GEOGRAPHY (BRUNEI)

Paper 2230/01
Geographical Themes

Key messages

- Ensure that candidates read the questions very carefully and identify the command words in each of the questions. This is very important with terms such as 'describe' and 'explain'. There is a list of command words in a table at the back of the syllabus (page 31) and candidates should be familiar with what all of these words mean so as their answer contains the required focus.

- Study the number of marks per question and write the answer based upon this. For example, in most cases a response to a 2-mark question should be quite short and to the point whereas a response to a 4-mark question should contain more detail. However, this is only a general rule and does also depend upon the question itself and the command words used. For example, a 4-mark question with the command word 'identify' would not require much detail.

- A question worth 2 marks will generally require two different points whereas a question with 4 marks will require four separate points. Quite often candidates write different sentences, but these can all be on the same point, so candidates should be advised to write a sentence on a separate point rather than a continuation of what has already been stated and has already achieved the credit.

- The use of bullet points is very rarely seen now which is very encouraging and candidates must continue writing in full sentences.

- Study figures and tables very carefully – many of the answers will be found in these resources or they should be used to provide the foundation of the response.

- Continue to include evaluative statements in the 7-mark questions but use examples more to support the evaluation stated. Examples should be included within the context of the answer and not just stated at the end of a response. An example/examples (depending on how the question is asked) should be integral to the answer rather than more of an afterthought.

General comments

It was very clear to see that candidates had been well prepared for this examination and credit must be given to both teachers and the candidates themselves for this. Lots of evidence of good geography was seen across the paper, from all around the world and within Brunei itself, and candidates are adapting well to the demands of the new syllabus. There were very few issues with the rubric and very few no response answers which was really encouraging to see. The 7-marks questions are still proving to be quite challenging, especially in Theme 1 Population and settlement. Candidates achieve the top of Level 1 or the bottom of Level 2 quite easily as they are able to show an understanding of the content asked and are able to refer to a simple example/examples and provide some form of evaluation. However, to progress further, examples must be more central to the answer and used to support the evaluation, rather than simply stating e.g. Japan. Nearly all candidates managed to complete the paper in the 2 hours provided so timing was not an issue and the extension of the paper by 15 minutes has proved to be very useful to candidates.

Comments on specific questions

Theme 1: Population and settlement

Question 1

Nearly two thirds of candidates chose to answer **Question 1** and a wide range of marks were achieved.

(a) (i) This opening question was generally not answered very well, especially the first part – definitions of 'site' were quite general and non-specific, and often included a more general definition of settlement. The definition of 'situation' was slightly better with more candidates getting the idea of it being the surrounding area, though some candidates did think it referred to the general conditions of the settlement.

(ii) Mostly answered correctly with at least one of the two factors correct in most responses – but other options, especially water and soil were frequently seen.

(iii) This was the most successfully completed part question in 1(a) and most candidates gained at least 2 marks out of 4. Most commonly correct answers were water supply as an advantage and flooding as a disadvantage. Some answers drifted into pollution resulting from industry which was not credited as the question was asking about early settlements. Reference to the river being attractive to tourism also appeared frequently but again was not credited as the focus of the question was on early settlements.

(b) 'Compare' was the main command word in this question and unfortunately many candidates did not acknowledge this. Many simply wrote about Zone A and then Zone B without clear comparisons and could not achieve the marks in this case. Either similarities or differences would be accepted but stand-alone statements without any attempt at comparing the zones in the photograph did not receive credit. Many candidates had the right ideas and recognised how wealth in the two areas would vary but only rarely was this related to the buildings in terms of either cost or affordability. Instead, more general wealth, employment and lifestyle differences were explained. Some saw the photograph as urban v rural or based on location with proximity to the CBD in the high-rise buildings.

(c) (i) A large number of candidates answered North America rather than South America. This was perhaps a misunderstanding or misreading of the question and candidates just went for the continent with the highest value overall.

(ii) This was mostly answered correctly, even by those giving the wrong answer in **1(c)(i)** but this was credited if the answer was correct so as candidates were not double penalised. When the answer was incorrect, one commonly seen error was to total all three percentage bars.

(d) (i) A large proportion of candidates did not understand the term counter-urbanisation, which unfortunately meant those candidates answered **1(d)(ii)** incorrectly. The majority of erroneous answers referred to movement in the opposite direction (rural to urban) or sometimes referred to movement between urban areas or even international migration.

(ii) Because of the high incidence of incorrect answers to **1(d)(i)**, this question was often not well answered. Some candidates were able to gain Level 1 marks, but it was very difficult to award marks when counter-urbanisation was not fully understood. Those candidates who had clearly understood counter-urbanisation were able to articulate reasons or to evaluate effects quite confidently. However, for those candidates addressing counter-urbanisation correctly, there was often some imbalance in their response with either reasons or effects making up the bulk of the content and it was rare to see both addressed equally or in any depth. Responses were also lacking in examples, and this prevented the better answers from progressing to Level 3.

Question 2

Approximately one third of candidates answered **Question 2** and outcomes were very similar to that for **Question 1**.

(a) (i) Many candidates achieved 1 mark for this for referring to farming in general but rarely was reference to growing crops and rearing animals seen together.

(ii) Very well answered with the vast majority of candidates acknowledging that goat was the answer. On the rare occasions that answers were incorrect, eggs was the common response.

(iii) Again, a good understanding shown and all that was required was the number 4. Many candidates answered 4 and then wrote out the 4 different food products and although this was fine and did not take away from the mark, time was wasted by the candidates by doing so.

(iv) This question was a real opportunity for candidates to show what they know about the strategies used in Brunei to increase agricultural production but unfortunately many did not grasp this opportunity and did not achieve the highest marks. The mark scheme contains a wide range of examples that could have been included and although development marks were awarded, there needed to be at least three well developed ideas or five separate points in order to achieve full marks. 'More farmers' was not credited as the emphasis had to be on trained or educated farmers gaining knowledge of agricultural techniques.

(b) (i) The key term 'distribution' continues to confuse candidates and perhaps this is a term that needs more attention in the classroom and when revising. Those that did understand the term gained 3 marks quite easily, but many answers only gained 1 mark. Some candidates drifted off and discussed other rice production in tonnes, such as 2000–2600, which achieved no credit as this was not the question.

(ii) This was well answered, and candidates were able to describe the difference between these terms successfully.

(iii) The focus of this question was the importance of rice farming on the people living in Southeast Asia and so reference to food supply, jobs, incomes, and cultural importance all received credit. Four separate ideas were required but often candidates stopped at only two ideas, which meant that only 2 marks could be awarded. Any reference to the economy of the country and exporting did not receive credit as the focus of the question was on the people themselves.

(c) Many candidates simply referred to the ideas that they had mentioned in **2(a)(iv)** which only gained maximum Level 2, 3 marks, as there was no development or examples. Candidates found it quite difficult to access the higher Level 2 marks and many did not have an example which they could refer to and use to access the higher marks. It was good to see many candidates stating clearly that the management strategies had been successful but more evidence from examples was needed to support this within the content of their response.

Theme 2: The natural environment

Question 3

Only one quarter of candidates attempted this question with questions relating to plate tectonics (**Question 4**) traditionally being more popular.

(a) (i) Many candidates recognised that the arrow pointed to the 'eye' of the storm to gain the reserve mark. Other answers referred to the central area or the middle part which did not receive credit. However, most candidates did not gain more than 1 mark as many responses described typhoon conditions more generally, not recognising that they would be different in the eye.

(ii) Most candidates gained just 1 mark for directly lifting information from Fig. 3.2. However, there were a few attempts made either to extend or to link the points, particularly when using the destruction of buildings as a base for loss of jobs or homelessness.

(iii) Performance on this question was reasonably good although very few candidates were seen achieving all 5 marks available. There was recognition that monitoring and tracking a typhoon enabled advanced warnings to be given and that might prompt evacuation, provision of shelter etc. Generally, management strategies were understood and well covered. The mark scheme contains a wide range of points that could have been included and this is a perfect example of where candidates wrote two or three points and gained 2/3 marks, but they must include five separate ideas to gain the full 5 marks.

(b) (i) Most candidates gained at least some credit for mentioning distribution on, at or around the equator. 'Between the tropics' was also frequently seen though many confused their answers by subdividing distribution between Tropic of Cancer and equator or Tropic of Capricorn and equator.

(ii) This was generally very poorly answered by most candidates. Only a minority of those seen attempted any explanation of tropical rainforest plant adaptations. It appeared that many candidates did not understand the word 'adapted' and so many went on to either describe the tropical rainforest in terms of structure, flora and fauna or otherwise only explained why the tropical rainforest existed because of high temperatures and high rainfall. The minority of candidates who did address the question correctly did reasonably well and the most common correct answers referred to waxy leaves and drip tips, tall trees and/or branches high up to reach the sunlight and buttress roots, but not always following up with how the specific feature was an adaptation to the environment.

(c) Candidates struggled with this question and did not seem to fully understand the term 'threats'. Description of threats were quite basic and generic, often just referring to deforestation and/or illegal logging often without giving any further underlying reasons for deforestation. Instead of seeing the idea of 'threats' as reasons/causes of rainforest clearance, many candidates saw the 'threats' as the outcomes or effects of deforestation, especially soil erosion, habitat loss, extinction etc. Thus, there was a large group who went for consequences rather than causes. As for the other part of the question, strategies suggested were a little more focused but again very general in terms of 'protection' by law etc. with quite limited evaluation of the effectiveness of these strategies. Examples were often used when naming an area but the responses rarely seemed specific to the named example, especially in terms of strategies. Overall, most candidates gained some marks from their responses at Level 1 or even to mid-Level 2 but, because of their often very generic or imbalanced (in terms of threats v strategies) responses, very few were able to use an example area effectively to attain Level 3 credit.

Question 4

Three quarters of candidates answered this question with varying degrees of success.

(a) This was very well answered with candidates understanding how earthquakes occurred along a transform/conservative plate boundary. The reserve mark was achieved in the vast majority of answers as candidates drew an acceptable diagram. The main focus of the diagram was to show that there were two plates moving alongside each other. The other marks were awarded for the ideas that the movement was not smooth, plates became stuck, pressure built up and was then released.

(b) (i) Generally answered well and the mark was achieved.

(ii) Those candidates who got **4(b)(i)** correct also got **4(b)(ii)** correct as they clearly knew where the focus and epicentre of an earthquake were located in Fig. 4.1.

(iii) The vast majority of candidates achieved 1 mark for identifying that the Richter scale measured the magnitude of the earthquake. However, very few candidates seemed to be aware of the Mercalli scale (although this is included under further guidance in the syllabus under 2.1.3 Earthquakes). Despite this, some candidates were clearly aware of the scale and recognised that the Mercalli scale measured damage caused by the earthquake.

(c) (i) The mark scheme contains a large number of ideas that could have been referred to and many of these were acknowledged in the candidate's responses. Common responses were rescuing people, giving medical help, and evacuating the buildings. However, some candidates simply stated 'ambulance service' or 'police' and did not make the link to their role or indeed what they had to do at the scene.

(ii) The command word in this question was to 'explain' why some buildings withstand an earthquake and candidates, in many cases, simply described how buildings had been adapted. Therefore, the marks were quite low for this question. Candidates referred to shock absorbers and steel bars but simply stated these points and did not make reference to how this helped buildings withstand earthquakes.

(d) (i) Many candidates did not achieve the full 4 marks. Four simple ideas of 'different types of material' were required, and answers simply listed as lava, ash, gases, and volcanic bombs would have gained the full credit. However, candidates made a mistake in numerous cases and wrote about the different types of lava which only gained the lava mark. Many discussed the different gases which came from a volcano but again this only gained the gas mark.

(ii) This was the most well answered 7-mark question on the paper. Candidates were able to discuss the threats and the benefits of living in areas at risk from volcanic eruptions and many were able to present an argument to agree or disagree with their decision. Examples were referred to but were a little too general in places and were not included within the main answer to support the candidate's decision. Often examples included in answers were too basic – 'as in Japan' or 'e.g. Mount Etna'.

Theme 3: Economic development

Question 5

Two-thirds of candidates answered **Question 5**.

(a) (i) Many candidates gained the mark for this for being within the range of tolerance, a significant minority were outside the range and many candidates did not specifically add the 'thousand' either in words or figures to their answer and therefore did not gain the mark.

(ii) Candidates did reasonably well to use Fig. 5.2 and gained marks for suggesting aspects of the buildings, greenery, availability of shopping and good weather as attractions to the area. However, many responses drifted away from the use of Fig. 5.2 and instead focused on Cambridge as a name, the attraction of being a candidate there and the link to examinations. They did this either as an extension to an otherwise correct answer or in some cases solely focused on reasons that could not be seen in the photograph. With questions like this one, candidates must study the resource carefully and focus their response on what can be seen in the photograph.

(iii) This question was usually answered quite well, although generically, with many candidates gaining all marks available from their suggested problems.

(iv) Similarly, this question was also answered successfully by most candidates, with many linking problems identified in their responses to **5(a)(iii)** to ways to reduce the problems described in their answers to this question.

(b) (i) A wide variety of definitions were seen, and most were along the right lines and therefore worthy of credit for at least 1 of the 2 marks. There was a generally sound understanding of sustainable tourism amongst the candidates although coming from different but all correct perspectives, i.e. socio-cultural, economic and environmental (the latter being perhaps the most prominent).

(ii) Candidates struggled to apply their understanding of sustainable tourism to the photograph and subsequently very few marks were awarded for this question.

(iii) Despite having a general understanding of what sustainable tourism involved, in the majority of cases, candidates' application of that understanding when it came to evaluating the statement was limited. Consequently, responses became very basic and generic and followed one or other of only a few arguments. For example, one idea was that lower tourist numbers meant easier control of impacts and thus fewer problems in terms of environmental harm or social/cultural erosion etc. An alternative idea was that low tourist numbers were not sustainable from an economic perspective, loss of income etc. Those that supported this idea often also proposed that larger numbers were needed for sustainable tourism and that control of impacts would be enforced by strict rules on tourist activity; Singapore was occasionally quoted in these references. Both arguments for low numbers on cultural/environmental grounds and higher numbers on economic grounds were perfectly valid and so most candidates gained some credit from their responses. However, the problem was that it was very rare to see a balanced and proper evaluation between the two arguments. Equally, although examples were named, again they were only used quite generically apart from Singapore.

Question 6

One third of candidates answered **Question 6**.

(a) (i) The key focus of this question was the term 'natural', and the vast majority of candidates got this question correct with volcanoes, forest fires and dust being the most popular responses.

(ii) This was very well answered by candidates, and many referred to the names of the gases which caused air pollution and the fact that these were released by car exhausts. The term 'gas' on its own received no credit.

(iii) Candidates found this question very challenging with less than half achieving any marks at all. This part of the syllabus (3.1.3 – strategies used to reduce the impact of industry on the environment) needs more attention as 6 marks were lost here for a large number of candidates. Some general marks were awarded when it was acknowledged that legislation was linked to laws that were set up and pollution permits were allowances given to industries to enable them to release a certain amount of pollution. However, green taxes were not understood, and many referred to the planting of trees which received no credit.

(b) (i) Candidates struggled with the idea of ranking in this question. Many candidates tried to work out the actual amounts using the overall totals and the percentages. This received no credit and wasted valuable time for the candidates. No marks were awarded for China and the USA as their ranks did not change.

(ii) This was a question which candidates achieved very highly on overall, with many gaining 4 or 5 marks. Solar energy is a renewable energy, a clean energy with low running costs and works well in areas of high sunshine were the most common advantages referred to. With regards to the disadvantages, the fact that solar panels are expensive, a large area is required, they do not work at night, and they can cause visual pollution were the common responses. However, there are also lots of other ideas that could and were referred to in the mark scheme.

(c) The second part of this question was answered very well. Candidates appreciated how important the refinery is to both the economy and people of Brunei and expressed this very well. However, the factors influencing the location of the Seria oil refinery were too generic and referred to ideas such as close to transport links, away from large areas of population, close to raw materials and flat land. These are factors that could apply to any factory or oil refinery in general and candidates really needed to refer to specific factors in the location of the Seria oil refinery such as the urban areas of Seria and Kuala Belait providing the labour supply in order to access top of Level 2 or Level 3 marks.

GEOGRAPHY (BRUNEI)

Paper 2230/02
Geographical Skills

Key messages

- Interpreting physical and human geography characteristics from maps (**1(b)(i)**) could be improved with more practice and clearer use of contrasting qualitative vocabulary is needed e.g. more/less (**1(a)(iii)**).
- Candidates need to take more care, be neater and more accurate when completing all types of graphs – pie graphs, bar graphs and plotting points on scatter graphs etc. Many straightforward marks are lost here due to lack of accuracy when it is clear that the understanding is there.
- Candidates need to pay attention to detail both when reading stimulus/source information and when expressing data to use full unit measurements. Again, understanding of data was evident but marks were lost by not expressing it fully.
- When asked to make a conclusion about a hypothesis in a Geographical investigation, candidates need to state that the hypothesis is 'accepted', 'confirmed', 'valid', or 'supported, or words to that effect, if they agree. When asked if the results support a hypothesis, candidates need to state 'yes' or 'no'.

General comments

The new syllabus includes different styles of maps from around the world. The New Zealand 1:50 000 map extract was well utilised by many candidates.

Identification of features, places, land use, distance, and direction in the use of map skills was generally good.

Interpretation of information from line graphs and bar graphs is very good as are numerical skills generally.

Analysis of the data collected in the Geographical investigation was generally good and well expressed.

Comments on specific questions

Section A: Mapwork skills

Question 1

Candidates demonstrated a sound ability to read and interpret the 1:50 000 map extract of Taupo in New Zealand. Most candidates demonstrated an understanding of mapwork techniques as well as linking information from a map to geographical information. Mapwork skills improve with practice and the high marks achieved by many candidates on this question suggests that they were well prepared for this examination.

(a) (i) The vast majority of candidates gave the correct four-figure grid reference for TAUPO.

(ii) Taupo was often incorrectly identified as a city rather than a town but the link to services provision was evident with many candidates giving the existence of schools and a hospital as the reason for their choice. Few candidates referred to the size of the settlement.

(iii) Not particularly well done, with many candidates struggling to express what they could see. For street pattern grid iron was seen from time to time, but there were too many who referred to the types of roads or who used terms like linear or nucleated. Open space was described better,

although there were many who referred to the buildings, rather than the space around them. Maybe the term 'open space' was unfamiliar.

(b) (i) Overall, this was done well with better candidates achieving the full 3 marks. Nevertheless, there were many who included human features such as the water treatment plant and Haku Falls Road. In addition, there were several who attempted to discuss river velocity and reasons for its variation along the course of the river. Reference to the upper, middle and lower course of the river were also common. Candidates need to use their knowledge of rivers and their characteristics to describe the map evidence. Only a minority of candidates had the river flowing uphill to the north, instead of to the southwest into Tapuaeharuru Bay.

(ii) The six-figure grid reference was problematic, with many candidates just missing out on the mark because they answered 671142. To give a six-figure grid reference the first tenth of the grid square is 0, so the correct answer is 670140.

(c) This question was done well. Grid square 6907 was most often incorrect, with vehicle track, the alternative incorrect response. Some also stated native forest or exotic non-coniferous forest.

(d) (i) This was difficult, as there were two numbers close together, but despite this most candidates gave the correct response. Those who did not usually stated 1266.

(ii) This question was a very good discriminator. Placing what was expected for each of the terms 'relief' and 'drainage' was very helpful to the candidates and made the question accessible. The better candidates had no problem achieving the full 4 marks. High mountains with steep slopes were seen relatively often. Relief achieved more marks than drainage with some weaker candidates referring to 'large' or 'big' drainage. Although radial was most often seen, there were frequent references to dendritic and centripetal drainage.

(iii) Using scale to calculate distance is challenging for candidates who do not know that a scale of 1: 50 000 means 2 cm on the map (1 grid square) represents 1 km. Having a multiple-choice answer format enabled many candidates to select the correct distance.

(iv) Naming state highway 5 seemed to cause few problems; and NW proved to be the most common response for the direction. A few suggested WNW, although quite a few weaker candidates made a failed attempt to use a three-letter direction. Candidates should be able to give direction in terms of a 16-point compass, but NW was accepted as an alternative response to WNW for this question.

Section B: Geographical skills

Question 2

This question overall was done very well, apart from **(b)(iii)** where the term anomaly may have been unfamiliar to some candidates. Particularly impressive were responses to **(a)(i)**. **Part (b)** included completion of a scatter graph which is a difficult technique, especially the best fit line and the anomaly, but most candidates attempted all three of the graph completion tasks. Even when **(b)(ii)** and **(b)(iii)** were incorrect candidates understood the basics of the question and were able to correctly answer **(b)(iv)**. There was a much lower omission rate for this type of graph completion question than in the past.

(a) (i) Most candidates interpreted the line graph well. The main issue was confusion over whether it was in 2015 or 2016 when the decrease in number of tourists occurred. Many candidates wrote 'in' 2016 when they meant 'by'. In most cases candidates were able to qualify the word 'increase' or give the figures. The main cause of a loss of marks was when candidates quoted the figures incorrectly or did not include thousands.

(ii) Not all candidates read the question carefully or they were not familiar with the popular tourist destinations in Bandar Seri Begawan because many named at least one tourist destination outside Bandar Seri Begawan. These included Jerudong (Water) Park, Ulu Temburong, Serasa Beach, and Tasek Merimbun. The mosques and Kampong Ayer were the most often stated, correct answers. Some also mentioned The Mall and Yayasan for shopping but these were not credited as tourist destinations.

(b) (i)-(iii) Most candidates plotted the data for 2015 accurately. For plotting the line of best fit, the majority plotted a positive relationship, although there was considerable variation including many whose line

joined 2014 to 2018 (which was not credited). Zigzag lines which joined all the points were also common. Nevertheless, the exact position of the line was well thought out by many of the candidates, and for most, at least two points were seen on either side of the line. The stronger candidates circled 2015 or 2016 as the anomaly. However, many circled 2014 and 2018 when the best fit line passed nearby. 2013 was often circled even though it was clearly not the point that was furthest away from the line.

(iv) This cloze comprehension type question was correctly completed by most candidates. Candidates appeared to understand the relationship shown on the scatter graph even if they had struggled to place the best fit line onto the graph in **(ii)**.

Question 3

This question proved to be the best answered on the paper, with many candidates achieving almost full marks. The rank order question in **(c)** and the pie graph completion in **(d)** were particularly well done.

(a) The description of the changes shown on this bar graph, whilst generally well done, was not as well done as the description of the changes shown on the line graph in **2(a)**. For the first answer, some erroneously suggested 2015 or 2020. Often, 6.2 was given for the second space instead of 6.4. Although the majority stated a decline or decrease for the last space, it was clear that some misunderstood what was required here and quoted a date or a figure read off the graph.

(b) Candidates are expected to know the location of the continents. Almost all candidates gained 2 of the 3 marks available. The inclusion and positioning of the continents' names on the maps meant that Africa and Oceania were easily categorised correctly. Only a few of the strongest candidates correctly gave <1 per cent for the whole continent of Asia.

(c) This question was exceptionally well done with almost all candidates stating the right order of the countries from highest to lowest.

(d) The majority of candidates were able to achieve the 2 marks available for accurately plotting that females were 35 per cent of international migrants in Western Asia on Fig. 3.3. The shading in most cases matched the key and was drawn neatly. However, there was the occasional candidate who seemed to not have a ruler in the examination room, with some lines being two wide or at an angle rather than being horizontal. Several candidates did not shade the male part of the pie graph. Overall, the standard of pie graph completion was much improved compared to previous years.

Section C: Geographical investigation

Question 4

This was the first Geographical investigation question for Brunei candidates in a November examination and most candidates attempted all the questions.

The data presentation question **(c)(i)** provided few problems for candidates, whereas **(e)(ii)** proved to be more difficult. Areas of Geographical investigation that candidates seemed less familiar with were describing data collection techniques **(b)** and making a conclusion **(c)(ii)** and **(e)(iii)**.

(a) Most candidates seemed familiar with the purpose of a pilot study, but some appeared to not know the term. 'Learn how to work safely in the river' was ticked the most. Of the distractors, 'get to know each other' was ticked the least.

(b) Most elements of the diagram in Fig. 4.2 got a mention, although not always in the order or exact context that they appeared in the Mark Scheme. A common response was to list the pieces of equipment and say what they were for. One ranging pole was often mentioned instead of two. The float (and what material it was made of) was almost always present in a response, but many candidates failed to say it was put or dropped into the river. Nevertheless, there were some excellent responses which not only clearly described how each piece of equipment was used, but also the order of events, culminating with the need to repeat the measurement and calculate the average. A common misconception was that some thought that the float was meant to travel from one site to the next.

(c) (i) This straightforward task proved to be no problem for most candidates.

(ii) Considering this type of question was a relatively new concept for most candidates the way they set about answering it was impressive. Not all candidates stated a conclusion, but most did. Most reiterated the hypothesis then set about giving evidence in which site numbers and the data were quoted. Many identified Site 3 as an anomaly. There were a few who felt the hypothesis was false, but even then, managed to gain 1 or 2 marks by reference to the decrease at Site 3 and with appropriate data. Some candidates tried to explain the data. In most cases, unlike in **(e)(iii)**, the data that was quoted was accurately read off Fig. 4.3, except for Site 8 which was occasionally quoted as 1.8 m/sec instead of 1.08 m/sec. A few omitted to give the units (m/sec) so did not gain the data mark.

(d) Most candidates answered this question correctly, identifying Photograph C as measuring the width of the channel and Photograph A as measuring the depth of the channel.

(e) (i) The majority of candidates knew or were able to establish by looking at the data provided, that the cross section of a river is calculated by width x depth.

(ii) The bar for Site 6 was not always drawn as accurately as the bar in **4(c)(i)**. This was because the scale was a lot smaller, and some candidates tended to misread it. Quite a large minority lost marks because their bar for 5.13 was clearly less than halfway between 5.0 and 5.2 square metres.

(iii) The outcome of responses to this question was very similar to the outcome of responses to **4(c)(ii)**. Those who did well in **4(c)(ii)** also did well in this question. Similarly, mistakes made were also replicated. There was more inaccuracy in the quoting of data compared with **4(c)(ii)**, with the graph being a little more difficult to read due to its scale. Also, some candidates attempted to explain the increase in area of cross section with distance downstream. Some candidates did not start their answer by stating ‘yes’, that the results shown do support the hypothesis.

(f) This question was a very good discriminator. The question involved quite a lot of reading of annotations, although these covered concepts that candidates should know. Stronger candidates had no problems in attaining the 3 marks available. However, many candidates struggled with vertical erosion, instead naming other processes from the box i.e. traction or saltation.