

# GEOGRAPHY

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| <p><b>Paper 0460/12</b><br/><b>Geographical Themes</b></p> |
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## Key messages

To perform well on this paper candidates should:

- Follow the examination rubric by answering three questions, selecting only one from each section.
- Know how to respond to command words and words which indicate the focus and context of each part, ensuring that irrelevant material is not included.
- Learn geographical words and phrases in order to define them and/or use them correctly in answers.
- Use comparative words to describe differences or compare features shown on source material.
- Consider the mark allocations and answer spaces provided in the question to ensure that answers contain the required detail and number of points.
- Write clearly and precisely, avoiding vague words or statements which need to be qualified or elaborated (e.g. 'pollution', 'overcrowding', 'facilities').
- Attempt to develop ideas or link them to others when extended writing is required in those questions worth five or more marks.
- Use and interpret various types of graphs and diagrams accurately to support ideas expressed in answers.
- Interpret photographs, graphs and maps carefully, referring to relevant evidence in them.
- Ensure that answers are based entirely on the source material provided when this is a requirement of the question.
- Be able to describe a distribution from a map and/or describe the location of a specific feature.
- Have a wide range of case studies and choose them with care to fit the questions selected, including relevant place specific information.

## General comments

A significant number of candidates performed very well across the paper and showed excellent geographical knowledge and understanding, writing answers of a consistently high quality. There was a wide range of marks and most candidates, although not always performing consistently across the paper, did make a good attempt at many parts of their chosen questions, enabling the paper to differentiate between candidates of all abilities.

There was a very small number of rubric errors, though it was rare to see scripts where all six questions had been answered. Those few candidates making rubric errors 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 to questions worth a small number of marks were of excessive length and answers to questions worth more marks were too brief. Most candidates, however, were guided by the mark allocations and space provided; the best responses being concise, yet sufficiently relevant, detailed, and accurate in content.

**Questions 1, 3 and 5** were the most popular questions. There were good answers seen to most questions, with **Question 2** being an exception as there were very few answers overall, some of which were rubric errors. There were many high-quality answers to those questions requiring extended writing, particularly to the **part (c)** questions on overpopulation, coral reefs, tourism, and food shortages. The best answers to these questions were well focused, with developed or linked ideas and some place specific information. Weaker responses were sometimes unfocused with brief lists of simple points, sometimes in bullet points, not all of which were relevant. Some candidates also included unnecessary general introductions with irrelevant information. In some answers where case studies contained developed ideas, they tended to be

generic developments of ideas with little place detail to support them. Case studies require specific place detail related to the chosen example to allow access to the highest level.

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

### **Comments on specific questions**

#### **Question 1**

- (a) (i) Most candidates identified Venezuela. A few named a country which was not identified on the map, particularly India.
- (ii) Many candidates gave the correct order. The most frequent error was to rank the countries in reverse order.
- (iii) Most candidates scored two marks by referring to generally positive net migration in the north of Asia compared with generally negative net migration in the south, along with appropriate supporting statistics. Some also compared net migration by using a comparative word, e.g. higher in the north. A common error was to reverse north and south or simply refer to immigration or emigration, signifying a misunderstanding of the term 'net migration'.
- (iv) Most candidates scored well, typically scoring three marks for ideas relating to health care, education, and employment. Other common ideas included sanitation and political stability. Weaker answers which did not gain credit used vague terms such as 'better standard of living', 'more developed' and 'safer'.
- (b) (i) This question was approached in a number of different ways. More perceptive responses compared the two trends overall, particularly referring to greater fluctuation in net migration than in natural increase. Weaker responses tended to deal with the two lines separately, looking at individual years rather than providing an overview, some mixing up the two lines. Most candidates gave some statistics; however, to be credited these needed to support valid statements.
- (ii) The question discriminated well. Strong responses suggested a variety of problems with a focus on the workforce, taxation and government spending, lack of people to defend the country, work and innovate, along with the negative impacts on development. Other ideas frequently expressed related to social impacts and increasing dependency ratios. Such answers showed both breadth and depth, with points often developed or linked. Weaker responses tended to focus on one or two simple ideas whilst some incorrectly wrote about problems experienced in the receiving country as a result of immigration.
- (c) Valid examples named by many candidates included India, Bangladesh, and African countries such as Nigeria and Niger. Most candidates correctly described a range of problems. Typically, weaker responses listed relevant problems, many using bullet points, but did not develop them, whilst others vaguely referred to 'quality of life', 'resources' and 'facilities'. Many candidates scored at Level 2 by developing or linking their ideas, and some related these ideas to their named country by including place detail to score full marks. A common error was to include a lengthy introduction explaining the causes of overpopulation at the expense of describing the problems fully. Another common error from significant numbers of candidates was to choose China and concentrate on how overpopulation was managed by the one child policy rather than answering the question.

## Question 2

- (a) (i) Most definitions of 'rural area' were vague and incorrect as they were not related to countryside or farmland, referring instead to lack of development, services or facilities.
- (ii) Candidates usually ranked the countries correctly.
- (iii) Few answers showed an understanding of the term 'distribution'.
- (iv) Most candidates were able to identify some reasons for the occurrence of rural depopulation, with references to employment, health care and education being the most common. Some responses referred to push factors whilst a minority referred to pull factors. Both approaches were acceptable.
- (b) (i) Few candidates identified the correct settlements. The exception was dispersed settlements which some candidates labelled correctly.
- (ii) Few responses demonstrated an understanding of the difference between nucleated and linear settlements.
- (c) Many responses named an urban area, but most answers did not focus on land use change as required. Answers generally referred to a range of problems and conflicts which occurred as a result of growth of the city rather than as a result of a specific change of land use in part of it and thus were largely irrelevant.

## Question 3

- (a) (i) There were a significant number of correct answers amongst many incorrect and speculative responses. Many candidates either mixed up east and west or did not understand that the river was flowing towards the sea away from the mountains.
- (ii) Many candidates scored marks for referring to the rainforest being in the northern part of the continent and/or near the equator. Some attempted to refer to lines of latitude but many answers lacked accuracy. Other candidates made reference to the two smaller areas on the coast but only a few described their location with enough precision and accuracy for credit.
- (iii) The question proved to be challenging for most candidates. Only a few gave accurate ideas, referring in their answers to the angle of the sun's rays or high insolation 'all year' or 'every day' which was required in order to explain the low annual temperature range. Many focussed incorrectly on rainfall or diurnal temperature change.
- (iv) This question proved to be challenging for many candidates whose answers displayed misconceptions. Few candidates could explain how the features shown on the map, such as the prevailing winds, cold ocean current and latitude, could influence the location of the hot desert. Many mentioned these features, but few showed an understanding of how and why they resulted in desert areas with low amounts of precipitation. The most common correct answers referred to the deserts being in the rain shadow, as a result of prevailing winds crossing the Andes, although this concept was often not well understood with many references to the mountains 'blocking the prevailing winds'. Only a very small minority of candidates correctly explained the impact of the cold ocean current with many incorrectly referring to this as an air current.
- (b) (i) Many candidates scored marks for identifying the increase in rainfall and decrease in temperatures from north to south, whilst some also effectively compared temperature range. Weaker responses misinterpreted the graph and thought the bars identified temperature and the lines rainfall.
- (ii) There was a full range of quality of response to this question from very detailed and accurate ideas to vague references to evaporation and storage of water. Stronger answers referred to several points and developed them into full, effective explanations. Weaker answers tended to either identify characteristics without any explanation or attempted to explain plant survival strategies without linking them to the plant characteristics. Another common error was to write about how fauna can survive desert conditions rather than referring to plants.
- (c) The question produced a full range of responses and discriminated well. Better answers identified particular characteristics such as buttress roots or drip tip leaves and explained why they were

necessary, giving examples of different types of vegetation. Good responses also linked vegetation growth (e.g. density, height, etc.) to sunlight, temperature, and precipitation, along with the lack of seasonal variation. Weaker answers simply included everything the candidate knew about the tropical forest including climate, animals, and reasons for deforestation, whilst some wrote about deserts rather than rainforests.

#### Question 4

- (a) (i) Many candidates mentioned wearing away or breaking down to score the mark whilst others gave answers which were too vague to credit.
- (ii) Most candidates identified the arch and platform. The most common incorrect choice was stack.
- (iii) Answers varied in quality. Some candidates explained the process of hydraulic action clearly and in detail. Some confused it with abrasion, whilst others correctly referenced waves hitting the cliffs but did not extend their explanations by referring to cracks in the rocks and air compression. A significant number wrote about the formation of caves, arches and stacks which was not what the question asked about.
- (iv) Whilst some candidates mixed up erosion with flooding, most gained credit by describing the damage to houses, with more knowledgeable responses also describing problems caused by destruction to roads, businesses, and farmland. Weaker answers were characterised by vague references to 'loss of land' or 'businesses affected' which were not precise enough for credit.
- (b) (i) This question, requiring photograph interpretation, proved to be challenging for most candidates. Reference to plants with aerial roots, growing in clumps over shallow water were the most common correct responses. Many descriptions were vague, with irrelevant references to the water and fauna living in it. Candidates need to remember to describe what the photograph shows, avoiding irrelevant explanations.
- (ii) This question discriminated well. The strongest responses gave a detailed explanation of the value of mangrove swamps to local communities and the natural environment. The fact that they naturally protect the coastline from erosion was the most common correct idea, although some stronger responses included several different benefits, ranging from the provision of opportunities for fishing to their importance as a carbon sink.
- (c) The question produced a full range of answers, with most making references to sunlight and water temperature. Good responses described and gave a detailed explanation of a wide variety of factors which are important in coral reef formation. They developed their ideas by effectively linking description and explanation together. Weaker answers tended to be descriptive with little or no explanation and errors in water temperature and ocean depth statistics.

#### Question 5

- (a) (i) Good definitions referred to changing or refining raw materials to produce an end product. Many candidates, however, simply referred to 'using' raw materials or showed misunderstanding by using words like 'manufacturing' or 'assembly'. Others repeated the word 'processing' or 'process' rather than using different words in their definition.
- (ii) Answers varied in accuracy. Whilst many candidates scored one mark for identifying the first statement, fewer identified the fourth statement. Some candidates did not carefully study the distribution map, and it appeared that others were using the 2010 map rather than the 1950 map.
- (iii) Most candidates scored a mark by referring to the increase in the number of iron and steel works. Better answers also commented on the spatial spread of the industry, particularly in the south east close to iron ore supplies.
- (iv) The question discriminated well. Better answers suggested the likely demand for the product, the proximity of the river for cooling water or transport, access to iron ore and the availability of a workforce. Many candidates referred to the location near the coast but did not explain the significance of this.

- (b) (i) Most candidates correctly identified the three risks to the environment from Fig. 5.3. Candidates are reminded to read the question carefully; some did not restrict their answer to Fig. 5.3, introducing other ideas which were not required.
- (ii) Answers varied in quality. Better responses clearly identified valid ideas, most commonly the treatment of water, fumes, or other waste products, along with the potential use of renewable types of energy in place of coal. Weaker answers were vague in their ideas, referring to being 'ecofriendly' and 'reducing pollution' without the precision required for credit. A significant number wrote about developing the industry away from where people live despite the question being about environmental risks.
- (c) Many candidates identified an appropriate location such as Jamaica or a specific area in India such as Goa. Some candidates included unnecessary long introductions about the reasons for the growth of tourism and the benefits it brings before addressing the problems, resulting in many of the relevant ideas not being developed or linked. This was particularly the case when candidates answered using bullet points which tends to lead to Level 1 responses. More effective answers were exclusively about the problems, with each one developed in some way to produce a more coherent response. Thus, a considerable proportion of candidates scored Level 2, with some including place detail to score full marks. A common error was to include ideas about the effects of tourism on the natural environment with no link to the problems it causes for local people.

#### Question 6

- (a) (i) Most candidates correctly identified growing sugar cane as the main land use.
- (ii) Most candidates included correct references to crops and animals. Some candidates wrote about 'agriculture' which does not define 'arable' as the term 'agriculture' includes the production of both crops and livestock.
- (iii) Many candidates scored well with reference to location in the south and near the tea growing areas and suggested that this either reduced transport costs or gave easy access to the raw material.
- (iv) The question discriminated well. Good answers identified two natural factors and gave a detailed explanation of how they influenced land use. Most other candidates could identify one or more natural factors, but did not explain how they affected choice of land use.
- (b) (i) Most candidates gained a mark for mentioning that crops are grown, or specified rice, but few identified other valid features of the farming from the photograph, such as the low-tech method of using animals to plough or the fact that one field is flooded by irrigation water. A significant number of candidates wrote about the buildings in the photograph rather than focussing on the farming.
- (ii) This question discriminated well. The question asked about how farmers could increase their production of crops, and a significant number of candidates scored highly by identifying several ideas and/or developing each one with full explanations. Weaker responses tended to gain some credit by referring to one or two simple ideas, typically the use of fertiliser or machinery; others, however, vaguely referred to using 'more land' or 'better inputs' without showing understanding.
- (c) Many candidates referred to Sudan or South Sudan and typically wrote valid explanations about war and its effect on farming. Usually, these ideas were developed although more knowledgeable answers included a range of other ideas to add breadth to their responses and gain higher marks within Level 2, such as the impacts of drought, flooding, or corruption. Reference to place detail, such as Darfur, helped some candidates with a range of ideas to score full marks. Some weaker answers tended to focus only on the fact that people could not afford food with no further explanation.

# GEOGRAPHY

**Paper 0460/22**  
**Geographical Skills**

## Key messages

- Candidates should practise working out 6 figure grid references and compass bearings, as well as calculating distances from 1:50 000 maps.
- In short answer questions eliciting a distance, angle or height, the units, for example, kilometres, degrees, or metres must be stated, unless already given at the end of the answer space. For instance, **Question 1(a)(iv)** required metres next to the height (147 m).
- Candidates should fully erase or cross out an answer if it is not required.
- Candidates need to read all questions carefully. For example, **Question 1(e)(ii)** asked candidates to identify a settlement, not types of land-use. This particularly applies to command words. For instance, **Question 4(a)** required the candidate to describe the coastal landform marked **X** and not explain it.
- Candidates should practise the understanding of key geographical terms to avoid misunderstanding the question. For instance, **Questions 1(e)** and **2(d)** required the candidate to write about physical features and not human ones whilst **Question 1(g)** required the candidate to describe the relief along the route of the A491 and not land-use.
- In questions using a photograph, for instance **Question 4(b)**, candidates should avoid naming features which they cannot clearly see.
- When asked to provide annotations, candidates should be aware of what is expected. For instance, in **Question 3(b)(ii)** candidates needed to offer descriptive phrases about the features of the housing in squatter settlements; single words such as 'window', and 'brick' did not suffice.
- Candidates should avoid simply re-writing some of the question in the form of an answer. This was particularly common in **Question 3(c)**, for example, where 'improving the quality of life' was used instead of saying how it is improved.

## General comments

The paper was answered well with those who achieved a high level able to express their abilities to the full. The weaker responses were able to show some geographical knowledge and understanding. Competence was demonstrated using a wide range of skills to answer the questions. The strongest answers demonstrated a high level of understanding of these skills and candidates were able to apply them in an appropriate way; for instance, in questions requiring some evaluation. For many candidates, more focus was needed on the command words in each question since the tendency to write at length was not always effectively directed. Most candidates managed their time well, completing all the questions on the paper in the allotted one hour and thirty minutes. **Questions 1** (apart from part **(g)**), and **Question 5** were generally well answered, but candidates tended to find **Questions 3** and **4** more challenging.

## Comments on specific questions

### **Question 1**

- (a) Candidates were able to score high marks on this question, showing good skills in finding features on the map and identifying them using the key. Feature **A** was a footpath and the land-use at **B**, a cultivated area. The type of road at **C** was a euroroute or national road; the more generic term 'highway' was not credited. The height above sea level of the trigonometric point at **D** was 147 metres, but a number of candidates left out the units, metres.
- (b) The six-figure grid reference of the swimming place at **E** was 308356 which was identified by the majority of candidates, although 309358 was a commonly seen incorrect response from the four choices given.

- (c) Nearly all candidates successfully located the trigonometric points at 597m in grid square 3128 and at 440 m in grid square 3430 and thus, most stated the compass direction from the former to the latter as north-east, and the straight-line distance between them as 3.5 km. In the latter, a tolerance of 100 m either side was allowed. Again, a tolerance was given for the compass bearing from the trigonometric point at 597 m to the one at 440 m of between 39° and 42°.
- (d) Many candidates were able to identify three services used by tourists which were located west of easting 33. Other responses stated camp site, caravan site and hotel which were not found in this area. Candidates needed to study the map carefully.
- (e) Most candidates were able to show in part (i) that the settlement of Oanes has both dwelling houses and farmhouses but not a dominant building. However, in part (ii), whilst a large number recognised that Forsand was the most important in the settlement hierarchy, there was some confusion since some candidates gave a type of building, usually dominant building, as their answer. Candidates needed to be aware of the meaning of 'settlement hierarchy'.
- (f) This was answered well by many candidates. They were able to recognise the physical features of a river from a 1:50 000 map extract. Its meanders, tributaries and variable width were most commonly recognised, whilst other candidates noted the islands in the River Espedalsåna as well as its direction of flow, which was from the north-east to the south-west. Common errors included reference to oxbow lakes and distributaries neither of which exist, as well as the suggestion that the river flows for south-west to north-east. Some weaker responses gave a description of the land-use near the river.
- (g) This question discriminated well, with the better responses demonstrating that candidates knew what is meant by the term 'relief'. From 3232 to 3531, good responses recognised that the road followed the lower and flat or flatter land. Between 3530 to 3528, the road went along or through a valley avoiding the much steeper land, eventually going along the coast. For 3628 to 4031, the route followed the river valley on flat or gentle land at the base of steep slopes. Weaker responses tended to describe the bends in the road, or the human features along the route or referred just to the steep relief.

## Question 2

- (a) Most candidates identified that Fig. 2.1 was a choropleth map in answer to part (i). In part (ii), most candidates recognised that the population density of < 1 person per sq. km was found in the south or south-west of the South Island of New Zealand and that there was a smaller patch in the centre. For a population density of 100-more than 100 per sq. km, many candidates identified that there were only small areas covered and that these were on the coast with one in each of the north, east and south-east. References to an uneven distribution and 'the edge of the map' were not credited.
- (b) Most candidates correctly divided the population by the land area to reach a figure of 4.4. people per sq. km as the population density, which could have been rounded down to the nearest whole number.
- (c) The higher density population was found on the coast or lowland and thus, there was an inverse relationship or negative relationship. The lower density population was found on the highland, although this was not so obvious. Many candidates found it challenging to recognise any relationship between population density in Fig. 2.1 and relief in Fig. 2.2. Indeed, credit was given for stating that the relationship was weak or not clear in places. Candidates needed to interpret the figures from the two keys rather than just repeat them.
- (d) A variety of appropriate physical factors were given and these included: climate, the presence of water or rivers, weather and soil fertility. A few weaker responses gave human features or elements of relief.

## Question 3

- (a) This question was generally answered well with many candidates pointing out that overall, the urban population living in squatter settlements had increased between 2000 and 2018 and that the biggest increase was in sub-Saharan Africa. It was commonly pointed out that Latin America and

the Caribbean was the only region to decline. Some vaguer responses, stating that most regions had increased for instance, were not credited.

- (b) Many candidates were unable to adequately define a squatter settlement in part (i). They did not show an understanding that the people living in them had no rights to the land they were built on and were therefore living there illegally. Those that referred to the crowded, low quality or temporary nature of the housing often missed that these were occupied by poor people with a low living standard. In part (b), many candidates found it difficult to write suitable annotations for three features of the squatter settlement in Fig. 3.2. Most successful were comments about the densely packed houses with no space between, the fact that they were built on top of each other, and that they were made of low-quality materials which were likely to collapse. Comments made about the roofs also gained credit: for instance, the point that they were made of corrugated iron and that they were sloping. Other candidates pointed out the cracks in the building structure. It was expected that all annotations were accompanied by an arrow pointing at an appropriate feature that matched the annotation. The most common errors were the provision of one-word descriptors e.g. 'bricks' and 'windows'. References to washing hung out to dry were not credited since this was not a feature of the actual houses.
- (c) This question discriminated relatively well, although suggestions on how the solutions given in Figure 3.3 were linked to a better quality of life were not always appropriate. Common correct responses suggested interest free loans made it easier to pay the money back or allowed the residents to afford better quality houses. Provision of services made the environment more hygienic leading to less spread of diseases and that recycled materials were cheaper. However, there were some misconceptions; for instance that a self-help workforce gives people paid employment, that recycled materials were used to make a stronger house, and that the provision of services means people do not pay for them.

#### Question 4

- (a) In part (i) many candidates did not recognise the spit with some suggesting it was either a headland, a bar or a tombolo. Those that did correctly name it, often did not describe it but explained its formation instead. Correct descriptions often pointed out that it was an elongated piece of coastline which was narrow and tapered to a point. Some suggested it stretched across the river. In part (ii), the longshore drift should have been shown as parallel to the seashore heading in a southerly direction, whilst the label for wind and waves should have been accompanied by an arrow in the sea pointing in a south-west direction. Many arrows were placed incorrectly in the river estuary. Sometimes the wind and waves were placed in different directions whilst the longshore drift arrow went from south to north.
- (b) This question differentiated relatively well, with the best responses linking each activity to a different piece of evidence which could clearly be seen in the photograph, Fig. 4.2. Leisure or tourism was often linked to the presence of the beach or the boats. The latter was also used for fishing, so there was a tendency for the overuse of boats as evidence. The presence of the harbour was often linked to trade. Some candidates recognised that sun-bathing or picnics were taking place on the beach, while the large number of cars parking or hotels were also linked to tourism. Weaker responses mentioned activities on their own without evidence, such as fishing or employment. The term 'transport' was often used in vague terms: for example, boats for transport.

#### Question 5

- (a) In part (i) most candidates recognised that the volcano, Mauna Loa was active, given the smoke which was evident in Fig. 5.1. Part (ii) was answered very well with many candidates naming a range of features of the volcano and demonstrating good knowledge of the topic. Better responses referred not only to the crater, secondary vents, and smoke emanating from fissures, but also to the gentle and bare slopes with evidence of ash and lava. Reference to plate boundaries and magma was not credited.
- (b) Most candidates were able to state one or two ways that a strato-volcano was different from a shield volcano. Many referred to the differing viscosity of the lava and/or the contrast in slope steepness. Some referred to the more explosive or violent nature of a strato-volcano and how it was more unpredictable. Other candidates got speed of the lava the wrong way round while some suggested that a strato-volcano was taller which is not necessarily the case.

- (c) This question was answered well by candidates and elicited a range of appropriate reasons for the lack of farming on the slopes of Mauna Loa. These ranged from the lack of soil on the barren slopes to the fact it was dangerous and could erupt at any time. It was also suggested that the emissions of ash and smoke were unhealthy for crops as well as the temperature being too hot for them.

#### Question 6

- (a) In part (i), most candidates were able to identify the north-west of India as having the largest area of extremely high water shortage together with smaller areas in the east as well as the south-east. Some candidates suggested that the distribution was uneven. In part (ii), the better responses went into precise detail on how to convert the percentage figures into degrees when drawing a pie chart. This was added to the need to divide the circle into four segments, with each being the proportion used by any one water consumer. Candidates needed to note the requirement for a key and a colour code; this did not always seem to be fully understood.
- (b) This evaluative question differentiated well between the candidates. For advantages, many referred to the building of a reservoir in an LEDC as meaning that a large amount of water would be available, and that it could store water for times of shortage, making water available all year round. Although an increase in food supply was mentioned quite frequently, few candidates stated that it would be the result of the extension of the area which was irrigated. Similarly, those who referred to an increase in employment, often did not link this to the building or maintenance of the reservoir. Some better responses did say that the availability of clean water would reduce the number of diseases, as well as reduce flooding.

Candidates responded more strongly to the disadvantages which were better answered overall. Many referred to the high cost of building the reservoir and that it may take some time to complete. The large area of land needed would result in deforestation and damage to wildlife habitats. Some candidates went on to say that it would result in the flooding of existing villages as well as the loss of quality agricultural land. Some also raised the problem of noise and or visual pollution during construction. A few weaker responses emphasised flooding because of the dam breaking, as well as the problem of water wastage but received no credit for these.

# GEOGRAPHY

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| <p><b>Paper 0460/03</b><br/><b>Coursework</b></p> |
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There were too few candidates for a meaningful report to be produced.

# GEOGRAPHY

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| <p><b>Paper 0460/42</b><br/><b>Alternative to Coursework</b></p> |
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## Key messages

Here are a few messages to pass on to candidates for them to consider in their preparation. These have been suggested by examiners based on scripts they have marked:

- When answering Hypotheses questions that ask whether you agree or not, always give your opinion at the start of your answer before any supporting evidence. This will usually be *Yes*, *No* or *Partly True/True to some extent*. Do not just copy out the Hypothesis if you agree with it. It is important to make a decision and state it as well as provide the evidence for your choice. Be clear in your decision; expressions such as *'might be true'*, *'could be false'*, *'true and false'* are too vague.
- When giving figures in an answer, always give the units if they are not stated for you e.g., data evidence in **Question 2(a)(iv)** should have referred to percentages and number of shops. It is also important that your numbers are clear e.g., a 4 can look like a 9; a 7 can look like a 1; sometimes a 2 looks like a 5.
- When shading graphs, use the same style as that provided in the question and make sure a sharp pencil gives a good dark image. Check you understand the scales used and the importance and style of any plots already provided e.g., in **Question 2(a)(iii)** some candidates shaded the type E slice with diagonal lines when, in the key, they are clearly horizontal lines.
- When you think you have finished, go back and check that all graphs and tables have been completed; candidates still lose marks by missing out graphs such as **Question 2(d)(i)** though, in this session, there was a very low percentage of omissions for any graph completion.
- Read the questions carefully and identify the command word e.g., *'Describe'*, *'Explain'*. A question such as **Question 1(e)(v)** that requires you to *'Explain why'* needs a reason or reasons to be given, not a list of erosional processes found along the course of a river.
- If a question asks for data e.g., **Question 2(a)(iv)**, then you must use statistics from resources, whereas if the question asks for evidence e.g., **Question 1(e)(iv)**, that could be a qualitative answer or judgement based on data. If you do not provide data in your answer when the question asks for it, you cannot get full marks for that question.
- If there is a reference to using a Table that contains exact figures and a Graph that contains plots, e.g., **Question 2(b)(iv)**, the figures in the table should be the ones referred to in evidence rather than estimating from a graph which might cause errors in judgement.
- Take into account the marks awarded. Examiners do not expect you to be writing outside the lines provided, so do not write a paragraph when only two lines are given – this wastes time.
- It is important that, if you write the remainder of any answer elsewhere, you signal it by writing something like *'continued on page 18'* to ensure it is seen. Note that some candidates gave the wrong sub-section number by their extra work which made it more difficult to match to their earlier answer and credit correctly.

## General comments

The vast majority of candidates found this examination enabled them to demonstrate what they knew, understood and could do; the marks gained indicated a high-quality cohort this session. It appeared to be a positive experience for most candidates. Most attempted every question and there was no evidence of issues with time and only a very small minority omitted graph and table completion questions missing out on straightforward marks. The overall range of marks was from 6–56 out of 60 with a small number of weaker candidates only scoring on the practical questions such as drawing graphs or diagrams and making choices from tables. Those of higher ability scored well on the more challenging sections requiring judgement and decision-making on Hypothesis choices with evidence and other written answers.

**Question 1** was about fieldwork on a local river in the UK and **Question 2** was about students carrying out shopping surveys in Dubai in the UAE. As is often the case, **Question 1** on physical geography proved less accessible than **Question 2** on the human geography. The mean mark was 35.1 and the paper was judged as fair and appropriate for the 334 candidates whose scripts were submitted.

There is less general advice to be given for areas for improvement in this paper. As there are no question choices to make, it is difficult to miss sections out – though candidates do (especially completion of graphs) – and there were no reports of time issues as the booklet format does not allow or encourage over-writing of sub-sections. Four questions though were poorly answered; centres need to take note of the advice given in the specific comments in this report. The four questions involved were:

- **Question 1(c)(ii)** where candidates needed to draw an annotated diagram to show how they would measure the depth of a river.
- **Question 1(f)** where candidates needed to demonstrate how to improve the methods of data collection used.
- **Question 2(a)(ii)** where many candidates chose '*business*' instead of '*comparison*' to describe the shops in Type A.
- **Question 2(a)(iv)** where some candidates clearly misunderstood the use of the word '*Most...*' in the hypothesis in relation to the data provided.

Most points for teachers to consider, when preparing candidates for future Paper 42 questions, relate to misunderstanding or ignoring command words, the use of equipment in fieldwork and the importance of experiencing fieldwork – even if it is only in the school grounds or simulated in the classroom. Particular questions where candidates did not score well often related to them not fully reading the question. This often means that some candidates do not obtain a mark in line with their geographical ability and is an area that centres should work on through strategies such as regularly using previous papers so that candidates get used to the style and demands of this paper.

Centres should be aware that although this is an *Alternative to Coursework* examination, candidates will still be expected to show that they know about fieldwork equipment, how it is used and fieldwork techniques. Some fieldwork experience is important even if there is only limited opportunity within the centre. Familiarity with maps, tables and the various graphs listed in the syllabus is also important for this examination.

### Comments on specific questions

#### **Question 1**

- (a) Most candidates correctly picked Rows 3 and 4 as the ones that would be important considerations when choosing their fieldwork sites. A small number only gave one tick. The most common incorrect answer was Row 5.
- (b) Most candidates suggested that a pilot study would be good for practising techniques and methodology, for correcting errors, for getting used to using the equipment and for developing confidence and teamwork. A few strayed from the purpose of the pilot study and focused on health and safety precautions and thought the pilot study would lead to accurate results. A small number stated it was good to practise but did not elaborate on why. It was important that candidates read and absorbed the fact that the pilot study was on a stream near their school, not the one they were going to study. A few incorrectly thought it would be good to get an idea of the expected results.
- (c) (i) Almost all candidates correctly chose Row 3 '*Tape measure and ranging poles*' as the best choice of equipment to measure the width of a river.
- (ii) This question proved challenging for many candidates though it discriminated well as some of the annotated diagrams were excellent with cross-sections drawn and explanatory labels added using the correct equipment to measure the depth. The starting point was clearly to know what a cross-section was and to draw this; the majority of candidates did not seem to know this and drew diagrams from above and along the river which made it difficult to add any equipment in the correct places. A few also incorporated clinometers and stopwatches into their labels and drawings, no doubt having seen them as options, though incorrect ones, listed in **Question 1(c)(i)**. Those that drew a cross-section often added equipment and labelled what it was but did not attempt to explain how it would be used to measure depth. Higher ability candidates drew a cross-section, referred to

ranging poles on each bank, a tape measure pulled tautly across the river and vertical poles at equal intervals touching the bed with a tape being used to measure the wet part of the poles. A small minority of candidates made no attempt to answer this question.

- (d)(i) Most candidates plotted both points accurately, drew a line through the points and shaded the part that was the river as shown on the other cross-sections. A few candidates drew a correctly located line but did not plot the points, whilst some plotted the points but did not shade the water. While almost all plotted the 50 cm plot at 3 m correctly, a few plotted the 35 cm plot at 4 m from the bottom of the scale instead of from the top.
- (ii) Most candidates made the correct decision that the hypothesis was true for width but not for depth. A few thought both were true and missed the fact that the river was deeper at 4 m then became less deep at 5 m. A few that chose this option recognised there was an anomaly but did not consider that the hypothesis was not true for depth! Errors were also made by candidates who took the width measurements of the river from the end of the horizontal scale and not from where the edge of the river was marked e.g., Site 1 width was 1.6 m not 2 m; Site 5 width was 12.8 m not 13 m.
- (e)(i) This question discriminated well. Random sampling and its disadvantages were not well understood by many candidates who suggested that the pebbles might be all the same size or might all be different or that it would take a long time or that the sites were not all equal distances apart. None of those ideas are valid disadvantages. Stronger candidates focused on ideas connected with subjectivity and bias as students could choose the pebbles they liked. Another disadvantage would be that they might pick them all from the same place so the sample would not be representative. A few were concerned that students might hurt themselves on sharp pebbles when picking them or that it would be tiring!
- (ii) Most candidates correctly suggested *Systematic* sampling to describe the method of choosing pebbles at equal distances across the river. Incorrect suggestions included *Stratified*, *Strategic* and *Line* sampling. A few wrote '*systemic*' and may have meant systematic but, as this is a word used elsewhere in geography, it was not assumed that they meant systematic, so it was not credited.
- (iii) Most candidates counted the numbers of pebbles in each category from Table 1.2 correctly and then plotted 8, 4 and 3 well on the graph. Errors came where candidates miscounted the numbers and then drew bars that were incorrect – a few plotted 8 correctly but added up the other two categories to 5 and 2 instead of 4 and 3.
- (iv) The question discriminated well with a wide range of marks being seen. Most candidates stated correctly that the hypothesis was *False* and then gave a statement that there was no trend or correlation between size of bedload and distance downstream; others stated the pattern was random, went up and down or simply that overall the bedload size increased – all of which confirmed the hypothesis was false. Quite a few candidates then gave paired data that showed the pebble size increased overall such as the average size in Site 1 being 471 mm and in Site 5 being 753 mm. Very few candidates gave a second piece of evidence that showed there were more larger size pebbles downstream e.g., 4 pebbles 1201–1500 mm in Site 5 compared to just 1 in Site 1.
- (v) Many candidates found this question challenging despite basic erosional processes along a river being a fundamental part of river studies. Quite a few candidates did not even mention the word '*erosion*' as an overall cause of the pebble size changing. Too many listed processes such as attrition and abrasion but did not explain how they changed the size of pebbles. Those that did often stated that they changed the size without stating that they reduced the size or made the pebbles smaller downstream. Longshore drift and the effect of waves also crept into some inappropriate responses. References to variations in speed and energy having some effect were made but rarely explained how they affected bedload size downstream.
- (f) Candidates found this question very challenging. For Hypothesis 1, stronger candidates suggested smaller intervals across the river for depth and getting other students to check the width/depth measurements as well as taking more measurements of width and depth at more sites which could be at equal distances apart downstream. For Hypothesis 2, stronger candidates correctly suggested taking a larger sample of pebbles at each site, using callipers or a pebbleometer to measure the pebble length. All of these ideas would have improved their methods of data collection. Many candidates simply suggested vague ideas such as take more measurements,

repeat the task, use digital equipment and get students to check. A few suggested carrying out different additional tasks or using a different river but these ideas would just extend their fieldwork, not improve what they had just carried out.

## Question 2

- (a) (i) This question was the one that had the highest success rate with candidates correctly choosing a hairdresser and beauty salon as a Type D shop and a jewellers as Type A. Incorrect choices seen were for the former with Type B and C being incorrectly chosen.
- (ii) This was one of the least successful questions on the paper with the vast majority of candidates describing the type of shops in Type A as '*business*' instead of '*comparison*' shops. It could be argued that all the shops are business shops but what distinguishes high-order and specialist shops is that, of all the business shops, these cause comparison by customers more than others due to the high cost and threshold population needed for them to survive.
- (iii) It was pleasing to see that the pie graph plotting was one of the more successful seen in recent exam sessions. The correct plot was at  $61^\circ$  left of the vertical; a tolerance of 2 each way (i.e.,  $59^\circ$  -  $63^\circ$ ) allowed a degree of error. Many candidates did not shade the large slice with horizontal lines as indicated in the key – too many were at diagonal angles. As usual some candidates did not plot the line in the correct clockwise order as shown in the key.
- (iv) While almost all candidates correctly decided that the hypothesis was *False*, thereby gaining a mark for the correct decision, very few gave the correct explanation for why it was false. Almost all candidates decided it was false because there was a figure of 39 per cent in the table for shops which sell clothes and shoes which was higher than the 38 per cent that sold high-order or specialist goods. While 39 per cent is a higher figure than 38 per cent, that was not the reason for the hypothesis being false. The correct reason was that 38 per cent sold high-order or specialist goods which meant that the other 62 per cent did not sell these goods so it was not true that *Most shops in the Dubai Mall sold high-order or specialist goods* as the majority sold other goods. Centres need to work on the difference between the use of terms such as *Most, Highest and Majority*.
- (b) (i) The student's suggestion in Fig.2.3 as to how to carry out the fieldwork contained many flaws and disadvantages that would make the results unreliable; these were perceived by most candidates. Clearly doing the count alone and counting the numbers 'in your head' could lead to errors in that there was no check or comparison if alone and it would be easy to be distracted or forget the numbers being totalled without some form of recording before reaching 50. Counting errors were stated often as a disadvantage but were only credited for a maximum of one mark. Other flaws included that they were only counting people who exited from the car park and not others who arrived by other means such as walking, bus or metro. Also, that the figures could not be compared in a meaningful way as one count was on a weekday morning and the other was on a weekend afternoon. Overall, most candidates scored one or two marks.
- (ii) There was no strict marking rule here that planning ideas must be written in the *Plan...* section and *Doing the count...* ideas had to be in that section as quite often the same ideas cropped up in different sections, so their answer was marked as a whole item out of four marks. Overall, this was done quite well. Candidates suggested doing the work in pairs or groups, doing the counts at comparable times and fixed time periods and counting at the same time and at different entrances around the mall. They also suggested using a clicker or tally method to count often adding that there should be a division of labour with one student counting and the other recording. Most candidates did cover many of these ideas; many scored full marks. Weaker candidates were vague about the planning and often repeated ideas in the two sections such as carrying out a tally and recording the numbers on a tally sheet.
- (iii) Many candidates plotted the two bars accurately at 100 and 165; of the two the second plot was occasionally incorrect being plotted at 175 or 185 due to a misreading of the scale.

- (iv) This question discriminated well. Most candidates correctly stated that there were more visitor numbers on Saturday than Wednesday which showed variation but, to get an overall mark, they needed also to spot that there were variations throughout the day on both days. This second type of variation was often stated later in the answer and needed linking to the first type for the overall mark. Candidates were more successful with providing two different examples of paired data for the variation e.g., there were 985 visitors on Saturday compared with 737 on Wednesday or that there were 43/45 at 9 am but 100/165 at 9 pm during the day on both days. The comparison between the two days was more often seen and commented on than the variation during the day.
- (c) The focus of the question was on the advice a teacher would give about using the questionnaire. Common and appropriate answers seen included working in pairs, not blocking entrances, being polite and/or saying thank you at the end, not forcing people to answer, using a sampling system to choose the shoppers and explaining what the questionnaire's purpose was. A few candidates decided this was a good opportunity to rewrite and improve the questionnaire with new questions such as not asking any personal questions – there were none in the questionnaire anyway; it did not need adjustment.
- (d)(i) Almost all candidates correctly completed the divided bar graph for two marks. A small number put the segments in a strange order and a couple drew the first diagonal at the wrong angle. A minority did not understand that the empty space provided was to help them locate and draw the graph and decided to start their graph at the end of this space. If this was then drawn correctly, a 1 mark maximum rule was applied.
- (ii) Most candidates recognised that more people went to the mall for shopping than entertainment although it was surprising to see that some stated that more went there for both. The question clearly said *Compare...shopping and entertainment*. Some candidates were too general when comparing the frequency of visits by just recognising that people shopped more frequently than for entertainment. The answer required use of the table to notice that most visitors went, for example, once a week for shopping and once a month for entertainment.
- (iii) This was answered well by most candidates with factors such as distance from the mall, cost of travel and access to a metro or bus route being popular suggestions. Other appropriate ideas included whether they owned a car, avoiding traffic congestion, the availability of car parking and whether it was bad weather or not – unlikely though in Dubai! Brief one-word answers were not credited: these included distance, pollution, traffic, income and cost. Some elaboration and explanation is expected at the end of most questions on this paper.