

GEOGRAPHY

Paper 2230/01
Geographical Themes

Key messages

- Candidates must study the command word in each question very carefully and ensure that their answer fulfils the demands of the command word in the question.
- It is also important that candidates study the number of marks per question very carefully and use this as guidance for writing the response. For example, 3-mark questions will require three different points.
- Case studies and examples should be included within the main body of the 7-mark answer and not just added on at the end. The examples used should be the main focus of the answer and not seen as an add on at the end of the answer.
- When questions are asked relating to graphs, candidates should focus on how the graph has changed over the time period, the actual change in the data and quote the difference between the data at the start and end of the graph. This is a good general way of answering graphical questions.
- Units must always be included in responses – if units are not included the candidate will not receive the mark.

General comments

Candidates had been prepared well for the examination and there was evidence of good understanding of geographical processes and geographical theory. Candidates followed the instructions listed on the front of the examination paper and answered one question from each of the three themes. Candidates achieved very highly in the questions that required calculations and the ranking question.

Comments on specific questions

Theme 1: Population and settlement

Question 1

- (a) (i) There were two separate points required for this answer and this focused on the terms 'international' and 'voluntary'. Candidates answered this very well, understanding that international migration was moving from one country to another and that voluntary was people moving through choice and not being forced. Two marks were awarded very often in this question.
- (ii) The command word in this question was 'explain' and two developed impacts were required. The focus of the question was on the country of origin and the positive impacts that would have occurred in this country due to international migration. Quite frequently candidates misread the question and included reference to the positive impact of international migration on the destination country referring to ideas such as more people would do the unwanted jobs, more people would be present and so labour costs would be reduced and there would be a wide variety of different cultures and religions present in the country. However, answers such as these did not receive credit. When candidates did focus on the positive impacts to the country of origin, correct answers included ideas such as less pressure on healthcare and education, less competition for jobs and less named pollution in the country. Making a simple point resulted in one mark being awarded and the second mark was awarded for development of the point made. Some candidates correctly listed four positive impacts in the origin country but only two marks could be awarded for two simple points without development.
- (b) (i) This question was very well answered, and many candidates calculated the difference in birth rate per 1000 people between the two countries correctly.

- (ii) Three separate points were required to achieve full marks. Candidates answered this question well. Correct answers referred to the one-child policy, the increase in female education which also resulted in more female employment, the high cost of having children and reference to either the availability, affordability or education on family planning/birth control. Some candidates answered the whole question focusing on the one-child policy, but this only received one mark.
 - (iii) Candidates could answer this question stating 'yes' the falling birth rate will be a problem for the country in the future, or stating 'no' there will not be a problem due to the falling birth rate. No credit was given for stating the decision and candidates could include points for and against within the answer. Those answers which agreed that the falling birth rate would be a problem focused primarily on the shortage of workers in the future and that less people would be employed in the armed forces. Answers which stated that there would not be a problem highlighted that China was currently overpopulated and that this would take pressure off resources as well as healthcare and education.
- (c) (i) Some candidates did not fully understand what the question was asking and referred to data from Fig. 1.2. The focus of the question was on the data that was needed to produce a graph showing natural population growth and the only answers that were acceptable had to refer to birth rate and death rate. Both pieces of data were required to gain the mark.
- (ii) With a question such as this, candidates should always start with the overall change, which in this case was a decline and then give the statistics to support this. This would result in two marks being awarded. Candidates could then work out the change, and this would receive another mark reaching the maximum three marks available for this question. Reference to the units (percentage) was required within the answer.
- (d) (i) There was a slight misunderstanding from a number of candidates relating to the term 'home-produced food in Brunei'. This term was taken from the syllabus and refers to the food that is grown and produced within the country of Brunei. However, candidates who misunderstood the term referred to food that was produced within the home and stated that people in Brunei did not always have time to cook or enjoy cooking and instead ate in restaurants or prepared fast food. Answers such as these received no marks. The focus of the question was on human reasons to explain why there was a shortage of food grown and produced in Brunei and correct answers referred to a lack of farmers and people wanting to work in the farming industry, people living in urban areas rather than in rural areas and that food imports were affordable and relied upon so less home-produced food was required. No credit was given to answers referring to physical factors such as relief of the land, climate of the country or the soil type.
- (ii) When candidates read the question thoroughly and analysed what the question was asking high Level 2 marks were awarded. Two clear strategies had to be described and then an evaluation of how effective these two strategies were in increasing the agricultural production in Brunei. It was also important to bring examples into the answer to support points that were made. General points referred to educating young people and encouraging these young people to become farmers in the future, introducing more machinery and fertilisers and pesticides, and a desire to become self-sufficient in certain products including poultry and egg farming. However, these points had to be developed and examples included to support the points made to achieve the higher marks in Level 2. Level 3 was rarely achieved as candidates often struggled to refer to specific examples. Examples could have referred to the research conducted with the Philippines Research Institute to develop a local rice variety that is suitable for growing in Brunei, or that the government announced in March 2013 that 1000 ha of land will be developed for livestock breeding and animal farming. Many answers remained at the top of Level 1 or just moved into Level 2 as simple strategies were referred to without any evaluation of the effectiveness of the strategy or reference to examples.

Question 2

- (a) (i) This was well answered and candidates correctly referred to ideas such as rural–urban migration, lack of jobs, lack of education or lack of healthcare in rural areas.
- (ii) In order to achieve the marks for this question, candidates had to refer to the photograph in Fig. 2.1. Common correct answers made reference to job opportunities, examples of the jobs and the public transport available for the opportunities. Most candidates referred to the traffic congestion or that there would be air pollution or noise pollution for the problem.

- (iii) Overall, this question was not answered well. In order to help candidates with the geographical term 'counter-urbanisation' a description of the term was given in the question stem. Candidates then had to explain how affluence (greater wealth) and environment have contributed to this process. Common correct responses for affluence referred to the fact that there is more car ownership as people can afford their own car and can commute and that as people become wealthier, they want a larger house with a bigger garden in rural areas. With the environment, correct answers referred to the fact that there was less air and noise pollution in rural areas.
 - (iv) This question was answered well with candidates understanding that there would be more air pollution or noise pollution in the rural areas or that deforestation and damage to habitats may have taken place to enable the development of the rural area. Two marks were often awarded.
- (b) (i) This question was not answered well but candidates who had clearly learnt the definition achieved the mark. The focus of the answer was to refer to the overall well-being of people. No credit was given for points such as 'how good their life is' or 'the way people live their lives'.
- (ii) This question was answered very well and most candidates got full marks. Candidates read the question correctly and were confident with their ranking skills.
 - (iii) As this question was worth four marks, four separate points were required. However, although candidates did make some good points many only achieved two marks as there was not enough detail to gain the additional marks. Common correct answers referred to people being educated about eating a balanced diet, more doctors and medical staff could be trained, and education enables people to get jobs which are higher paid and so they can afford healthcare and a better diet. Simply referring to the fact that people can get better jobs received no credit as the link had to be made to the fact that this would increase their income and therefore more spending could take place on things which would increase their life expectancy.
 - (iv) As with **Question 1**, two different strategies had to be described in this question. These two strategies had to be evaluated with regards to their success in improving the quality of life in LICs and examples had to be included within the answer to support the strategies and the evaluation. There were often simple strategies such as increased spending on healthcare and education referred to without any clear description or evaluation of success and many answers remained within Level 1 or just achieved the lowest mark in Level 2.

Theme 2: The natural environment

Question 3

- (a) (i) This question required candidates to refer to the pattern of temperature and rainfall separately. Often these were answered together which made it difficult to score marks. The focus of the question was on the fact that temperature was high and remained constant all year whereas rainfall, despite being high, did have more fluctuations. Those candidates that answered about the temperature and rainfall separately generally achieved the two marks.
 - (ii) This question was answered reasonably well, with some candidates acknowledging that the answer was high. The question asked for one word so those candidates that put two words did not receive any credit.
 - (iii) With a question such as this it is always very important to simply describe what can be seen. Common correct answers referred to the fact that there were many clouds and that they were white.
- (b) (i) Many candidates correctly answered that this description referred to biological weathering. The common incorrect answers stated physical weathering.
- (ii) Candidates found this question quite difficult. Many did not respond to this question and left it blank with a no response answer. With regards to geology, the focus was on the fact that some rocks such as granite do not weather as easily as others such as sandstone. With regards to relief, the focus of the question was on the fact that temperature decreases as relief increases so freeze–thaw weathering will take place.
- (c) (i) This question was answered well and many candidates acknowledged that the tropical rainforests take in carbon dioxide and release oxygen and gained two marks.

- (ii) The focus of the question was the overall change so any reference to changes in between received no credit. Many candidates scored at least one mark. Candidates who referred to the overall decrease and stated the statistics received the two marks available.
- (iii) One mark was reserved for the building of settlements and one mark for the building of dams. Common correct answers for the building of settlements referred to the fact that there were more people and so more land was required, timber was required for building and that forest land was cleared for housing. For the building of dams, marks were commonly awarded for recognising that large areas were required for the generation of HEP and that the building of dams helped to control flooding.
- (iv) Candidates had to describe the two named strategies and evaluate how effective they were in conserving and managing tropical rainforests as well as referring to specific examples within the answer. Candidates that covered all these elements achieved highly. Often the strategies were not described in sufficient detail, and no evaluation took place with regards to their effectiveness. Candidates struggled to include relevant examples to support their answer and as a result found it difficult to access the higher Level 2 marks. Some candidates referred to their own strategies and not the named strategies of 'ecotourism and fire control' and received no credit.

Question 4

- (a) (i) This question was answered well, with many candidates scoring at least one mark. With a question such as this it is very important that candidates study the resource carefully before answering the question. Common correct answers referred to the fact that volcanoes were close to plate boundaries and appeared in a linear pattern. No credit was awarded for reference to the Pacific Ring of Fire as this was not labelled on Fig. 4.1.
- (ii) Again, many candidates scored at least one mark. To achieve credit, candidates had to recognise that the area contained many volcanoes and that these volcanoes were in the shape of a circle. Reference to the fact that the volcanoes were in a ring shape received no credit as this was contained within the question stem.
- (iii) Most candidates were able to recognise that this was a conservative or transform plate boundary.
- (iv) Candidates responded very well to Fig. 4.2, and many achieved three or four marks. With regards to the sturdy boots/shoes, there had to be recognition that these were there to protect feet. With the respiratory protection the main emphasis was on protecting people from toxic gases. The first aid kit was to provide treatment for minor injuries, and the bottled water was to keep people hydrated.
- (b) (i) Candidates that had revised this thoroughly achieved the four marks quite easily, showing good geographical knowledge.
- (ii) The majority of candidates were able to recognise that the river landform was a meander and gained the mark.
- (iii) Candidates found this question quite challenging, and many struggled to achieve more than one or two marks. When candidates had revised this section thoroughly marks were gained quite easily but often this question was not very well answered. Simple points such as the narrowing of the neck of the meander and the river cutting through gained credit.
- (iv) When candidates referred to a named river flood event, they were able to score marks quite easily. However, often general points were made such as people were killed or injured, people were made homeless or farmland was destroyed. Those candidates that referred to a named river flood were able to describe the impacts of that flood on the people and were often able to evaluate the effectiveness of the management strategy in reducing the impact of the river flood event. When candidates answered in this way, examples were used frequently to enhance the quality of the response. Common responses referred to the floods in Bangladesh. Reference to flooding from tsunamis was not the focus of the question and so could not gain credit beyond simple points.

Theme 3: Economic development

Question 5

- (a) (i) Most candidates were able to acknowledge that this was reducing energy use and gained the mark for this question.
- (ii) Many candidates achieved two marks for this question and referred to the use of public transport instead of driving cars and turning off appliances when not in use.
- (iii) Candidates found this question quite difficult, and the vast majority achieved lower marks for their answers. With regards to the use of technology, marks were awarded for reference to how LED lights and the use of online shopping and meetings instead of travelling resulted in energy conservation. For education, candidates recognised that this raised awareness on the importance of energy conservation, but many did not achieve additional marks beyond this.
- (b) (i) This was very well answered, with most candidates correctly naming one type of renewable energy source.
- (ii) Candidates found describing the distribution difficult and as a result this question was quite low scoring. Four separate points were required to gain full marks, but many candidates did not include four separate points in their answer. Common correct answers referred to the fact that the countries which produced 80–100% of their electricity from renewable energy sources were spread out, were mostly in the southern hemisphere, mostly in Africa or South America with a few in Europe or Asia.
- (iii) This question was answered well, and it was clear that candidates were confident answering a question such as this. Three correct answers were required, and common answers included that alternative energy sources will not run out, will result in less air pollution, reduce global warming and cause less acid rain.
- (c) (i) Overall, this question was not answered well. No marks were required for the description of the employment structure but rather the reasons for the employment structure. When marks were awarded, reference was made to fewer people prefer to work in the primary sector due to the low wages or hard and challenging work, fewer workers were required in the secondary sector as machinery replaced workers and finally that there was more education so people could get employed in tourism and banking in the tertiary sector.
- (ii) Candidates were able to describe the benefits of the oil and natural gas industry for the development of Brunei and achieved highly in this part of the question. However, many answers focused primarily on this without evaluating the importance of the oil and natural gas industry for the future development of Brunei. As a result, while many candidates were able to get into Level 2, they struggled to get beyond Level 2 and 4 marks as only one part of the question was answered.

Question 6

- (a) (i) Candidates answered this question very well and the vast majority acknowledged that Japan was the correct answer and received the mark.
- (ii) This question was answered well and many candidates acknowledged that the continent was Asia and gained the mark.
- (iii) The focus of this question was to describe three natural attractions of Brunei for tourists. However, many candidates simply named the attractions and so no credit was given. When an attraction was named with a description a mark was awarded. Common correct answers referred to Ulu Temburong National Park, which is a large area of protected rainforest, the Pantai Muara beach where people can swim and watch sunsets and Tasek Lama where people can go and see the waterfall.
- (b) (i) This was very well answered, and many candidates calculated the correct figure of 75 and included the units (%).
- (ii) Many candidates gained one mark for referring to the fact that trains were often now electric.
- (iii) This question was not answered well with many candidates incorrectly stating that another greenhouse gas was carbon monoxide or sulphur dioxide. Correct responses often referred to methane or nitrous oxide as the other named greenhouse gas.

- (iv) Candidates answered this well and often included four separate points. Common correct answers referred to ice melting, sea level rise, forest fires, heatwaves and drought.
- (c) (i) The vast majority of candidates identified that energy was the most polluting industry and achieved the mark for this.
- (ii) Many candidates correctly calculated the percentage that the fashion industry contributed to greenhouse gas emissions and received the mark.
 - (iii) Candidates found this question related to smog quite difficult and many incorrectly referred to visual pollution which received no credit. Common correct answers for smog referred to the fact that acid rain was caused and rivers and lakes became acidic. Candidates found the effluent part of the question easier and received credit for referring to water pollution and the harm to marine life.
 - (iv) It is very important that candidates refer to the two strategies that are listed and do not refer to their own strategies. Candidates found it challenging describing the two strategies listed, in particular pollution permits. With regards to legislation, candidates often referred to the fact that laws were passed to control the pollution in the country, but the description was often limited. Candidates found it challenging to evaluate the effectiveness of the strategies and many candidates gained no more than mid-Level 2 marks. When candidates described the two named strategies, included examples and evaluated the effectiveness of the strategies Level 3 marks were awarded. Examples referred to named countries as well as health acts that were passed.

GEOGRAPHY

<p>Paper 2230/02 Geographical Skills</p>
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Key messages

- Giving a precise six-figure grid reference is a difficult skill that needs to be practised.
- Many candidates did not understand scale and distance.
- The terms 'relief' and 'drainage' were unfamiliar to quite a few candidates.
- Candidates should have the necessary equipment for the examination (see page 30 of the syllabus: pencil, eraser, ruler, protractor and calculator).
- It is very important that candidates work carefully through the paper, being sure to read every question, and not just answering those with lines to write on.
- Care must be taken when reading data from graphs to ensure that it is precise and the correct units of measurement are used.
- When asked to 'explain' this can rarely be done in a few words; it requires reasons why and not description.

General comments

The best candidates scored well in all three sections of the paper.

Map skills which were generally good included: four-figure grid references, using the key to identify features, and describing vegetation and land cover.

Completion and interpretation of the various types of graph was very good. These included a line graph, pie graph, bar graph and dispersion graph.

The quality of responses to **Section C: Geographical investigation** is improving. In particular, the conclusions have noticeably improved. Almost all candidates attempted a conclusion and gave arguments to justify it. To gain full marks, candidates also need to quote data from the relevant Figures and Tables to support their conclusion.

Comments on specific questions

Section A: Mapwork skills

Question 1

Most candidates were able to competently analyse the 1:50 000 map extract of an area of Norway. The high marks achieved by some candidates were due to good preparation and practice, probably using past examination papers and map extracts.

- (a) (i) Almost all candidates were able to name an island in grid square 7578.
- (ii) The six-figure grid reference was correctly given by many candidates, but others were not precise enough to gain the mark. Candidates should be reminded that the first tenth of a grid square is 0 not 1, so the correct answer was 748792 rather than 749792. Giving a precise six-figure grid reference is a difficult skill that needs to be practised.
- (b) (i) The majority of candidates accurately stated the height of the lake.
- (ii) Most candidates correctly identified feature B as an historical site.

- (iii) Care should be taken when plotting features. Candidates who used a ruler and pencil to draw the power line onto Fig. 1.1, using the grid references provided, were able to accurately locate the feature compared to those who only looked at the map and approximated it. A significant number of candidates did not attempt this question.
 - (iv) Many candidates did not know that 1 grid square on a map represents 1 square kilometre (km²). This is the same whether the scale is 1:25 000 or 1:50 000. They did not need to measure in centimetres with a ruler and then try to convert this into km², they only needed to count the number of grid squares, in this case 12, so the correct answer was 12 km².
- (c) (i) Rivers flow from higher land to lower land and usually end in a lake or the sea. The river Gausa flows into Lake Mjøsa so it is flowing from west to east. The majority of candidates correctly answered this but there were a significant number of candidates who were unable to work this out or maybe did not know their compass points.
- (ii) Stronger candidates measured the distance along the river Gausa in cm then converted it to km either by using the linear scale shown on the map extract or by dividing by 2 because they knew that on a 1:50 000 map 2 cm = 1 km. Many weaker responses did not show understanding of scale and distance. These are maps skills that improve with practise.
 - (iii) The majority of candidates could name another river that flows into Lake Mjøsa.
 - (iv) In order to answer this question about the nature conservation area, candidates needed to refer to the key. Some candidates were unable to provide an answer to this question suggesting that they did not understand it.
- (d) Candidates were very skilled at using the map extract and key to give map locations for the types of tourist accommodation shown in Table 1.1. Many candidates scored full marks.
- (e) Stronger responses had detailed descriptions of the physical features named in Table 1.2 whilst weaker responses often had one- or two-word answers. The terms 'relief' and 'drainage' were unfamiliar to quite a number of candidates.
- (f) The wording of this question 'name the settlement' was not clear to many candidates who instead stated the type of settlement. It was a difficult question that required candidates to compare a satellite image to the map extract to locate the area shown in the image and then name it using the map extract. Only a small minority of candidates were able to do this.

Section B: Geographical skills

Question 2

This Brunei-based question which included a line graph of population growth and pie graphs of age-distribution was generally well answered by the majority of candidates.

- (a) (i) This description of population change in Brunei was well answered by the stronger responses which used the significant changes in the line graph as the start and end points for description and quoted precise data from Fig. 2.1 to gain the three marks available. Weaker responses described the changes decade by decade instead of picking out the main trends, or gave data that was not precise, such as <20 000 for 1900 and nearly 450 000 for 2020.
 - (ii) The line graph, Fig. 2.1, was generally plotted well but a few candidates lost marks for not accurately locating 490 000 at 2050.
- (b) (i) The pie graph, Fig. 2.2, needed to be plotted and shaded in the same order as the two other pie graphs. Many candidates plotted accurately but in the wrong order. Shading has generally improved, with almost all candidates using a pencil and ruler.
- (ii) This question required a comparison of the change in percentage of two age groups. Some candidates only wrote about change in one of the age groups whereas others quoted the data incorrectly so did not gain any marks. The most common correct point of comparison given was that the population aged 14 and under decreased whilst the population aged 15–64 increased.

Care must be taken when reading data from graphs to ensure that it is precise.

- (iii) A variety of correct reasons were given for the change in the population aged 14 and under.

Question 3

This question on energy use included a variety of geographical resources.

- (a) The choropleth map of energy use per person in Africa, Fig. 3.1, produced very mixed results. A number of stronger responses lost marks by not stating the units, kWh. Even if the locations and figures were accurate the descriptions had to include the units of measurement. Other responses scored two marks for stating that the lowest energy use was at the Equator and the highest in the North and South of Africa. The lines of latitude were very effectively used by many candidates to describe the pattern of energy use in Africa.
- (b) This question using the 'Energy Ladder' in Fig. 3.2 was not well answered as only a few candidates focussed on the word 'changes'. Many candidates only described the type of energy used at each income level without using any words which described a change.
- (c) (i) Fig. 3.3 needed to be studied very carefully, especially if candidates were not confident which energy sources were renewable. The information needed to rank the renewable energy sources in order of importance was included in the graph, along with the %, however some weaker responses included non-renewables.
- (ii) The calculation required in this question was easily done by most candidates, although a few did not include the units, in this case, %.
- (iii) Stronger responses had three separate points to explain why it is important to reduce the global use of fossil fuels. Weaker responses had brief descriptive points such as 'to reduce global warming', 'to stop pollution', 'to improve health' with no attempt at explanation. A clear explanation can rarely be given in a few words.

Section C: Geographical investigation

Question 4

This Geographical investigation on a river was very well answered by many candidates, evidence perhaps that they had undertaken some fieldwork or virtual fieldwork and/or prepared well for the examination by using past examination papers to familiarise themselves with the skills involved in different types of Geographical investigation.

- (a) Responses to this question showed that some candidates did not know how to formulate a hypothesis.
- (b) Completion of the risk assessment in Table 4.1 showed that many candidates had a good understanding of ways to reduce risk when undertaking fieldwork.
- (c) (i) There was a wide range of answers to this question. The description of how to measure width and depth was straightforward for candidates who had done this type of measurement, either in the field or the classroom, but weaker responses lacked detail or clarity. Most pieces of the fieldwork equipment were mentioned, although not always in the correct order. The ranging poles were often placed along the river rather than across the river from bank to bank. There were some excellent responses which clearly described how both width and depth were measured using the equipment provided.
- (ii) A significant number of candidates did not attempt this question which suggested that some candidates did not know how to calculate the average depth. Overall, this question was not answered well.
- (iii) Almost all candidates were able to complete the bar graph accurately and neatly using a pencil and ruler.

- (iv)** This AO3 Judgement and decision-making question was very well answered by the majority of candidates who understood the requirement to make a decision and then support their conclusion with evidence. When data was quoted from Table 4.2 and Fig. 4.2 it was essential to include the units of measurement used, in this case metres (m) for width and centimetres (cm) for depth.
- (d)(i)** The majority of candidates gave the correct method of sampling from the choices available.

 - (ii)** Most candidates correctly identified the piece of equipment shown as callipers.
 - (iii)** A significant number of candidates did not attempt this graph completion question. Perhaps being unfamiliar with the method of presentation of the data, or the question being overlooked. It is very important that candidates work carefully through the paper, being sure to read every question, and not just answering those with lines to write on. Those that did answer the question often scored the two marks available.
 - (iv)** For this question, when asked to make a conclusion, candidates needed to state that the hypothesis was 'supported', 'correct', 'true', 'confirmed', 'valid', or words to that effect. It was not sufficient to state 'yes' or 'agreed'. Stronger responses supported the conclusion with evidence of site numbers and data results. Weaker responses did not include the units of measurement (cm), only repeated the hypothesis, or tried to explain the data. Candidates who did not quote data from Table 4.3 or Fig. 4.4 were unable to gain full marks. Several candidates only referred to the data shown in Table 4.3 for Site 2 only, instead of Fig. 4.4 which showed the results for all three sites.