperature trend from the maximum temperature trend.
- Many candidates recognised that they needed to plot the two temperatures with crosses on the correct date of 14 September.

Limited responses

- Some candidates did not recognise that there were two different types of line so often made both lines continuous.
- Some candidates accurately plotted the top maximum temperature at 14 °C. They then misplotted the second minimum temperature at 11 °C.

(iv) Comprehensive responses

- Most candidates did identify 20 September had the smallest daily range of temperature at 1 °C between 13 °C minimum and 14 °C maximum.

Limited responses

- Some candidates identified the lowest/smallest minimum temperature on 13 September and gave that date instead.
- Some candidates gave the temperature difference of 1 °C without giving the actual temperature difference.

(v) Comprehensive responses

- Many candidates indicated that the hypothesis should be true.
- Some candidates indicated that the hypothesis should be partially true. This was borne out as there were a few places where minimum temperature fell when maximum temperature rose and vice versa though not enough to make the hypothesis false.
- Candidates decided the hypothesis was true identified that there was, a clear positive trend whereby when the maximum temperature increased, so did minimum temperature and vice-versa. They chose continuous dates and paired data to confirm this.

Limited responses

- Some candidates indicated that the hypothesis should be false and tried to support their view with the limited data that supported this hypothesis.

(e) (i) Comprehensive responses

- Most candidates realised that measuring the three weather variables over a month instead of 15 days would provide them with more data or a wider range of data and give them more evidence to identify trends or patterns which would also help to eliminate anomalies.

Limited responses

- Some candidates stated that, by collecting more data, their conclusions would be more accurate which is a vague conclusion and not necessarily true. More data does not equal more accuracy.
- Some candidates judged that an average could be calculated for a month instead of 15 days without understanding that would not make results more reliable.

(ii) Comprehensive responses

- Candidates suggested that measuring the weather variables at different times of the year would allow comparisons and indicate similarities and differences due to seasonal effects, giving more justifiable conclusions than those obtained over a few weeks.

Limited responses

- Some candidates gave generic answers such as the results would make conclusions more accurate or that an average could be calculated; neither would make the conclusions more reliable.

(f) Comprehensive responses

- Many candidates could suggest a worthwhile hypothesis to extend their weather fieldwork.
- Candidates came up with either a question for example, 'Does rainfall increase when temperature decreases?', or a statement for example, 'Atmospheric pressure increases when rainfall is low.' to investigate collecting rainfall data.
- Candidates realised that it was only required to answer a description of the fieldwork method to collect rainfall data not the other variable in their hypothesis.
- Responses included using a rain gauge in an open area with its top just above the ground to collect rainfall. Other answers could include checking the amount by pouring the water into a measuring cylinder and reading off the scale the amount of rainfall in millimetres and then; after emptying the rain gauge, it would be reset for the next 24-hour period.

Limited responses

- Some candidates did not realise what a hypothesis was. They suggested topics such as 'Rainfall during the day' or 'Temperature and Rainfall'.
- Some candidates did suggest an appropriate hypothesis but did not elaborate as to how to collect rainfall data.
- Responses such as collect the rainfall data when it's raining or measure rainfall only on days when it rains demonstrates a need for more understanding of the fieldwork method.
- Some candidates gave answers which described how to collect data from the non-rainfall variable for example how to measure temperature or pressure.

Question 2

(a) (i) Comprehensive responses

- Most candidates correctly stated that the initials CBD stood for Central Business District.

Limited responses

- Some candidates thought the initials stood for Central Building Department, Central Bus Depot or Central Business Development.

(ii) Comprehensive responses

- Most candidates correctly chose the bus station as the land use most likely to be in the CBD of a town.

Limited responses

- Instead of choosing the bus station, some candidates thought that other land uses, especially the airport or a factory, were more likely to be in the CBD.

(b) (i) Comprehensive responses

- Most candidates correctly named an appropriate sampling method such as random, systematic or stratified.
- Random sampling was chosen by many candidates describing the method by suggesting that any person could be asked or that a system using a random number generator for taking numbers from a hat could be used.
- Systematic sampling was chosen by many candidates stating that it required choosing people at regular or equal intervals and giving an example such as every ninth or tenth person.
- Stratified sampling method was chosen by a minority of candidates suggesting that the sample selected would be based on grouping people by reference to age and/or gender.

Limited responses

- Some candidates suggested sampling methods that were not appropriate methods such as quantitative methods, questionnaires, surveys or interviews.
- Some candidates chose the random method and then did not elaborate further.
- Some candidates that chose the systematic method referred to people being chosen at intervals rather than 'regular' intervals. A few suggested choosing every second person which is too frequent to be called sampling.
- Stratified sampling requires a sample to be chosen that relates to the total population. While candidates were aware it related to age and gender, candidates needed to state that the sample would be chosen related to the socio-economic data of the whole population.
- Some candidates explained their choice suggesting that it gave every person an equal chance of being picked or that it avoided bias.

(ii) Comprehensive responses

- Most candidates suggested two appropriate problems students might have while using the questionnaire. The most popular answers included people not wanting to answer, being too busy or being suspicious of the motives.
- Candidates were aware that not everybody the students asked would have visited the supermarket or that they might be a visitor so they could not answer the questionnaire. Language issues was also a problem that was raised.

Limited responses

- Some candidates suggested that people being questioned might lie or deliberately give incorrect answers. This is not a problem with using the questionnaire as the students would never know.
- Some candidates suggested that it would be time-consuming or that the answers might be vague. As the questionnaire in Figure 2.2 involved only circling four choices, there could be no vague answers, and it would take very little time to complete.

(c) (i) Comprehensive responses

- Most candidates plotted both lines accurately and correctly shaded in the three sections.

Limited responses

- Some candidates only plotted one line accurately, usually the 91 plot.
- A small number of candidates reversed the plotting and shading.
- A few candidates did not attempt the graph completion.

(ii) Comprehensive responses

- Most candidates correctly judged that the hypothesis was true and supported that decision by making a statement that over half, the most or the majority of questionnaire results showed that, for three of the four statements, most responses strongly agreed and agreed with the hypothesis.
- Most candidates also provided data from the table that supported the hypothesis for example 64 people strongly agreed and agreed that the supermarket provided more choice of goods.

Limited responses

- Some candidates incorrectly suggested that the hypothesis was partially true or even false as they placed too much emphasis on the fourth statement which showed 49 people agreed that it had cheaper prices and 51 disagreed. These figures were too close to justify a partial response and the data for the other three statements clearly supported the hypothesis.
- Some candidates' data evidence involved adding up the columns instead of reading along the rows.

(d) (i) Comprehensive responses

- Most candidates correctly stated that the student scores for agree and disagree were 75 and 76.

Limited responses

- A few candidates did not attempt this question.

(ii) Comprehensive responses

- Almost all candidates drew the bar accurately at 260.

Limited responses

- A few candidates incorrectly drew the bar at 160 as they misread the scale.
- A small number of candidates did not attempt the plot.

(iii) Comprehensive responses

- Almost every candidate chose Statement 3.

Limited responses

- There were too few responses to provide a meaningful comment.

(e) (i) Comprehensive responses

- Most candidates suggested that, if the students were working as a group, they could discuss their scores, agree on a score or that they could take the average or most common score to overcome the issue of subjectivity.
- Several candidates also suggested that it might be beneficial, for consistency, if just one person in the group was nominated to decide the score.
- Most candidates suggested that the issue of the score being at different times of day could be overcome by either requiring that the scores were all taken at the same time of day or by taking an average.

Limited responses

- In the second part of this question, some candidates suggested taking the score at different times of day which was the issue that they needed to overcome. The problem was that the score had been taken at different times of day.

(ii) Comprehensive responses

- Most candidates did use the ruler to draw a bar accurately at -4 (20 mm) using the start line provided.

Limited responses

- Some candidates drew bars below or above the 20 mm length required.
- Some candidates drew a 20 mm bar accurately above the provided line instead of below it to clarify at +4 instead of -4.

(iii) Comprehensive responses

- Many candidates realised that, to justify the true decision made by the students, it was important to provide evidence that the highest/positive EQ (Environmental Quality) scores were nearest to the supermarket, and the lowest/negative scores were furthest away.
- Responses quoted correct comparative data such as D being close scored +7 whereas B being distant scored -6.

Limited responses

- Some candidates made a new decision about the hypothesis and then tried to justify it.
- Some candidates focused on comparing the highest and lowest scores with examples. They did not relate these scores to the distance from the supermarket.

(f) (i) Comprehensive responses

- Most candidates identified 'tally' as the method to use with the recording sheet.

Limited responses

- A small number of candidates incorrectly chose 'estimate' as the way to complete the recording sheet.

(ii) Comprehensive responses

- Most candidates gave detailed descriptions of how they would carry out the traffic count.
- Most common responses involved working in groups or pairs, dividing tasks up between the group such as counting different types of vehicles and counting on different sides of the road.
- Some responses suggested using a timer and a counter/tally to record the count and noted the importance of carrying out the count at the same time at all sites for comparative purposes.

Limited responses

- Candidates did not suggest circling the location as part of the survey method.
- Some candidates also suggested carrying out the count at several times in the day for a fixed period such as 10 minutes or even an hour. The recording sheet stated the three times the survey would be carried out and that each of these times was a fixed period of 30 minutes.
- Some candidates thought a traffic count involved using a questionnaire with people who were driving vehicles.
- A few candidates decided that a traffic count involved counting people and their answer focused almost entirely on carrying out pedestrian counts.

(iii) Comprehensive responses

- Most candidates focused their answers on standing in a safe place as a difficulty and gave reasons why counting vehicles might be hard including that they were going too fast, traffic congestion was high and that, on wide roads, some vehicles could be hidden behind others which is very likely from their experiences in India's urban areas. Deciding on the type of vehicle for example lorry or van might be difficult too.
- Many candidates did recognise that standing for 30 minutes where there was high traffic congestion could cause breathing difficulties and that weather extremes such as heavy rain and heat could cause practical and health issues such as sunstroke.

Limited responses

- Some candidates gave vague answers such as the traffic being hard to count without reasons as to why this could be the case. Recording the same vehicle twice was also an unlikely difficulty as was the idea that the survey was time-consuming or that it would take a long time.
- A few candidates focused their answer on what difficulties the survey might cause them. They suggested that it would be too noisy to concentrate, that they might get headaches or that it would be tiring and they would get bored.