

GEOGRAPHY

Paper 2217/12
Paper 12

Key messages

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

- ensure that the examination rubric is followed correctly, answering three questions, one from each section
- select the three questions with care. Read them all through and study the resources provided with them before making a choice
- answer all parts of the three chosen questions
- read the question carefully. If it helps, underline command words and words which indicate the context of the question
- respond in the correct way to command words used in questions, in particular 'describe', 'explain', 'identify' and 'justify'
- identify the correct focus specified in the question stem, e.g. death rates or birth rates, dispersed or nucleated settlements, positive and negative impacts
- ensure that they responded correctly to key words such as 'similarities' (Q2(a)(ii)), 'hierarchy' (Q2(c)), 'manage' (Q3(c)), 'natural vegetation' (Q4(c)) and 'conserve' (Q6(b)(i))
- learn the meanings of geographical words and phrases in order to be able to define and accurately use geographical terminology. When defining words or phrases, candidates should not simply repeat a word or words as part of their definition
- understand the difference between describing a distribution from a map by referring to general patterns and describing the location of a feature or place by giving distances and directions from named places
- use the mark allocations and answer space provided in the question and answer booklet as a guide to the length of answer required
- write as clearly and precisely as possible avoiding vague, general statements
- write in full wherever possible, especially in the final two parts of each question, ensuring that ideas are developed with the correct focus
- perform basic skills using graphs, photographs and maps of various types, referring to them in an appropriate way to support ideas rather than directly lifting material from them without any interpretation
- have a range of case studies so that appropriate ones can be chosen for the topics tested
- ensure that each case study used is at the correct scale, e.g. country or area. The syllabus identifies the scale required for each case study
- avoid writing a long introduction and/or conclusion to any question at the expense of answering it in detail

- develop points and link ideas wherever possible in case studies and include place detail
- indicate, when using the extra pages at the back of the question and answer booklet, that the answer is continued and clearly show the number of the question on the extra page
- avoid using extra sheets of paper until the additional lined pages are full

General comments

This was the first examination testing the revised syllabus. It differentiated effectively between candidates of a wide range of ability. Many candidates performed well across the paper and a range of excellent responses were seen to all questions. Most candidates were able to make a genuine attempt at their chosen questions; however, weaker candidates inevitably found it difficult to interpret questions, use resource materials and answer coherently.

The change in the rubric caused relatively few problems and most candidates selected a question from each section as required. There were a few who penalised themselves by answering both questions from within a section, in which case they were awarded the mark for the higher scoring question. As in previous years, there were some candidates who ignored the rubric altogether by answering four or more questions. However, it was rare to encounter papers where all questions had been attempted. Typically, if all questions had been answered, they were all very weak and/or parts had been omitted from each.

Question 1 was the most popular question, while the two questions in each of **Sections B** and **C** were roughly of equal popularity. There were good answers seen to all questions, including those requiring extended writing, particularly the case studies on overpopulation, management of coastal erosion, desert vegetation and the impacts of a transnational corporation. High quality answers in these case studies were characterised by a range of developed ideas and the inclusion of place detail which is required for full marks (Level 3). Many weaker responses in the case studies tended to rely on generic ideas with little place detail to support them, while others were characterised by the use of simple statements (Level 1). It is an increasing trend to write long and unnecessary introductions with place detail and background information. This is not required, it gains no marks and time and space would be better used focussing on the actual question.

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

Comments on specific questions

Question 1

- (a) (i) Many candidates showed an understanding of death rate. Where candidates did not score the mark it was usually because they did not include reference to 'per year'.
- (ii) This was very well answered, though a few candidates gave figures rather than the country name.
- (iii) This was generally well answered, with most answers referring to disease, healthcare, water supply and food supply as reasons for variation in death rates. Some candidates were not sufficiently specific (e.g. better climate, natural disasters, crime or standard of living) or they referred to ideas which are unlikely to have a significant effect on a country's death rate (e.g. volcanic eruptions, road accidents).
- (b) (i) This was a good discriminator. There were some excellent answers which carefully described the graph in four sections and included years and data, while in contrast many weaker candidates did not consider changes in the rate of decline over the time period. Common errors were inaccurate reading of figures from the graph, and inaccurate use of descriptive terms such as 'steep', 'gradual' and 'steady'. Despite the question only asking for description, some candidates tried to explain the trends by suggesting reasons for the decline.

- (ii) There were many good answers which discussed the reasons covered in the passage (e.g. two-child limit, campaigns for abortion or contraception). Some candidates referred to penalties but did not say what they were, while others did not say what the penalties were for. Other factors were included by some candidates and credited (e.g. later marriage, increased pension provision, mechanisation of farming).
- (iii) Again, some very good answers were seen and the question differentiated well. Better answers referred with precision to a number of relevant problems such as ageing population, less money being raised by taxes, lack of armed forces, decline in the economy and shortage of workers, in some cases developing their ideas for further credit, while weaker ones wrote in vague or simplistic terms. Some candidates examined the problems for the younger generations, such as closure of schools, which were acceptable. Some candidates made the error of focussing on why birth rates were low, repeating points they had made in (ii), perhaps not understanding the reference in the question to governments being 'concerned'.
- (c) There was a range of case studies and the focus of answers should have been on explaining the problems caused by over-population rather than writing about the reasons for it or the solutions, to which some candidates referred, often in lengthy introductions or conclusions. While case studies on Nigeria, China, Bangladesh and India tended to be the most popular and best examples, there were other examples which were used to good effect. Some answers gave excellent details with developed ideas and place detail or appropriate statistics (Level 3). Others, however, were somewhat vague with simple ideas which were little more than generic references (Level 1).
- Inevitably, some candidates who selected China drifted into the one-child policy in their answer, while there was some confusion in the answers of some candidates between over-population and rapid population growth.

Question 2

- (a) (i) While some candidates could define the term 'rural' settlement by referring to the countryside or similar, others struggled to do so. Some defined 'urban' while others simply gave examples of rural settlements. Some answers referred to rural settlements as those lacking in development, which may, of course, be true in some countries. Such answers, however, did not define the term as required.
- (ii) This discriminated well with those candidates who made effective use of the map evidence referring to the linear nature of both settlements, the north-south orientation or the fact that both are surrounded by fields.
- (iii) Many candidates were able to comment on the scattered buildings, separated by large areas of countryside, fields or farmland. Despite the assistance provided by the map, weaker candidates were unable to display any understanding of the term 'dispersed rural settlement'.
- (iv) Few candidates understood the fundamental reasons behind the growth of a nucleated settlement, many simply referring to the growth of settlements generally. The common relevant idea mentioned was the growth around a crossroads; however, many answers focused on provision of services, migration into the settlement and suggestions as to why a settlement grew up rather than why it grew up in a nucleated pattern.
- (b) (i) This question was well answered with three clear points being made by many candidates who used the map to identify changes such as the growth of high class residential areas, changes in industrial structure and developments in the transport network.
- (ii) This was a good discriminator. The question was about the industrial function of Llanelli and many valid factors were suggested by candidates using evidence from the map. Better answers referred with precision to a number of relevant factors (e.g. the port, transport, workforce, availability of fuel and power, etc.), in some cases developing their ideas for further credit, while weaker ones wrote in vague terms, for example about issues such as 'resources' or 'transport'.

- (c) There were relatively few high quality responses which contained developed ideas and place specific information and for many candidates this was their weakest case study. Where candidates did achieve the highest level, they focussed on an area, naming cities, towns and villages in the area, and linked shops and services provided to the different sized settlements in the chosen area. However, many candidates focussed on a city rather than an area which made it more difficult to show the hierarchy of services. Indeed many did not seem to understand the concept of a hierarchy of service provision as they simply described different services and how they created jobs.

Question 3

- (a) (i) Many candidates repeated the words 'deposition' or 'depositing' and/or 'coast'. Creditable answers used 'dropped' or 'left behind' as suitable alternatives to show that they understood what was meant by 'deposition' and 'beach' or 'by the sea' to show their understanding of 'coastal'.
- (ii) Generally this was well answered and most candidates gained some credit. A small number of responses confused constructive and destructive waves.
- (iii) This discriminated well and some excellent answers were seen. However, many other candidates were not totally clear in their explanation of the sequential process. Many candidates referred to the prevailing wind, swash and backwash; however, some did not refer clearly to the angles of swash and backwash which are critical in the longshore drift process. Some candidates drew diagrams but few were really helpful as they were either not labelled or simply repeated information from their written answers.
- (iv) Many candidates explained how a spit was formed rather than describing its main features as required. The most common correct responses were for the curved end, the spit being composed of sand and shingle and the marsh which frequently develops behind it.
- (b) (i) Many candidates used the evidence in the photograph well and gained full marks for this question, referring to features such as cliffs, headlands and bays, notches and caves. Reference to pebbles/loose rocks was not accepted as evidence of coastal erosion, unless candidates referred to this being at the base of the cliff or similar.
- (ii) This was another good discriminator. There was a range of answers, many well prepared candidates including and developing valid ideas about the impact of rock type, waves, wind, vegetation and management schemes. Excellent development was seen, with some candidates exploring the variation in erosional processes in areas where specific named rock types (e.g. chalk and clay) outcrop. Weaker responses typically referred in very simple terms to little more than the waves and winds.
- (c) There were many excellent answers, most focussing on regions of the UK, especially Holderness, and such answers tended to include valid place detail. The most popular management techniques were groynes and sea walls, with good answers explaining how these defences worked, while weaker answers just identified the management techniques. Some candidates included unnecessary detail in introductions about why the area of coastline was being eroded, while others evaluated the techniques, which was also not what the question required. Candidates were not penalised for doing this; however, they wasted time which could have been used to add further relevant description of the measures or explanation of how they provide protection.

Question 4

- (a) (i) Most candidates correctly identified 'rainfall' as showing the greatest difference.
- (ii) Most candidates were able to score at least one mark by correctly naming one or both of the instruments. There were some wild guesses, while others struggled to properly name the wet and dry bulb thermometer. Hygrometer was, of course, accepted as an alternative but not hydrometer.
- (iii) Generally this question was well answered. Many good answers named the rain gauge, referred to a specific time period between measurements being taken and a location factor such as 'in an open area'. Weaker answers tended to only mention the rain gauge or focussed on the location of it rather than how it is used to measure the rainfall.

- (iv) There were many good answers which referred typically to the white colour, the slats for ventilation and the box being off the floor, explaining how these characteristics ensure accuracy. As in the previous question, some candidates made the mistake of describing siting factors rather than features, while others described the characteristics without explaining why they ensure information collected is accurate. Some candidates focussed wrongly on the instruments themselves rather than the Stevenson screen.
- (b) (i) This question discriminated well and descriptions varied in quality and accuracy. Weaker candidates did not read the graph accurately, and some mixed up the temperature and rainfall scales. Some candidates described the climate features month by month. More perceptive candidates recognised and gave the general description of 'hot and dry' and referred to features such as the range of temperature and rainfall with appropriate months and accurate statistics.
- (ii) There were some excellent explanations of why there are desert climates close to the tropics, with stronger candidates developing their ideas, typically those which explained the lack of rainfall such as descending air, high pressure, the continental locations, wind directions, rain shadow effect and distance from water bodies. Such answers showed a good and detailed understanding of the complex atmospheric processes involved. Many candidates, however, showed little understanding of these processes, with largely descriptive, and in many cases irrelevant, answers, for example about the vegetation. Common mistakes were to concentrate the explanation on processes occurring at the equator, or on simplistic ideas such as 'it doesn't rain therefore it is dry', 'there are no clouds' and 'it gets lots of sun therefore it's hot'.
- (c) This was one of the best answered case studies and the Sahara desert was the most popular choice of example. Well prepared candidates wrote about deep or widespread roots, spikes and waxy leaves, for example, with clear links between the characteristics and adaptations, referring to specific plants (e.g. cactus) to illustrate their points. Some candidates who did not read the question carefully (or did not know the meaning of vegetation) wrote about animals or people, or generally about the desert landscape, while others described the characteristics of desert vegetation with little or no attempt to explain.

Question 5

- (a) (i) Most candidates correctly ranked the four countries.
- (ii) Most candidates scored one mark, usually by simply describing the HDI level in countries of each continent in turn rather than interpreting the data and describing 'differences' observed. The map clearly shows that in North America HDI is generally higher and less varied than in South America, which would have been sufficient to score full marks.
- (iii) Some excellent responses were seen with candidates referring to the variety of factors taken into account to derive the HDI figure rather than using just one indicator which measures income alone. Such candidates also referred to the index produced being usually to compare countries, though it was rarely mentioned that change over time can also be observed by it. Weaker responses showed little understanding of the requirements of the question and many wrongly focussed on how developed some countries were compared to others.
- (iv) A good knowledge was shown here by many candidates, with reference particularly to raw materials, access to ports, government corruption, education level and war.
- Weaker responses tended to be vague with unspecific references to 'poverty', 'natural disasters' and 'disease' and a focus on how the differences in levels of development manifest themselves rather than an explanation of them.
- (b) (i) This was generally well answered and most candidates scored the three marks.
- (ii) Most candidates identified a correct country (Egypt or South Africa), although some named Kenya which was not acceptable. Many answers included appropriate evidence from the data, with many candidates developing their ideas. Some candidates lost marks by simply quoting a statistic without interpretation or not stating that the value was the 'highest' or 'largest' when referring to the specific indicators.

- (c) Many, but not all, candidates were able to identify an appropriate TNC and country where it is located and it was encouraging to see that the majority of candidates at all ability levels gave both sides of the argument. The most popular choices were Coca Cola, Apple, Nike and Toyota, though many others were seen. Ideas were developed relating to employment, exploitation and environmental destruction, though most focussed on the people living in the country rather than the environment. Incorrect responses considered positive and negative points for the company rather than the country in which it operates.

Question 6

- (a) (i) Many candidates gave an acceptable definition which showed an understanding that visual pollution 'can be seen' or is an 'eyesore'. Answers which scored no mark gave examples or repeated 'visual', while others referred to the eyes being damaged by pollutants, particularly gases and chemicals.
- (ii) The most common ways mentioned were deforestation, overgrazing and monoculture, although not all candidates used those terms. Incorrect ideas included the overuse of fertilisers, ploughing and irrigation.
- (iii) Most candidates identified three different economic activities from Fig. 9 and were able to score at least one mark, usually for reference to the disposal of waste in water courses by manufacturing industry. There were some precise references to the water pollution caused by the use of fertilisers and pesticides in agriculture, and acid rain was used by some candidates to show how transport, industry or power stations pollute water. Some candidates repeated ideas for different economic activities (e.g. acid rain): double credit is rarely awarded for the repetition of ideas. Reference to power stations was the least well done as many candidates referred simply to the 'disposal of waste'. Radioactive waste or heated water was accepted as a specific example here but power stations rarely dispose of general 'waste' in water courses in the same way as some industries do.
- (iv) As in previous years, there was a large variation in the knowledge and understanding of the process of global warming. Only the best candidates gave a detailed explanation of the sequence from identifying the pollutants to the increase of the temperatures. Many candidates wrote vaguely about 'fumes' or 'gases' and there is still much confusion between the process of global warming and the destruction of the ozone layer. The introduction of the ozone layer into any answer about global warming only serves to confuse, not clarify, understanding.
- (b) (i) Many candidates scored 1 or 2 marks; scoring full credit, however, was not common. Some weaker responses defined the three terms accurately but that was not what the question required. The most common relevant answers explained about using fewer resources by not making new products, but this idea was often repeated.
- (ii) This broad question allowed good discrimination. The most popular correct answers referred to finite resources, habitat protection, extinction of species and global warming, many strong responses including perceptive development. Some weak answers were either simplistic, too extreme in terms of destruction of the universe or their use of language and geographical terms was too vague to gain credit. Alternatively, they just focussed on one issue, frequently global warming, which was unfortunate for those candidates who continued to confuse it with ozone depletion.
- (c) Almost all candidates chose an appropriate country, though a few named a region or settlement instead. Popular countries which were identified included Iceland, France, Germany and the UK, though any country was acceptable, including LEDCs. Some good LEDC answers were seen about fuel wood. Weaker candidates were usually able to achieve Level 1 by referring to at least one type of energy used in that county (or simply listing several). However, many found difficulty in developing their ideas and providing details which described how energy is supplied. Some candidates used statistical information to develop their ideas while others gave details of the methods of energy supply. However, some incorrectly developed their answer by explaining the advantages and disadvantages of the energy types, which were not relevant.

GEOGRAPHY

Paper 2217/13

Paper 13

Key messages

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

- ensure that the examination rubric is followed correctly, answering 3 questions, one from each section.
- select the three questions with care. Read them all through and study the resources provided with them before making a choice.
- answer all parts of the three chosen questions.
- read the question carefully. If it helps underline command words and words which indicate the context of the question.
- respond in the correct way to command words used in questions, in particular 'describe', 'explain' and 'compare'.
- identify the correct focus specified in the question stem – e.g. global or local effects, pull or push factors, problems and benefits.
- ensure that they respond correctly to key words such as 'rural' (**Question 1aiii**), 'economic' (**Question 1aiv**), 'characteristics' (**Question 4aiv**), and 'reasons' (**Question 6aiv**).
- learn the meanings of geographical words and phrases in order to be able to define and accurately use geographical terminology. When defining words or phrases candidates should not simply repeat a word or words as part of their definition.
- understand the difference between describing a distribution from a map by referring to general patterns and describing the location of a feature or place by giving distances and directions from named places.
- use the mark allocations and answer space provided in the question and answer booklet as a guide to the length of answer required.
- write as clearly and precisely as possible avoiding vague, general statements.
- write in full wherever possible, especially in the final two parts of each question, ensuring that ideas are developed with the correct focus.
- perform basic skills using graphs, photographs and maps of various types, referring to them in an appropriate way to support ideas rather than directly lifting material from them without any interpretation.
- express themselves as clearly as possible avoiding vague, general statements.
- have a range of case studies so that appropriate ones can be chosen for the topics tested.
- ensure that each case study used is at the correct scale e.g. settlement, country or area. The syllabus identifies the scale required for each case study.
- avoid writing a long introduction to any question at the expense of answering it in detail.
- develop points and link ideas wherever possible in case studies and include place detail.
- when using the extra pages at the back of the question and answer booklet indicate that the answer is continued and clearly show the number of the question on the extra page.
- do not use extra sheets of paper until the additional lined pages are full.

General comments:

This was the first examination testing the revised syllabus. It differentiated effectively between the candidates of a wide range of ability. This cohort performed well across the paper and a range of excellent responses were seen to all questions. Most candidates were able to make a genuine attempt at their chosen questions, however weaker candidates found it difficult to interpret questions, use resource materials and answer coherently.

The change in the rubric caused relatively few problems and most candidates selected a question from each section as required. There were a few who penalised themselves by answering both questions from within a section, in which case they were awarded the mark for the higher scoring question. As in previous years there were some candidates who ignored the rubric altogether by answering four or more questions, however it was rare to encounter papers where all questions had been attempted. Typically, if all questions had been answered they were all very weak and/or parts had been omitted from each.

Questions 1, 4 and 6 were the most popular questions within each section. There were good answers seen to all questions, including those requiring extended writing, particularly the case studies on squatter settlements, flooding and food shortages. High quality answers in these case studies were characterized by a range of developed ideas and the inclusion of place detail which is required for full credit (Level 3). Many weaker responses in the case studies tended to rely on generic ideas with little place detail to support them whilst others were characterised by the use of simple statements (Level 1). It is an increasing trend to write long and unnecessary introductions with place detail and background information. This is not required, it gains no credit and time and space would be better used focussing on the actual question.

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

Comments on specific questions:

Question 1

- (a) (i) The majority of candidates gained credit for correctly identifying the definition for migration but significant numbers omitted any reference to 'people moving' and therefore could not gain credit.
- (ii) The vast majority of candidates correctly matched the key term with the definition and also completed it neatly and clearly. There were some answers which only had one arrow which was insufficient to score even if correct.
- (iii) Most candidates gained credit for the 'loss of workers' idea but only the more able candidates developed their response by pointing to the reduction in food production and the split in families as the fathers left for the city. A few wrote wholly from the perspective of urban pull factors which failed to score any credit.
- (iv) Candidates mainly gained credit on the ideas of 'more jobs' which were 'more highly paid' and 'lower house prices'. Some referred to wider economic indicators such as a 'higher GDP per capita' but where availability of better services such as health care or education was mentioned it was rarely put in the context of a richer country being able to afford it so did not score any credit.
- (b) (i) Many candidates struggled to understand the term 'net migration' i.e. the overall difference between in and outflows of people. Instead candidates went into detail comparing at length each individual element e.g. 'Indonesia's emigration is larger than Singapore's'. Where candidates did use net migration calculations they often failed to express it in millions or omitted the minus sign to show Indonesia's net loss of people. However, some very good answers were seen and those candidates that understood what 'net migration' is and how it is calculated were able to score full credit.
- (ii) Most candidates scored well on the positive impacts of migration for the destination country such as 'a larger workforce, cheaper labour, more taxes paid to government' etc. Many wrote at least 3 creditable points here with many full mark answers also seen. However, there were some candidates who wrote about the negative outcomes such as racial tension or negative impacts on the losing country and so did not gain credit for this.
- (c) Where the candidate had identified a city (as many named countries such as USA as their example), they were usually able to give some detailed and developed ideas about the problems facing migrants living in squatter settlements, particularly those concerned with the lack of hygiene of the environment, water supply, lack of job opportunities and discrimination. Even where a candidate had identified the wrong example they were usually able to gain 5 credit for including some developed ideas.

Question 2

- (a) (i) Very few inaccurate answers were seen here and the vast majority of candidates were accurate within the 1% margin allowed between 14 – 16%.
- (ii) Most candidates were able to read off the percentage values correctly from the graph and use a comparative word to describe the difference thereby gaining the full 2 credit in most instances.
- (iii) Many answers were speculative about future sites for building which was not relevant. Where candidates understood the land is and will remain open space, there were appropriate land uses suggested such as ‘parks, gardens or sports fields’. Although weaker candidates thought it could be farmland which is unlikely in an MEDC city.
- (b) (i) The vast majority of candidates could identify relevant urban land uses from the photographs provided. The most common land uses identified were ‘housing, factories and car parks’.
- (ii) This was a good differentiator as a variety of responses were seen, some scored full credit and many scored just 1 or 2 marks. Weaker answers tended to explain what a port was rather than the factors which would allow one to establish and grow like proximity to the sea, deep water, etc.
- (iii) This question was also a good differentiator. Most candidates were able to identify some relevant features such as ‘high land values leading to the building of skyscrapers’ but only the most able could go on to gain full credit with a range of well-described characteristics. However, many candidates talked about housing development in the CBD which is not a characteristic of this zone. Vague responses were also seen referring to businesses and pollution which need further exemplification if they are to gain any credit.
- (c) Overall this question was generally not well-answered. Most candidates relied on the idea of there being more of the features they had described in the previous question without any place specific information. Answers about building a subway often lacked any explanation of why it had been done restricting the answer to Level 1. There were a few good answers seen about London’s congestion charge. Some candidates referred to new housing which as for the previous question is inappropriate for the CBD zone. Many responses simply referred to a list of ideas such as ‘more shops being built’ which is just a simple Level 1 idea and therefore many candidates did not score beyond 3 marks.

Question 3

- (a) (i) Responses to this question were varied. Where the candidate had understood that the weather instrument shown was a barometer and therefore is used to measure ‘air pressure’ many omitted the word ‘air’ and so did not score the mark. There were a wide range of incorrect answers seen about humidity and rainfall.
- (ii) The vast majority of candidates scored the the full credit available here. But there were some who gave the extremes of the scale on the thermometers and others who gave the same figure for the max and min temperature with the range being given as zero. Other candidates added the figures together or divided them and clearly had no idea of what to do.
- (iii) Many candidates had learnt the names of the 3 instruments shown in Fig. 4 and scored full credit. Weaker candidates only gave one word like thermometer and some incorrectly thought the anemometer was a wind vane.
- (iv) This question was a good differentiator. Whilst most scored on the idea that the wind speed would not be affected by obstacles if placed on the roof. Only the strongest responses scored full credit for ideas about preventing heat absorption from the sun or the ground etc. Many candidates were able to gain 1 or 2 credit for those simple ideas. Some candidates merely described the characteristics of the Stevenson’s screen which did not gain any credit.
- (b) (i) Many candidates were able to score at least 1 mark here and all mark scheme ideas were seen. However, few could accurately name both cloud types. Weaker answers made correct statements about one of the images only which was not comparative and so did not gain any credit.

- (ii) This question was a good differentiator as many candidates described the Hadley Cell in great but inappropriate detail and did not gain any credit. Others were able to respond in good detail describing the processes of 'high temperatures leading to evaporation, rising air, cooling and condensation' and gained full credit. The vast majority of weaker candidates often scored credit for 'evaporation and condensation'.
- (c) Very many candidates ignored the question and wrote in detail about why the rainforest climate was hot and wet. Good answers referred to the need to compete for light and grow tall, the evergreen nature of the forest and the drip tips on leaves which have developed due to the climate characteristics. Few candidates however scored full credit because they omitted any place specific information such as an accurate annual rainfall figure or a named tree type, etc.

Question 4

- (a) (i) This question overall was very poorly answered. Many candidates simply did not know the key term and candidates who did often omitted reference to the tributaries which drain water into the main river. It was rare to see a full accurate definition. Candidates should be encouraged to learn full and accurate key terminology and definitions throughout their course.
- (ii) This question was better answered and the vast majority of candidates scored full credit here either for the vertical infiltration/percolation flows or the horizontal throughflow and groundwater flow. There were some who just gave the letters like A and B which was not relevant.
- (iii) The majority of candidates scored 1 mark only for the variation in tree cover. Many went far outside the question brief with statements about surface run-off and absorption by tree roots. Some good answers were seen which referred to the possible variation in rainfall but very few scored full credit.
- (iv) There were many good answers seen here referring to the increase in width, depth, discharge and steepness of the river but far too many believe that steepness controls the velocity of the river and said, wrongly, that A (with all the obstacles of large boulders) would be faster.
- (b) (i) Many answers seen here described the 'location' rather than the 'characteristics' of the delta. Good answers referred to the northerly direction of flow, the distributaries (many said 'tributaries') and some accurately measured the width or length of the delta using the scale well.
- (ii) This question was a good differentiator. Some excellent answers were seen which in some cases included a brief explanation of flocculation. However, some weaker answers were also seen including those using incorrect terms like 'tributaries' and even a number of candidates who thought a delta was formed by the river eroding new channels.
- (c) This question was also a good differentiator. Weaker answers gave the generalised factors which could lead to a flood anywhere such as 'high rainfall' but better answers seen gave actual rainfall figures or explained factors such as 'snow/glaciers melting in the Himalayas' etc. Some answers veered off the requirements of the question to write about coastal floods due to cyclones without reference to the storm surge pushing up the river to cause floods or wrote about global warming and sea level rise. Other candidates also answered on the impacts of flooding which was irrelevant.

Question 5

- (a) (i) The vast majority of candidates were able to accurately read off the figure from the graph and gain the mark..
- (ii) Again, this was generally well answered with the majority of candidates correctly identifying coal and renewables respectively. The most common incorrect response seen was 'nuclear' instead of 'renewables'.
- (iii) This question was also well answered by the majority. Most scored credit on the 'non-renewable, air pollution and global warming' impacts of fossil fuel burning.
- (iv) This question was a good differentiator. Weaker candidates tended to use short and often extreme or vague phrases like 'very dangerous' without reference to the specific circumstances such as a 'leak or reactor meltdown' that would release radiation. Also benefits were generally less

understood than the problems. Many candidates wrongly believe that nuclear power is renewable. Also many vague responses such as 'more energy can be produced' were seen without any reference to using small amounts of uranium. It was rare to see more than 2 credit awarded on this question.

- (b)(i) Mixed responses were seen here. Where the candidates used geographically valid ways of expressing location such as compass directions or distances from other named features or places they scored well. Weaker answers lost credit by vaguely listing all the places the wind farm was near or next to. Candidates should be advised to use compass directions and distance from or to features when describing locations.
- (ii) This question was generally well answered as candidates scored well with reference to opponents identifying visual pollution and the impacts of construction on the marine ecosystem, shipping or tourism or birds flying into them. Whilst supporters arguing that low cost electricity can be produced and it is a renewable form of energy. Some referred to the noise produced but at over 10 km distance from the islands this would not be a realistic issue and is likely a reason for siting them offshore (i.e. to reduce the impacts of noise). Overall, all mark scheme ideas were seen.
- (c) This was generally well done with many candidates gaining Level 2 credit or higher. High tech areas like Silicon Valley or Science Parks in Asian countries tended to score well with place specific detail. There were also some excellent answers on individual plants like Toyota at Burnaston, Derby which had place specific reference to named roads and identified the importance of the UK being in the EU. There were some responses that just selected from the list but then did not go on to name an example – e.g. they chose 'manufacturing' but did not provide an example of a factory and therefore just gave generic ideas which were in many cases simplistic Level 1 answers.

Question 6

- (a)(i) This was generally well answered with the vast majority of candidates correctly ranking USA, China and Brazil. However, some candidates transposed Brazil and China or referred to Canada or Mexico which were not specified. This is a case of candidates not reading the information in the question carefully enough.
- (ii) This question was not particularly well answered as many candidates gave examples of water use rather than the locations implied by the terms e.g. 'for showing/drinking'. Where the need to do so was understood most gained credit for domestic being in the 'house/home' but many could not give an alternative word for industry such as 'factories or manufacturing' and just repeated the word 'industry/industrial'.
- (iii) This was generally well answered as most candidates scored well on this simple task although many quoted all the figures for both places when a simple comparative list would score the credit e.g. 'Canada uses more water than Mexico in industry, domestic use and in total' which would provide full credit.
- (iv) This question was generally poorly done in contrast to the previous question. Even the strongest responses just repeated the previous answer i.e. Canada has more industry, Mexico has more agriculture. Only rarely did answers explain why e.g. 'Canadians are richer and will have washing machines/dishwashers and will wash their cars and water gardens more often'.
- (b)(i) This question was generally well answered. Where candidates understood that a source is where the actual water originates from this was answered well. However, too many named the two pipelines which are a means of transferring water rather than a source and so lost the third available mark in many cases.
- (ii) This question was a good differentiator as where the candidate restricted their idea to the need for a good urban supply of water this was answered fairly well although few gained full credit. Many wrote about the use of water to grow crops but there were many valid answers referring to the increase in hygiene and reduction in disease or drought where there was sufficient water storage and treatment. All mark scheme ideas were seen.

- (c) This question was also a good differentiator with many excellent detailed answers seen but equally many weak vague responses seen too. Where a country or region such as Darfur/Sudan/Ethiopia was given rather than an inappropriate continent such as Africa then answers scored well. Many weaker answers focused on population growth/overpopulation despite the fact that historically there have been no countries with the sort of persistent food shortage and starvation that would entail. Most food shortages are temporary due to climatic variations such as droughts or disruption to farming processes from wars or pests/diseases etc. Some had also learnt a case study about HIV/AIDS and chose to write on this rather than answer the question set.

GEOGRAPHY

Paper 2217/22
Paper 2

Key messages

- Practical skills questions need to be completed precisely
- Given data should be interpreted to show understanding
- In **Section B**, careful analysis should be backed up with evidence

General comments

This paper was comparable with that for previous years, with **Question 6** proving to be the easiest overall and **Question 4** being the most difficult. In **Section B**, **Question 8** was a little easier than **Question 7**, and consequently was also more popular, by 4:1.

Candidates scored well on **Question 2(b)(i)**, **Question 2(c)(i)** and **(ii)**, **Question 3(a)(i)** and **(ii)**, **Question 6(a)**, **Question 6(b)(i)** and the first parts of **Question 7** and **Question 8**, as well as **Question 8(b)(ii)**. **Question 1(c)(ii)**, **Question 3(b)(i)** and **Question 4(b)(i)** were particularly difficult, along with **Question 7(b)(i)**, **Question 7(d)(ii)**, **Question 7(d)(iii)**, **Question 8(a)(v)**, **Question 8(d)(iv)** and **Question 8(e)(i)** in **Section B**.

Generally candidates attempted most of the written sections of the paper, but there were still relatively high omission rates for the cross section in **Question 1(c)(ii)**, and the graphs, especially **Question 7(b)(ii)**, **Question 7(b)(iv)** and **Question 7(c)(ii)**. Candidates should be encouraged to read all instructions carefully. They would then be less likely to omit the parts where the answer is needed somewhere other than an answer line. **Question 1(d)(i)**, **Question 1(e)(i)**, **Question 3(a)(iii)** and **Question 6(a)(ii)** were all further examples where candidates needed to read carefully and give attention to the wording of the question.

Comments on specific questions

Section A

Question 1

- (a) The 1:50 000 map was of Galway, Ireland, and candidates were instructed to look at the three areas shown in Fig. 1. For each area they needed to state the types of roads and describe the pattern. There were several types of road in each area, and at least two of them needed to be mentioned in order to get a mark. For Area A, there was primary, secondary, other and track. Area B had third class, other and track. Area C had regional, third class, other and track. The majority of candidates were awarded these three marks.

The remaining marks could then be gained by describing the pattern in each area. Area A had a grid pattern, with blocks between mainly straight parallel roads. In Area B there were more curves and a lot of dead-end roads. In Area C the regional road was parallel to the coast, running west-east, with most of the other types of roads running north-south from the regional road and again many dead-ends. Some candidates used these ideas but many struggled to describe the pattern. Some tried to use terms borrowed from other types of pattern such as settlement, drainage or deltas and some were clearly only looking at the main roads within each area. Many wrote vague statements about various junctions and how the roads interlinked, but this usually did not give the

idea of pattern. The weakest candidates wrote about the pattern used in the key to designate the type of road.

- (b) The position of the graveyard was shown with a small red dot and this was clearly labelled, also in red. The grid reference was 282283. Many candidates had the correct answer.
- (c) In Fig. 2 candidates were presented with three cross sections and they were asked to decide which gave the most accurate representation of the land from 160310 to 210310. D, E and F were essentially the same towards the west, but towards the east the pattern of hills and valleys differed. The correct answer was E. There were many correct responses.

Candidates then had to label three features on their chosen section. It did not matter whether they had chosen the correct section in part (i), since the features were towards the west where D, E and F were drawn in the same way. The track was between 43 mm and 47 mm from the west end of the cross section. The river was between 33 mm and 36 mm and the plantation edge was between 25 mm and 28 mm. Lough Kip had been marked on each of the three sections in order to provide an example of how best to indicate the locations. Some followed the example but others just wrote the letters without indicating the position on the section line that they were referring to. It was then necessary for the whole of the letter to be within the tolerance for the mark to be awarded. Candidates should be encouraged to use arrows to locate positions on cross sections.

- (d) The post offices at Moycullen and Spiddle were connected by a fairly straight road and candidates were asked to estimate the distance along the road. There was no need to measure accurately though laying a ruler along the road would no doubt have helped in making a judgement. Answers of 13 km, 14 km or 15 km were acceptable and many candidates gave answers within this range. However, a fairly high proportion had ignored the instruction to give their answer to the nearest kilometre. They had clearly spent time measuring the route and had then forgotten to round the answer so that it was expressed in the right way.

The compass direction from Moycullen Post Office to Spiddle Post Office was south west. This was straightforward and many had correct answers.

- (e) Candidates were then asked to focus on Spiddle and note what services, other than the post office, might be used by people visiting the area. There were plenty to choose from with caravan site, camping site, parking, quay, slip, public telephone and church or chapel and many candidates had three correct answers. However, they had often just written about services in general and had not really considered whether or not visitors would be using them. Thus those who had just selected three services did not always get three marks since school and police station were not valid.

Continuing with the theme of visitors, in part (ii) candidates were asked to state three natural attractions within 4 km of Spiddle. Using the key to identify elements of the natural landscape, correct answers included the beach at the coast, various rivers or streams, the hill (mountain was not accepted), lake or lough, and forest (or coniferous plantation as this was the term in the key). This was relatively easy and many candidates got three marks. Those that did not often selected non-natural attractions, such as the camping and caravan sites, which, although they would be in a natural landscape, are not of themselves natural features.

Question 2

- (a) Fig. 3 was a world map showing the location of Fiji along with the top six destinations for emigrants leaving Fiji. Candidates were first asked to describe the location of Fiji. The equator and tropics were marked as useful references and 'between the equator and the Tropic of Capricorn' was the most common correct answer. Others referred to the southern hemisphere or 'in the tropics' which were also valid, but phrases such as 'above the Tropic of Capricorn' or 'near the Tropic of Capricorn' were not accepted. Another valid approach was to locate in relation to other countries labelled on the map, so 'east of Australia' or 'north of New Zealand' were good answers but 'it's far from the UK' did not give any useful information. 'In the Pacific' was also valid. Candidates commonly scored one mark. Their attempt at the second mark was often an alternative expression of the first or was too vague.
- (b) Included with Fig. 3 was a ranked list of the destination countries, and candidates were asked which was the third most popular. Almost all candidates had the correct answer of New Zealand. A few had counted up from the bottom of the list and arrived at Canada.

Candidates were then asked to consider how the reasons for migration might vary, specifically in relation to New Caledonia and the USA. Many could think of reasons for going to the USA, such as the opportunities in terms of jobs and education and the higher standard of living available in a rich country. Relatively few mentioned the fact that New Caledonia was much closer to Fiji, and as such would likely be cheaper to travel to. Invalid responses included discussion of relative climates.

- (c) The question continued by looking at inward migration to Fiji and candidates were given Table 1 showing the top six ranking countries supplying immigrants. The number 1 ranking country, supplying the most immigrants, was India. Again this was usually correct, except for those who read the table from the bottom as in part (b)(i).

Candidates were then asked how many of the countries on Table 1 were also ranked in Fig. 3 and thus supplying immigrants as well as being a destination for emigrants. The correct answer was three and many candidates also chose to name them (Australia, New Zealand and UK).

Then in part (iii) candidates were asked to suggest why migrants might eventually return to their country of origin. There were lots of possibilities here. Popular suggestions included retirement, homesickness, a change in family circumstances or returning to start a business, having worked abroad to raise the necessary capital.

Question 3

- (a) Table 2 presented candidates with several columns of data about earthquakes. Each column was totalled and in part (i) candidates were asked to identify the year that most earthquakes had occurred. The correct answer was 2011 with 2495 earthquakes and almost all candidates had the correct answer.

Similarly in part (ii), almost all candidates correctly selected the figure of 1896, being the number of earthquakes of magnitude 5.0–5.9 in 2009.

Part (iii) was a little more difficult, involving a calculation. In 2006, earthquakes of 6.0 and greater included 142 from 6.0–6.9, 9 from 7.0–7.9 and 2 from 8.0–9.9, giving a total of 153 earthquakes. Many candidates did have the correct answer but a few made calculation errors. The most common error was 142.

Candidates were then asked to describe the relationship between magnitude and number of earthquakes. This was a negative relationship, with number of earthquakes decreasing as magnitude increased. Many candidates realised this and expressed it clearly. Those who did not understand the question usually explained magnitude.

- (b) Table 3 showed data for the earthquakes of 2013 that had resulted in deaths. Candidates had to complete the ranking of the number of deaths. The magnitude ranking had already been completed, and provided an example showing how to deal with the situation of equal ranks. However, many candidates had obviously not looked at this since there were many mistakes, either due to not recognising equal numbers or not omitting the next rank number after assigning equal ranks. The weakest candidates simply completed the pattern that had already been started by adding 4 and 5 at suitably spaced intervals down the column.

Earthquakes of similar magnitude can have very different numbers of deaths for many reasons. Popular suggestions included differences in population density, building materials, building design, the availability of rescue services and the preparedness of the population. Comments about warning systems were not valid. Most candidates had at least some ideas and gained some of the available marks.

Question 4

- (a) Fig. 4 gave climate data for Brazzaville, Congo, and candidates were asked to complete the graph to show 210 mm of rain in April. Most did this correctly.
- (b) To assess understanding of temperature range, candidates were told that the range was 5 °C and were asked to calculate two possible values for the temperature in July that would result in this range. To do this they needed to look for the highest and lowest of the other temperatures and

apply the 5 °C difference to each. The highest of 31 °C in March and April would give a July temperature of $31 - 5 = 26$ °C. The lowest of 28 °C in June and August would give a July temperature of $28 + 5 = 33$ °C. Candidates found this challenging and relatively few got both answers correct. Many had just judged what they thought to be reasonable, based on the shape of the graph rather than applying any calculation.

Making a judgement of the most reasonable answer was what was needed for part (ii). The mark was awarded for the reasoning, so it was possible to give a valid reason without having a correct answer in part (i). Candidates argued that the graph was trending down to July and that the sunshine hours were low. Similarly, at 4° south the sun would not be overhead in July.

- (c) In part (c), candidates were asked to describe the variation in sunshine hours per day. This was done fairly well, with candidates noting the maximum of 6 hours in March, April and May, and the minimum of 4 hours in June, July, August and October, giving a range of only 2 hours. A few candidates tried to describe the variation in sunshine through the hours of a typical single day.
- (d) The vegetation statements in part (d) were a mixture of characteristics from both tropical rainforest and desert vegetation. Candidates needed to pick out the rainforest descriptions to fit the climate of Brazzaville. The correct answers were 'broad leaves with drip tips' and 'thin bark and shallow roots'. Candidates typically scored 1 here, with no particular pattern to the occurrence of errors.

Question 5

- (a) The photograph showed rice production in Bangladesh and candidates were asked to describe the inputs shown. There was plenty of scope here and most commented on the water or flooded fields and the labour at work. Others mentioned the flat land, the soil, the planting of seed or young plants and the use of simple tools. Almost all candidates scored some marks and many got 3 or 4.
- (b) Fig. 5 gave information about the consequences of reduced food production in Bangladesh. Candidates needed to read carefully and select the right information to show how different groups of people were affected. The whole family had fewer meals and of lower quality, using cheaper and less preferred foods. To combat increasing costs, children were taken out of school and sent to work, men would need to seek further and better employment so would tend to migrate to urban areas and women would also be forced to seek employment. This was relatively straightforward provided candidates read Fig. 5 carefully and used that as their only source of information. Again many scored 3 or 4 marks.

Question 6

- (a) Fig. 6 was a diagram of an industrial system and candidates were asked to identify two inputs. There were three possibilities: cassava roots, water and fuelwood. Almost all candidates had two correct answers.

Candidates were then asked to identify two outputs, other than atteke and gari. Again there were three possibilities: peels, juice and fibre waste. Similarly, most candidates had two correct answers, though there were a few who had not read the question carefully and wrote about atteke and gari.

Part (iii) was also straightforward. The first stage of the process was manual peeling and almost all candidates responded correctly.

- (b) Candidates clearly had good understanding of Fig. 6. Atteke has steaming as the final process, while gari has toasting, and again most candidates had noted this correctly.

Information about fuelwood was given on Fig. 6. To make 250 kg of atteke, 500 kg of fuelwood would be needed. Many candidates had a correct calculation but they had not always supplied the units of their answer. The most common numerical mistake was 125 kg, where candidates had divided by two.

- (c) In part (c), candidates were asked about pollution resulting from the processing of cassava. They had to suggest the type of pollution and explain their answer. The most popular suggestion was air pollution and most explained that this was a result of burning fuelwood.

Section B

Question 7

- (a) Almost all candidates chose *source* and *mouth* in the correct order; a few reversed them and the most common error was choosing “*tributary*” for where the river enters the sea.
- (b) (i) Many candidates assumed that, by taking more measurements, using more sites or better equipment, the results would be more reliable but all that does is provide more data. To make it more reliable, extra measurements need to be used to work out an average; getting other students to check a pair’s measurements would help and some aspects of the tape measure needed to be right, e.g. it should be taught and straight across the river. Some suggested having a pilot survey but that would not make the investigation’s results more reliable. Suggestions to do the work at different times or seasons would not improve reliability either.
- (ii) This was a straightforward plot for most candidates; a few placed the 7.6 cross at 8.6 or 6.6; some put it at 10.6! Although the mark was for the plot rather than joining up the line, a few candidates did not draw in the line – this should have been done. A surprisingly high number did not attempt to plot the point.
- (iii) There was a variety of sketches with and without labels. One mark was awarded for clearly indicating that the river’s cross-section would be measured then three marks for correct labels on the drawing such as a metre rule or stick being in the water, where the depth was measured, the ruler or stick touching the bed, measuring at regular intervals across the river using a tape measure and putting ranging poles at each bank at the end of the tape measure. Many drawings were basically text with little visual element; others were drawings with no labels. Some contained students up to their necks in water, or depth being measured from boats using sonic radar. This easily had the highest *No Response* percentage on **Question 7** yet many candidates did well. Teaching basic fieldwork techniques for measuring the hydrological parameters of rivers on this common topic would be beneficial to candidates.
- (iv) A significant number of candidates did not attempt this straightforward cross-section although it was clear that Site 4 was incomplete compared to the other completed Sites. Most candidates scored well on this with almost all getting a shading mark. Some plotted upwards from the bottom axis instead of from the top line. While 0.4 was plotted well, 0.32 was difficult to plot accurately but some tolerance was allowed for this plot.
- (v) While almost all candidates provided a correct equation, a number decided to recalculate the answer or completely miss out the numbers required in the equation.
- (vi) A very small number of candidates decided the Hypothesis was either *completely true* or *not true at all* but most agreed it was *partially true* recognising that the area increased from Sites 1–5 then decreased at Site 6. It was important that candidates provided evidence rather than wrote phrases such as “*Sites 1–5 agree with the hypothesis but Site 6 is an anomaly*”. They should have provided some qualitative or quantitative evidence from the information provided. It was not necessary to describe every change in every site; seeing the overall picture is the skill required here. It was surprising how many chose *partially true* for a mark then wrote about velocity instead of cross-sectional area. Some candidates circled two choices which made it difficult to mark and credit.
- (c) (i) Four pieces of equipment were shown in the Insert; candidates were awarded one mark for describing the correct use of each piece of equipment. For each mark they had to correctly name the equipment used. This has been a standard question on many exam papers so candidates were expected to be able to describe the procedure in detail. Most did well scoring 3 or 4 marks but it was surprising how many did not recognize the ranging poles – some described them as pencils – or chose to describe other equipment such as a ball float instead of the orange shown; some described using a flow meter. Candidates scored well on describing the orange starting at the first pole and use of the stopwatch to time its flow between poles. Marks were lost though as they were not sure where the poles would be located and they did not refer to a certain distance or give a distance for using the tape measure. Some distances given were unrealistic, e.g. 50 km, from source to mouth, 100 metres. Some also let the orange run for a period of time rather than a set distance which negates the use of ranging poles and is not a conventional use of the equipment provided. A number described the equipment being used across the river when maybe they meant along. It was not necessary to describe how the velocity was calculated after using the equipment.

- (ii) Only a few candidates did not attempt the horizontal bar graph. This was the most successful sub-section on **Question 7** and was well-plotted by almost all candidates. While there was no shading mark, it would be good practice for candidates to shade the bars to match the other shading as shading marks may be credited in future.
- (iii) Here candidates were told that the students thought the Hypothesis could not be supported and consequently were asked to provide evidence for that decision. Clearly any evidence that supported the Hypothesis could not be credited yet some candidates decided the Hypothesis was true and provided supportive evidence either through not reading the question or thinking they had to make a decision. Candidates who provided the correct evidence that supported no agreement identified sites where the velocity either stayed the same or decreased downstream or provided comparative relative data to support this.
- (d)(i) This was not an easy plot yet most candidates put the crosses in the correct location and added the site number 6 which was a requirement to get the mark. A small number did not attempt this question. A very small number decided to add a best-fit line or just joined up the plots. This did not affect their mark if it was plotted in the right place.
- (ii) This was not done well. By looking at the graph or Table 2 it was clear that, in general, there was a positive relationship at most sites, e.g. 1, 2, 3, 6 with a possible anomaly at 4 (using the Table) and a definite anomaly at Site 5. Some candidates recognised the positive relationship but did not refer to where it existed; it was not enough to identify Site 5 as an anomaly without providing some evidence for it being so. Paired data between two sites that demonstrated the positive relationship was also required for a mark. Many just described the measurements at each site with no overview supporting a partial relationship. A significant minority did not attempt this.
- (iii) Many candidates wrote a great deal about cross-section areas, gradients and “space” for water to move and tried to link the area with velocity with no reference to the beds and banks forming the channel cross-section. A number of perceptive candidates did relate the cross-section area to the friction caused by bed and banks and so could provide a correct explanation as to how the channel cross-section might affect average velocity. A significant minority did not attempt this.

Question 8

- (a)(i) Statistics show that every candidate attempted this and almost every one made the correct choice of “*clothes and shoe shop*”.
 - (ii) This was well done by most candidates who correctly located Fi in the correct empty place. Clearly they had to use the key to put the bank into the Finance coding then locate it. Some used other initials such as Ba, Se which were wrong. A disappointing minority did not attempt the question.
 - (iii) Almost all chose Entertainment correctly; a few chose Library by going south of the church instead of north as required. Others chose Food which was either too near or too far from the 58 metres distance from the church.
 - (iv) Some very good descriptions on this question with credit being given for use of compass directions such as south of Finn lane or south west of Forest Street. Some candidates thought there was a Forest in the town by not reading fully along the road name! Answers not credited included “*linear*” which is a pattern and “*at the bottom of the map*” which is non-geographical or even “*in the forest*”.
 - (v) Many candidates focused on the total number of food shops compared to number of specialist non-food shops. The most obvious difference in distribution was that the food shops were in clusters whereas the non-food shops were scattered around the town. A few gave the difference in relation to other land-uses they were next to which was not credited. This was the least successful sub-section of **Question 8**.
- (b)(i) Well done by most in recognising an old map as secondary data.
 - (ii) This was the most correctly answered sub-section in **Question 8**; only a few did not attempt the question. Some candidates plotted -7 as $+7$ and others plotted $+3$ instead of $+4$ but overall this was a relatively easy two marks to gain.

- (iii) Having provided a table showing land-uses in 1981 and also a graph which plotted changes, candidates now needed to decide whether shops and services on the main shopping street had changed between 1981 and 2012. Looking at the table and graph which gave a visual impression of change, every shop service and other building had changed except “*other services*” which had stayed at 19. Taking out the land-uses which were not relevant to the Hypothesis i.e. empty buildings and houses, of the eight shop and service categories left, seven had changed and, as some perceptive candidates argued, within “*other services*” the number could stay the same but with different services within it between the years. The vast majority of candidates correctly concluded that the Hypothesis was true and stated increases and decreases with statistics for several shops and services. One mark was allowed for those that identified “*other services*” as the anomaly providing they gave the number 19 rather than just said it did not change. It was important that the change was stated, e.g. decreased by 7 rather than changed by 7; the examiner wanted to know what the change was. It would also have been clearer if candidates had written “*fell by 7*” rather than “*changed by -7*”. A small number decided the Hypothesis was partially true; others did not provide a decision on the Hypothesis but gave relevant evidence for a correct decision for credit. A number included empty buildings and houses in their evidence for change but these are not shops or services so could not be credited.
- (c) (i) Many vague answers such as “*some people*” were at school or, the middle-aged were at work. For credit candidates should have referred to the age-groups in the table. For the over 60s some reference to them being in the town centre for shopping was required rather than general comments such as they don’t work, they have time or they are retired. The under 16s being at school was a popular answer.
- (ii) A significant minority did not attempt this yet others could suggest sensible ideas such as carrying out the survey at weekends or a non-working day or after school/work finish. Although the idea of using a bank holiday was accepted in principle, it would be likely that the shops would be closed and the students would not be at school to carry out the survey. A good number suggested stratified sampling or targeting the survey to get an equal number in each age-group. Some suggested doing the survey at different times or days but not when.
- (d) (i) This pie chart was done well by the majority with a correct plot at 83 per cent and correct shading. It is still the case that far too many candidates do not plot the information in the clockwise order required which also matches the order of the key. Consequently a plot at 80 per cent was incorrect as it was in the wrong order although the correct shading of the larger slice was credited in these cases.
- (ii) Completing the divided bar graph was a successful exercise for most candidates with the plot at 78 per cent from the left and the shading in the order of the table and key. There were less incorrect plots than the pie chart in (i) but there were still candidates plotting 40 per cent from the right at 60 per cent and losing the plot mark.
- (iii) Many candidates did not read the question or look carefully at Table 7 in the Insert. They were asked “*Under which advantage or disadvantage in Table 7...*” so should have chosen one from the list of advantages or disadvantages provided that they judged the two statements best belonged to. Some just put *Advantage* for one and *Disadvantage* for the other as answers instead of choosing the best one from each. For 1, the statement best fitted with *Shops sell specialist goods (advantage)* and for 2, the statement best fitted with *Lack of choice when buying goods (disadvantage)*. Fortunately the vast majority gave the correct choices for both marks.
- (iv) The candidates were told that the students had judged the Hypothesis false; despite this some candidates decided to make their own judgment of *True* and tried to justify that. In providing evidence that this was false, candidates should have carefully noted that there were 100 people surveyed who then provided several advantages and disadvantages each which produced 247 answers that were positive and 111 negative answers. Many wrote that there were 247 people and 111 people which could not gain credit. Also some just rewrote the table out without any amalgamation of groups or taking an overall view of what the data was saying. The best answers did compare the number of answers provided and made overall statements about the number for the highest disadvantage being twice that of the highest advantage and also that 88 per cent shopped elsewhere or the lowest percentage (12 per cent) shopped in the town centre. Candidates must look at individual data and use it to get credit; just rewriting it will not gain credit.

- (e) (i)** There were some very good suggestions here with the best candidates realising that it would be possible to plot locations on a map and create the sphere of influence and say something about the range of shops and services. A few mentioned flow lines, some others suggested sensible Hypotheses to explore such as the effect of distance on the frequency of shopping. Some just suggested extra questions instead of suggesting how the extra question stated could extend their fieldwork.
- (ii)** The idea of the question being intrusive and requesting information that should be private was a common answer with a second mark for a reason such as fear of crime, robbery, stalking and the misuse of the information for unwanted items such as junk mail.

GEOGRAPHY

Paper 2217/23
Paper 2

Key messages

- Practical skills questions need to be completed precisely
- Given data should be interpreted to show understanding
- In **Section B**, careful analysis should be backed up with evidence

General comments

This paper was comparable with that for previous years, though candidates found the mapwork (**Question 1**) quite difficult and this was the question that had the most omissions. Some candidates were perhaps put off by the unfamiliar style of the Irish map and they need to realise that the map skills that they have learned are still applicable on an unfamiliar map. Candidates also found **Question 3(a)** and **Question 3(c)(ii)** to be more difficult, while **Question 5(a)(iii)** and most of **Question 6** were relatively easy.

In **Section B**, **Question 7** was by far the most popular. The pie chart in **Question 7(c)(ii)** was done very well, while **Question 7(d)(i)**, **Question 7(d)(iii)** and **Question 7(d)(iv)** all proved to be difficult.

A few candidates missed out on some of the easier marks through not reading the question carefully enough. Examples of this were in **Question 5(a)(i)**, **Question 6(a)(iv)** and **Question 6(b)(i)**.

Comments on specific questions

Section A

Question 1

- (a) The map extract was of Rossaveel, Ireland. Candidates were asked to identify the type of ferry going to the Aran Islands from the settlement of Rossaveel. Ferry (P) could be identified from the key as a passenger ferry and many candidates had a correct response for this. The most common error was quays as this was labelled on the map at the end of the dashed line representing the ferry route.

Candidates then had to use map evidence to show the advantages of the location of Rossaveel as a ferry port. Some mentioned the wide channel and the sheltered harbour; some noted the car park and the road access. Quays would have been relevant but were generally not mentioned and nor was lighthouse.

- (b) The six-figure grid reference required was for the Martello Tower. This was labelled in red and candidates were told that it was south west of Rossaveel, which enabled most candidates to locate it and attempt the grid reference. There were some correct answers here and others were at the right location but had the sequence of numbers in the wrong order.

In part (ii), candidates had to find the section of the R336 road and estimate the distance between the two reference points. This could be done without measuring since the road was fairly straight, roughly parallel to the grid lines and the answer only needed to be to the nearest kilometre, which was 9 km. Almost all candidates had done this correctly but some had clearly spent time measuring and had not rounded their answer.

- (c) Returning to the area around Rossaveel, candidates were asked to describe the course and features of the Cashla River. This started in Glenicmurrin Lough, at 28 metres above sea level, and meandered down a gentle gradient in a generally south westerly direction, turning north west at the end to enter the sea in Clynagh Bay. There were some tributaries and braiding, and one human feature, the R336 road. Candidates struggled to score many marks here. They needed to look carefully at the detail and interpret the map rather than relying on labelled and keyed features.
- (d) Here candidates were presented with three cross sections and they were asked to decide which gave the most accurate representation of the land from 960280 to 030280. A, B and C were essentially the same towards the west, but towards the east the highest point varied as did the height at the eastern end. The correct answer was B. There was no particular pattern to the errors here, with both A and C being chosen and some strange answers such as grid references from those that did not understand the question.

Candidates then had to label three features on their chosen section. It did not matter whether they had chosen the correct section in part (i), since the features were towards the west where A, B and C were drawn in the same way. The R336 road was between 13 mm and 16 mm from the west end of the cross section, with the Cashla River between 49 mm and 52 mm and the third class road between 71 mm and 74 mm. Loughaunnacrossy had been marked on each of the three sections in order to provide an example of how best to indicate the locations. Some followed the example but others just wrote the letters without always indicating the position on the section line that they were referring to. Some chose to mark each feature on a different cross section and there were a number of omissions for this part.

Candidates were then asked why it was not possible to mark the position of the triangulation pillar on Bovroughaun Hill onto the cross section. This was located in grid square 0128, to the north of the section line, and since the section line did not pass through the peak of the hill, and thus the triangulation pillar, it could not be marked on the cross section. Candidates found it difficult to express their answers here and few achieved the mark.

- (e) Candidates were told that the small black rectangles were buildings and were asked to describe their distribution throughout the map. Many noted that they were dispersed, while at the same time following the roads and on the lower and flatter land. Most were within 2 km of the coast, whilst avoiding the edge of the coast and also the lough shores. Many did this well, but again a number of candidates omitted this section.

Question 2

- (a) Candidates were presented with a map of population growth rate in Bangladesh and were asked what it meant to have a growth rate of less than zero. Some realised that this meant that the population was decreasing and some expressed this as death rate being higher than birth rate, which was acceptable. A common error here was to state that there was no birth rate.

Candidates then had to describe the location of areas with a growth rate between 2.33 per 1000 and 4.75 per 1000. Many mentioned that they were scattered, and particularly pointed out the large area in the east, the areas close to Dhaka, and the islands in the Brahmaputra and the Ganges delta. However, some had misunderstood the question and either stated further figures or gave reasons for the growth rate.

- (b) The second map in this question showed population density and candidates had to mark three areas, X, Y and Z, where population density and growth rate were as specified. This required careful study and attention to detail, and many candidates did this well.

Question 3

- (a) Fig. 4 was a hazard map for part of Dominica and candidates had to describe the location of the settlement of Pointe Michel, in relation to the position of the vent. For this, distance and direction were needed, with Pointe Michel being less than 3 km to the west of the vent. Distances down to 2 km were acceptable where candidates opted for a precise figure. Those that did not score the marks had usually tried to describe Pointe Michel in relation to the hazards shown on the map.

- (b) Having located Pointe Michel, candidates were then directed to look at the hazards that related to the settlement. There was a high risk of pyroclastic flow, a minimum ashfall depth of 30 cm and the threat of volcanic bombs and volcanic mud flow. Candidates usually got some of this right, but some named other places or peaks rather than volcanic hazards.
- (c) Delices would be least affected by an eruption, according to Fig. 4. Most candidates had the correct answer.

A south east or southerly wind could result in higher ash fall at Roseau. Again, candidates showed good understanding here, though some had named the wind from the opposite direction.

Question 4

- (a) For this question, candidates were presented with a photograph of a tropical landscape and were asked to describe the vegetation shown. There were some good responses here, with candidates describing the dense, tall, straight, broad leaf trees forming the canopy. Many also noted the bushes and the palms close to the road. Some candidates had clearly seen the tropical rainforest and then written a standard answer rather than specifically describing the photograph, but they did still get credit for valid points. This is perhaps the reason why few mentioned the grassy area of low growing plants in the foreground.
- (b) Candidates then had to say how vegetation in a hot desert environment would differ from that of Photograph A. Again, this was done well, with mention of sparse, low-growing, deep rooted, small leafed plants, and particularly succulents such as the cactus. Other ideas that were seen less frequently were few leaves, waxy leaves, thorns and a rapid life cycle.

Question 5

- (a) Fig. 5 showed the major cassava producing countries, grouped by continent. Candidates were first asked which continent was producing the most cassava. The correct answer was Africa, but a significant proportion of candidates responded with Nigeria, the largest producing country rather than the largest producing continent.

The largest producer in Asia was Thailand and this was mostly answered correctly.

Candidates also usually completed Fig. 5 correctly in response to part (iii).

- (b) In part (b), candidates were given information about cassava processing in Fig. 6. From this they could identify two types of pollution. Most correctly suggested water pollution and air pollution or dust, though a few put air pollution and dust as their two suggestions and thus missed out on the second mark.

Modern processing uses more water than traditional processing and candidates were asked to suggest reasons for this. Many pointed out that demand had increased, though candidates often relied on copying out phrases from Fig. 6 and did not always show understanding. However, some had noted that modern processing is mechanised and suggested that water would be needed for cooling or cleaning machines.

Question 6

- (a) Fig. 7 presented survey results of the activities of tourists to Scotland. Candidates had to first complete Fig. 7 and then answer some simple graph interpretation questions. This was mostly done correctly with 14 per cent participating in sightseeing, and cycling and golf showing equal results. The most popular indoor activity was museums / galleries and this was again an example of where candidates had not read the question sufficiently carefully, as a number had chosen the most popular activity overall which was hiking / walking.

- (b) Fig. 8 then presented further tourist data to compare. Boating and horse riding were the two activities shown on Fig. 8 but not on Fig. 7, and the usual mistake here was to write what was on Fig. 7 but not on Fig. 8.

The fact that boating and horse riding did not appear on Fig. 7 would not mean that no-one in Scotland had done these activities, but the mark here was for giving a reason why. There were some good ideas, but some candidates really struggled to express themselves clearly. Some popular valid suggestions were that these were not options on the Scottish survey, they were not done by the people who answered the Scottish survey or they gave results of less than 1 per cent.

It could be seen that hiking / walking was the most popular activity shown on both Fig. 7 and Fig. 8, but candidates were asked why it would be difficult to compare the data on the two graphs. Many appreciated that the two graphs used different units: percentage for Scotland and number in thousands for Ireland. Candidates seemed to have less trouble explaining this and it was generally well answered.

Section B

Question 7

- (a) (i) Whilst most candidates identified the correct definition of sphere of influence, significant numbers did choose the incorrect distractors, especially 'area around a town or shop'.
- (ii) The question proved to be a good discriminator. Many candidates referred to there being more or a variety of shops in a larger settlement, and stronger responses included geographical ideas such as comparison shops, specialist goods and higher order services. Weaker answers were typified by references to 'more people' and 'better services' which were too vague to credit. Also weaker candidates only repeated the definition of sphere of influence. Irrelevant answers referred to migration and jobs which suggested that the candidates had little grasp of the meaning of sphere of influence.
- (b) (i) Marks were also well spread in this question which discriminated between candidates who were familiar with the fieldwork methodology and those who weren't. Some candidates had clearly carried out pedestrian counts themselves and were able to show good understanding of the techniques. Candidates usually gained marks by referring to working in groups, timing the counts, and tallying the pedestrians as they passed the student. They were also able to distinguish between organisation of the pedestrian count and carrying it out. In contrast weaker answers focussed on safety issues and where the counts would be carried out. This latter information was included in the question. There was also a focus on post-fieldwork recording and graphing of results which could not be credited. A few candidates repeated the same ideas (and the same wording) in both the organisation and the carrying out sections.
- (ii) Most candidates plotted the bars accurately, with few omitting the question. A minority of candidates plotted 212 too low in Spandau Arcaden.
- (c) (i) The correct answer was most popular, but all distractors were chosen by some candidates, especially 'comparison goods are better quality than convenience goods' and 'comparison goods are bought more frequently than convenience goods'.
- (ii) Most candidates completed the pie graph accurately. Candidates who drew the segments in the wrong order should remember in future to follow the order of the key and, in this case, the other completed pie graph. On some responses the shading did not resemble that used in the key. Candidates need to be aware that this may result in them not being credited for inaccurate shading patterns.

- (iii) Generally candidates answered the question about the hypothesis conclusion well. Most correctly agreed with the hypothesis and many gave accurate paired data for another mark. However, far fewer candidates wrote a descriptive statement to support the hypothesis. They did not compare the situation by a statement such as 'there are more pedestrians and more shops selling comparison goods in Spandau Arcaden'. An error made by some candidates was to give the number or percentage of shops selling convenience goods in Pichelsdorfer Strasse, instead of shops selling comparison goods.
- (d) (i) Most candidates gained credit by explaining that the proposed question would invade a person's privacy, although some overstated this and simply referred to the question being rude or offensive, which did not gain credit. Many candidates did not score the further credit by giving a different reason such as the question would not inform the distance travelled. Some candidates said that the question was vague, rather than the answer would be vague as the question was not specific enough.
- (ii) Almost all answers were correct, but 12 per cent of candidates did attempt to shade the blank section, this not gaining an accessible mark. A minority of candidates lacked accuracy in shading by using a cross symbol rather than a circle.
- (iii) This section produced the lowest scoring answer in question 1. Many candidates were vague in their advantages and disadvantages, stating that they were 'easy to see' or 'visually appealing', and that they were 'time consuming' or 'difficult to draw'. The most popular scoring answer was the disadvantage that specific or exact values were not plotted. Some candidates referred to making comparisons as an advantage but few stated that the pattern of shading allowed comparisons to be made between areas.
- (iv) This question was a challenging test of understanding in supporting the hypothesis. Most candidates correctly suggested that the hypothesis was correct, although few scored full marks for their justification of this conclusion. The most common supporting evidence contrasted the number of boroughs from which people visited the two shopping centres, coming from 12 or all boroughs to Spandau Arcaden and from six boroughs to Pichelsdorfer Strasse. Relatively few candidates used data which compared no visitors from some boroughs to Pichelsdorfer Strasse with a specific percentage from the same borough to Spandau Arcaden. A common error made by weaker candidates was to compare data from hypothesis one, i.e. the number of people visiting the two shopping centres and the number of different types of shop.
- (e) (i) This was a different type of question to previous years which replicated a fieldwork task. Most candidates identified and matched the different types of land use in the key. Some did not follow the instruction to use the types of land use provided, and instead they gave their own examples of goods and services, for which they gained no credit.
- (ii) Many candidates scored full marks as they successfully used the key to shade the different spaces. A common confusion was that the photography shop was an entertainment facility rather than a shop selling comparison goods. However, candidates were not penalised as the mark scheme allowed one error without penalty.

Question 8

- (a) (i) The question was answered poorly. Many candidates did not consider the context of the question which was fieldwork on a beach. The question was not asking for a weather measuring instrument. Nevertheless many candidates suggested a wind vane without considering that such an instrument might not be available on a beach. Simple ideas which were accepted involved using materials such as grass which could be thrown into the air to see which way it blew, or wetting a finger to see which side became colder from the wind. Many candidates who made these suggestions did not follow them up by stating that a compass would also be required to work out the wind direction.
- (ii) The correct answer of 'waves approaching the beach' was most popular, but a significant proportion suggested 'direction of the tide'.

- (iii) The process of longshore drift, although fundamental to the study of how the sea transports material, was not explained well by many candidates. Better candidates did gain credit for reference to the angle of swash at it approaches the beach, the perpendicular return of backwash down the beach, and movement of material along the beach. The crucial factor of wind direction was often omitted from these answers. Weaker candidates tried to explain the process by describing what was shown in the diagram, e.g. 'the pebble moves from position 1 to position 2 and then goes to position 3 ...etc.' but showed no understanding of why this movement occurred.
- (b) (i) This was a challenging graph completion question because of the unusual scale. Nevertheless many candidates plotted it accurately. Some candidates did not realise that they should measure from zero downwards and so measured 0.88 from the bottom axis.
- (ii) Few candidates were able to give two acceptable ideas to improve the reliability of measuring. Many answers just suggested 'measure more times' or 'measure in lots of places along the groyne', thus omitting the crucial idea of calculating the average measurement. Few candidates suggested that a good idea would be to ask another student to check the accuracy of the measurement.
- (iii) Most candidates agreed with the hypothesis and to some extent supported their decision with appropriate evidence. The question proved to be a good discriminator as the supporting evidence needed to be appropriate. Good answers gave accurate statistics and referred either to the higher beach on the south side of the groyne or the bigger distance from the top of the groyne to the beach on the north side of the groyne. Weaker candidates struggled to support their decision and gave the wrong data pair in the context of their reason, e.g. they described the difference in height of the beach but gave data to show the difference in height between the top of the groyne and the beach. Some candidates tried to justify their decision by comparing the three groynes along the beach rather than the north and south sides of each groyne.
- (c) (i)(ii) Most candidates correctly identified locations from the table. A few mixed up the locations and consequently gave the answers in the wrong sub-section.
- (iii) The simple task of plotting the bar graph was not attempted by 10 per cent of the candidates. Candidates must read the question paper carefully so that they do not omit graph completion questions. Candidates who plotted the bar usually did so accurately.
- (iii) Generally candidates did not answer the question well. Many candidates gained credit for suggesting that defences were built in order to protect residential and tourist areas. Few candidates expressed appropriate ideas about why the caravan site and farmland were not protected. Some candidates suggested ideas such as variation in rock type or wave strength which were not supported by any evidence in the map or table. The weakest answers merely listed different land uses with no attempt to explain why some were protected whilst others were not.
- (d) (i) The question from the students aimed to find out if there was any point in carrying on with the questionnaire, because if the interviewee did not know about the coastal defences there was no point carrying on. Better candidates realised the significance of a negative response. Weaker candidates stated what information would be gleaned from the question, i.e. 'to find out if they knew about the defences' but did not develop their answer by referring to whether it was worthwhile to continue with the questionnaire.
- (ii) Again this question was answered quite poorly because many candidates did not realise that the answers referred to information which would be common to all questionnaires, such as age and gender of the interviewee, and the location and time of the questionnaire. Some candidates suggested different questions which could be included such as 'Where do you live?' and 'Are you a tourist or local?' These would have formed the answer to a different examination question.
- (e) (i) This graph completion question had the highest rate of omission on the paper. Candidates who did attempt the question were usually accurate in plotting, although a few were careless in plotting the first dividing line at 73 per cent not 63 per cent. A small number of candidates did not understand the technique of plotting a divided bar and began to plot each category from the same percentage point (45 per cent).

- (ii) Many candidates began their answer by stating that they agreed with the hypothesis, even though they were told that information in the stem of the question. A few candidates even contradicted the conclusion given. Good candidates realised that supporting evidence had to be grouped, so adding together the 'agree' and 'agree strongly' opinions. Individual statistics such as '70 per cent agree strongly that defences are needed' were not credited because they did not give an overview of the support. Weaker candidates used terms such as 'more' and 'lots of' which are vague in relation to statistical data.
- (iii) The final question was the most challenging and identified the best candidates who were able to assimilate the two sets of data. Most candidates recognised the significance that local people wanted more defences but did not want to pay for them. However, some failed to use appropriate data or 'most' and 'few' to quantify this dichotomy. Few candidates recognised or could explain the conflict created by this in terms of who else would pay for the defences.