# GCE

**Chief Examiner's Report**
# Geography

# Foreword

This booklet outlines the performance of candidates in all aspects of this specification for the Summer 2019 series.

CCEA hopes that the Chief Examiner's and/or Principal Moderator's report(s) will be viewed as a helpful and constructive medium to further support teachers and the learning process.

This booklet forms part of the suite of support materials for the specification.  Further materials are available from the specification's section on our website at www.ccea.org.uk.

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# GCE GEOGRAPHY

# Chief Examiner's Report

# Assessment Unit AS 1 and AS 2

## Overview

This suite of examination papers was seen to be accessible, with few timing problems evident and relatively few gaps left in the answer booklets.  Two of the three AS geography papers are now marked on-line: AS2 for the second year; AS1 for the first time this year.  The necessary use of slightly altered examination booklets presented no particular problems to candidates.

There was some evidence of case study material from the previous specification still being taught to candidates; teachers must ensure that their case studies are up-to-date and reflect the needs of the current specification.  Candidates need to be reminded of the need to use accurate locational descriptions in their case study responses and of the importance of learning definitions for the key geographical terms featured in the specification.

Another issue was that some candidates failed to make full and effective use of the resources.  Limited observational evidence taken from the resource was commonplace and marks were lost as a result.  Occasionally, candidates introduced lengthy, irrelevant discussions of material not required by the question, for example regarding hazard impacts, evaluation of management strategies or post-hurricane management methods for AS1 3(b)(ii).  This reduces attainment and wastes valuable examination time.  Candidates must ensure that they answer the question that has been asked of them.  If the question involves calculations, workings should be shown so that partial marks can be awarded in case of mistakes.

Regarding fieldwork, candidates from centres who carry out human studies tend to struggle more in addressing the fieldwork questions, especially if their fieldwork is on a topic not reinforced by being part of the specification.

# Assessment Unit AS 1      Physical Geography

## Overview

As the revised specification has become more embedded in centres, it is reassuring to report that teachers and candidates responded positively to the challenges and opportunities presented for attainment.  There were few rubric errors and timing did not appear to present a significant barrier.  There appeared to be a smooth adjustment to the formatted AS1 paper layout to allow for online marking, and teachers are to be commended for responding to CCEA circulars and providing essential preparation guidance to candidates prior to the examination.

The language and terminology employed in the questions and resource materials appeared to present no obvious barriers to comprehension and this helped to maximise attainment.  Questions provided opportunities for able candidates to display excellent geographical knowledge and skills, whilst providing sufficient accessibility to candidates of more modest ability.  Some questions were challenging in nature, but candidates attempted to answer nonetheless and, in many cases, this did allow some award of marks.  The range of marks awarded and the overall mean was broadly comparable with previous examination series.

One issue noted by the examiners was that candidates did not always fully use the resources within their answers.

## Section A

**Q1** **(a)** This question was well received and candidates engaged fully with the resource information. Many displayed confident analytical skills to describe relevant land-use changes and subsequent hydrological trends. Figures were usually cited to support their interpretation. However, some candidates failed to use all the resources and as a result lost marks.

The explanatory component of this question provided a more differentiated outcome. Although some extremely impressive answers were evident, attainment was compromised in cases when all three hydrological characteristics lacked a proposed explanation. Occasionally, candidates neglected to explain the decreased groundwater store in the Olifants drainage basin. Furthermore, superficial explanations or those lacking specialist terminology restricted attainment.

**(b)** Many candidates approached this question with confidence and gained good marks. Although some exceptions were evident, most candidates displayed knowledge of the general characteristics of a waterfall, such as the plunge pool, overhang and gorge. Capable candidates recognised the importance of differential erosion rates as a result of contrasting geological rock strata and introduced and explained relevant fluvial erosion processes. High level marks were achieved when candidates engaged fully with the resource, making explicit references to the High Force example presented. Occasionally candidates neglected to observe and explain the obvious deepening of the plunge pool or the collapse of the overhang. The most impressive answers integrated resource information and provided a detailed and well-sequenced explanation of fluvial processes, using specialist terminology. Some used the erosion term 'attrition' rather than abrasion when discussing the plunge pool.

**Q2** **(a)** This straightforward question was well answered. Most candidates could clearly distinguish between an autotroph and a heterotroph within an ecosystem. The majority achieved the full two marks, but many dropped a mark for either not making reference to autotrophs 'harnessing sun's energy via photosynthesis' or referring to 'consumption for energy' by the heterotrophs.

**(b)** This question proved to be challenging, particularly for those who failed to respond to all key elements and command words. Marks were lost in three main ways.

- Failure to use the resources effectively. Weaker candidates displayed an inability to read the negative scale on the bipolar bar graph, a skill area which may require further reinforcement within centres. Many neglected to observe the decreased layer of soil permafrost as well as the more developed deeper layer of topsoil.

- Provision of only a superficial coverage of the ecological influences from their regional scale study. Most cited the Alaskan North slope or Siberia as their Tundra studies, but some failed to present sufficient specific case study depth and detail.

- Failure to consider both the biotic and abiotic components of their chosen Tundra ecosystem. Abiotic elements were most commonly neglected. Occasionally, candidates provided lengthy material on proposed oil drilling and subsidence, with a lack of focus on the actual question.

**(c)** **(i)** Examiners expressed disappointment that few candidates displayed detailed, accurate knowledge of the soils associated with the temperate

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grassland biome. Although a wide range of topsoil characteristics were provided for selection, most candidates offered a general explanation for their chosen characteristics without explicit reference to this biome. Appropriate contextual explanations were only provided by more able candidates. Answers were therefore sometimes quite basic for this question.

**(ii)** Both optional processes outlined in Resource 2B were popular. Although most candidates could accurately identify the processes of leaching and capillary action, fewer could fully describe their impact on the soil profile. Occasionally the confusion of mollisol with the gelisol profile led to the inclusion of erroneous statements. Candidates need to ensure that they are able to differentiate the soil processes operating in the temperate grassland biome.

**Q3** **(a)** Candidates competently accessed the information presented in the graphical format. Better responses analysed the climate data with a clear focus on the need to recognise and describe annual patterns rather than extract values with less relevance. Competent answers calculated and depicted comparative ranges or seasonal contrasts in maximum and minimum temperature values. A great variation in the quality of explanation was evident. Although some candidates displayed a superficial insight into the influence of 'continentality' as a key factor influencing annual temperature patterns, others failed to contrast the thermal characteristics of land and sea, which obviously influenced the annual temperature of the coastal city with that of the continental interior. Weaker candidates confused continentality with the influence of ocean currents, while others provided irrelevant answers relating to latitude. Therefore, this question allowed for considerable differentiation between candidates. With regard to the resource – many identified maximum and minimum figures but failed to calculate the annual temperature range, which was integral to this question.

**(b)** **(i)** This skills based question was competently handled. Many candidates accurately employed the compass, map scale and lines of latitude and longitude to describe the movement of Hurricane Irma over the time period specified. Appropriate place references also helped candidates score well.

**(ii)** Many excellent answers were rewarded with Level 3, but this question saw a highly differentiated outcome. Some neglected to make full use of the images presented and partial and limited observational evidence from the resource was disappointingly commonplace. Many launched exclusively into the case-study component of the answer, sometimes with a lack of focus on relevancy. Although Typhoon Haiyan and Hurricane Katrina were most commonly selected for case study exemplification, some candidates provided generalised answers with a lack of case-study depth or detail. Furthermore, candidates who only introduced a narrow range of actual or potential management strategies lacked the breadth of knowledge essential for high level marks. Occasionally, candidates introduced lengthy irrelevant divergent discussions of hazard impacts, evaluation of management strategies or post-hurricane management methods. This reduced attainment and wasted valuable examination time.

## Section B

**Q4** Although this question was popular, it proved to be challenging for those with only superficial knowledge of river management methods. More able candidates provided an insightful discussion of a range of river management methods in relation to environment sensitivity and sustainability. Credit was gained for hard and/ or soft engineering methods if dealt with insightfully and comparatively. Weaker candidates tended to provide simple description of their flood management methods, only introduced a narrow range of river management techniques, neglected to use appropriate specialist terminology and failed to provide relevant spatial exemplification.

Although there appears to be an excellent understanding of channelisation methods, teachers should provide greater opportunities for candidates to explore the sustainability and environmental sensitivity of such strategies. One examiner considered that some candidates drew upon their GCSE case studies rather than the material they learned as part of this AS course.

**Q5** This question proved to be both popular and accessible. The majority of candidates selected psammosere or lithosere studies, although a small number selected to discuss the successionary evolution of vegetation on bare rock (a xerosere.) Well-prepared candidates excelled; their answers provided a detailed and well-structured discussion of all seral stages, beginning with the initial colonisation by pioneer species and terminating in the establishment of the climatic climax community, assuming that human interference did not produce a plagioclimax community.

Although many well prepared candidates provided exceptional case specific detail on vegetation species, as well as soil and micro-climatic variables, only the more able provided explanation for the evolution of such successional communities. The most able recognised the importance of autogenic factors, which modified the soil and microclimatic environment, allowing for the temporal/spatial progression of plant communities. The lack of this essential explanatory component often restricted the overall level of attainment.

Unfortunately, a minority of candidates incorrectly selected their small scale ecosystem case-study and thus their descriptions related only to the final climatic climax seral stage of succession and few marks were gained.

**Q6** This was the least popular question in Section B. Only the most able candidates addressed both components competently and provided a detailed explanation of the formation of a mid-latitude depression. The air masses involved were commonly recognised but many were unable to explain accurately the role of the Polar Front Jet Stream, which is instrumental in the anticlockwise uplift of air and subsequent low pressure conditions at the ground surface. It is evident that this aspect of meteorology, which is not taught at GCSE, requires attention at AS.

In relation to the passage of the depression (the second component of the question), well-prepared candidates were able to secure marks with structured responses which explained in sequence the weather associated with the passage of the warm front, the warm sector and the cold front. Better answers included an explanation of a range of meteorological variables, such as cloud cover, precipitation, wind, air pressure and visibility. They also incorporated specialist meteorological terms, including relative humidity, latent heat and pressure gradient force. Attainment was compromised if description of weather variables was provided without any explanation. A very small proportion of candidates confused depressions and anti-cyclones, and thus failed to gain credit.

# Assessment Unit AS 2    Human Geography

## Overview

The new format for AS Geography is now well established and candidates have clearly been well prepared to handle the length of the paper and its time demands, ensuring that enough time is left to complete the extended response questions in Section B.  Only a small number of candidates failed to complete their second question from Section B.  There continues to be an improvement in the quality of the responses to these questions, although some candidates have rote learned key facts and figures to provide the main basis for their responses without tailoring their knowledge to the actual question set.  Candidates generally coped well with this paper; examiners reported that all questions were accessible to a wide range of abilities.  In Section B the least well-answered question was question 6 (development); the more popular and also better-answered choices were Question 4 (population) and Question 5 (settlement).  Perhaps more time should be spent on the development section of the specification to encourage candidates to attempt this case study.

Often answers were not completed in enough detail, for example they lacked sufficient case study facts and figures essential to lift responses into Level 3.  Another issue was that some candidates missed the phrase: 'to help you' and/or failed to notice that the question required a plural response as with 'problems' in Question 1(a).

## Section A

**Q1** **(a)** This was an accessible question.  Most candidates made good use of Resource 1A to inform their discussion relating to language barriers.  In addition, most candidates provided additional issues related to national census taking in LEDCs, with many using case study detail and/or place references to expand their discussion.  Unfortunately, some candidates failed to develop their responses beyond the resource provided.  Such responses, despite often being well-developed, could not access higher marks.  Candidates must be reminded of the need to read every question with care.  In the case of this question, "to help you" and "problems" (plural) provided important signals to guide candidates.  Candidates need to be reminded of the need to use accurate locational descriptions in their responses.

**(b)** **(i)** Most candidates accurately identified Ester Boserup's theory of population sustainability.  Justifications were normally well-developed and incorporated good, detailed references to the resources provided.  Only a small proportion of candidates failed to incorporate figures into their response.

**(ii)** Those candidates who failed to identify Boserup's theory in Question 1(b)(i) and discussed it here could still access maximum marks.  The quality of responses relating to Thomas Malthus's theory of population sustainability were disappointing.  Descriptions of growth rates of population and resources were often poorly developed.  Moreover, too many candidates confused positive and negative checks.

**Q2** **(a)** **(i)** Descriptions were often poorly developed.  Candidates need to have a clearer grasp of the three key urban processes (urbanisation, suburbanisation and counter-urbanisation).  Good answers were able to link each of these processes to specific time periods, using appropriate figures.  Candidates need to be reminded that suburbanisation does not necessarily affect the size of the urban area, only the distribution of the population within the urban area.  Only urbanisation and counter-urbanisation will cause a change in the population of the city.

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**(ii)** Candidates tackled this question with confidence and achieved pleasing marks. Most candidates were able to outline two ways in which counter-urbanisation impacted on surrounding rural areas. Unfortunately, a significant proportion of candidates failed to include at least one valid place reference, resulting in a maximum mark of [3] being awarded.

**(b)** **(i)** While most candidates made good use of the resource, they were unable to provide an accurate definition of gentrification. Centres and candidates alike should be reminded of the importance of learning definitions for the key geographical terms featured in the specification.

**(ii)** Generally speaking, candidates scored well in this section. However, quite often candidates focused on one issue and were limited to a maximum of [3] marks.

**Q3** **(a)** **(i)** Descriptions were often restricted in nature. Too many candidates failed to identify that the UN Goal is represented by zero on the graph and that the bars reflected the deviation (either positively or negatively) from that goal. This often had a detrimental impact on the quality of the description provided. In addition, responses frequently lacked sufficient references to the regions and range of Millennium Development Goals presented in the resource.

**(ii)** Candidates struggled with this question, with many failing to even attempt a response. Most candidates who did attempt an answer were limited to [2] marks because they could only outline one aim, notably that the Sustainable Development Goals build on the work of the Millennium Development Goals. Only well-prepared candidates were able to provide a detailed outline of the four key aims. Those who did easily accessed maximum marks.

**(b)** **(i)** Most candidates were able to achieve maximum marks in this question. Candidates need to be reminded to use accurate locational descriptions in their responses.

**(ii)** A large proportion of candidates could not identify a composite indicator of development in their response, with many candidates stating an economic or social indicator. Such responses could not be awarded any marks. Correct responses commonly identified the Physical Quality of Life Index (PQLI) or the Inequality-Adjusted Human Development Index (AHDI). In most cases, candidates provided an accurate positive and negative assessment of the indicator.

## Section B

**Q4** This was a very popular choice of essay and candidates approached it with much tenacity. The question was relatively straightforward and allowed candidates to both describe and explain how birth rates, death rates and total population change through the Demographic Transition Model. Many of the responses included relevant examples of place; however, some needed to refer to place in more detail. Some responses included a diagram that helped to amplify the description, but often did not. Unfortunately, despite the enthusiasm for explaining the finer points of the Demographic Transition Model, only a minority of candidates included figures for both the birth and death rates, which limited their marks to a high Level 2. Of the responses that included figures, some were missing the total population or valid place references.

**Q5**   The question asked candidates to explain the main issues and challenges found in their LEDC urban case study.  This was a popular question and many candidates brought a good extent of detailed knowledge to address it.  A wide range of answers were presented; sometimes candidates would only discuss two issues or challenges and in some general responses it was sometimes difficult to tell if more than one issue was discussed.  Some other common problems were:

- A minority of candidates failed to discuss a specific LEDC city case study.  Some wrote in general terms whilst others wrote about a MEDC city case study instead.

- Some candidates only wrote about one issue or presented answers that were largely descriptive.

- In some cases, candidates did not present enough detail in relation to the chosen case study city.  Detailed case study material is a requirement for case study questions.  In particular, some failed to present specific depth in relation to economic activities in the LEDC city.

Examiners noted that candidates often presented answers that were lacking in specific detail with poor application of facts and figures.  One examiner noted that many candidates were still using the Cairo case study from the previous specification and whilst it may be possible to "tweak" this information, many responses included long paragraphs about the Zabbaleen sorting rubbish and issues with traffic and transport around the city.  These topics do not fit well with the new specification and candidates were spending too much valuable time including irrelevant material'.

**Q6**   This question was not only less popular with candidates than the others, it was also less well answered.  It focused on the national LEDC case study and the role that globalisation played in influencing its development.  Unfortunately, many candidates also made reference to aid, which was not part of the question.  Some candidates failed to include enough detail in their answers in relation to a specific LEDC case study  Some failed to include sufficient details about how these aspects of globalisation might influence its development.

Examiners noted that this question also sometimes allowed responses with out-of-date case study material.  Some answers considered Ghana but then drifted into discussions about aid.  Candidates should have identified both advantages and disadvantages of globalisation but often did not consider both aspects of the question.

## Assessment Unit AS 3     Fieldwork Skills and Techniques in Geography

### Overview

In general, both centres and candidates were well-prepared for Question 1 (Fieldwork). Attainment was noticeably higher in centres where obvious fieldwork follow-up ensured preparation for questions relating to all aspects of the fieldwork process. Unsurprisingly, rivers and psammosere transects were most commonly investigated by candidates, although other physical and human fieldwork studies were also represented. Centres that carry out human geography studies tend to struggle more in addressing the fieldwork questions especially if the fieldwork topic is not covered by the specification. Centres are reminded that the specification requirements relating to the topic for investigation are 'an issue, hypothesis or question related to or arising from study as part of Units 1 or 2'.

It is necessary to reiterate the importance of adhering to the prescribed content of the fieldwork report (summary statement), which should include only a title, a clearly stated aim, hypotheses and a statement of location. In addition, the table of data must contain only raw data collected during fieldwork, with no statistical computations applied. The inclusion of any additional content could result in the candidate's script being referred as potential mal-practice and could result in penalties being applied.

Unfortunately, marks in Question 2 (Geographical Skills and Techniques) were generally low. This was disappointing since, traditionally, candidates tend to score better in this question. Undoubtedly, the inclusion of an unseen Nearest Neighbour Analysis and questions relating to stratified and random sampling proved challenging for some candidates. Candidates must ensure that they prepare thoroughly for this section of the examination, even if they cannot 'revise' for it in the traditional sense of the term.

The paper produced a wide range of marks, allowing for a differentiated outcome, and the level of language appeared to present no obvious barriers to comprehension. Candidates were able to attempt to answer all of the questions as very few left sections/questions blank. This would suggest that candidates had enough time to complete the examination paper.

Yet again, many examiners commented that they were surprised by candidates' inability to address the demand(s) of the question asked. Centres must prepare their candidates to identify the focus of each question, to pay close attention to the emboldened words and phrases, and to carry out the instructions of the question as set.

**Q1 (a)** Candidates must ensure that they incorporate clear and convincing links to their own fieldwork investigation throughout Question 1. In the case of this part-question, candidates were required to provide specific details relating to the selection of their own fieldwork location. Disappointingly, low marks were commonly awarded. A large proportion of candidates neglected one specific aspect of the question, either 'how' or 'why' their fieldwork location was chosen.

When attempted, discussions relating to how the location was selected were often basic in nature, lacking clear and conspicuous references to the candidate's own fieldwork planning. It is imperative that candidates are fully involved in planning their investigation and can infuse their responses with specific detail and contextual knowledge. Better prepared and more able candidates provided a detailed discussion relating to the completion of a pre-site visit, consultation of a specific secondary source or classroom-based discussion.

Candidates' explanations as to why their location was considered suitable were also restricted in depth and detail. The question also only asked for one reason for why the location was considered suitable, yet many candidates provided a multiple reasons in the form of a list with no elaboration. Responses such as 'it is close to school' and 'it is an ASSI' do not access high marks. In addition, candidates often lost sight of the planning focus of this question. For example, a large proportion of candidates suggested that their chosen sand dunes were an excellent example of ecological succession or that their selected river clearly showed changes downstream. In both scenarios no marks could be awarded, since the very aim of the fieldwork was to investigate the expected change. Better answers made specific reference to reasons such as physical or human characteristics, the size of the location, health and safety considerations or access arrangements.

**(b) (i)** Most candidates were able to distinguish between primary and secondary sources of data. This question was accessible to all candidates.

**(ii)** This question required a two-fold answer: description of data collection and evaluation of data collection. This allowed for differentiation between candidates. Although this appeared to be a relatively straightforward part-question, many candidates focused on the methodological description and neglected the evaluative component of the question. Only well-prepared candidates could produce a clear description of a primary data collection method, including specific detail regarding the equipment and techniques employed in the field.

Candidates often lost marks when they provided a basic and/or incomplete description of their methodology. Candidates who chose to discuss river discharge, for example, often failed to address the two key elements of cross-sectional area and velocity. Those who described the measurement of a particular soil characteristic, such as pH, organic content or moisture content, often described the extraction of the soil sample and neglected the subsequent laboratory processes. Occasionally, candidates described a sampling procedure without identifying a specific variable from their submitted table of data.

Evaluation of the data collection technique proved to be the more challenging aspect of the question. This component of the question was often neglected, restricting the answer to a maximum of [4]. However, many better candidates were able to address this without any issues and thus able to gain full marks.

**(c) (i)** Well-prepared candidates confidently selected a relevant statistical technique, worked transparently through all steps in the calculations in a logical manner and produced an accurate result.

Spearman's Rank was the most popular statistical technique for hypothesis testing. In addition to calculating an accurate $\sum d^2$ value and calculating a reliable $r_s$ value, well-prepared candidates competently employed the significance chart/table to determine the level of significance for their result. Full marks were commonly awarded. Just to note, some centres had more than 12 sites within their data set. This cost candidates time in terms of ranking etc.

Occasionally, candidates lost marks when they:

- simply inserted their memorised $\sum d^2$ value into the Spearman's Rank formula, instead of completing the necessary steps to illustrate how the value was derived;

- selected two variables which did not relate to a hypothesis stated in the fieldwork report;

- erroneously ranked their data;

- misapplied the formula; and

- failed to provide a conclusive statement on significance. This was probably completed by two thirds of candidates. Most candidates who did address this were accurate although a few identified the wrong significance level.

For some candidates, additional centre guidance and practice is essential to overcome these challenges.

Centres and candidates must be reminded that all calculations must be shown in the box provided. There is certainly enough space to do so. The ranking of data and completion of calculations, for example, must not take place on the submitted table of data.

Nearest Neighbour Analysis did not feature. Mean, median, mode and range were addressed by a few candidates, most of whom achieved full marks; those who failed generally did not show their working out or did not identify the variable being addressed. However, this technique is not always appropriate to the aims and hypotheses stated in the attached fieldwork report.

**(ii)** The question required candidates to demonstrate their theoretical understanding of their fieldwork data and calculated result in Question 1(c)(i). A clearly differentiated outcome was the result, with the level of geographical reasoning varying considerably between candidates. Many well-prepared candidates confidently explained their statistical result using logical geographical reasons, specialist terminology and relevant theoretical concepts. By contrast, poorly prepared candidates often provided cursory responses with superficial reasoning and a restricted use of specialist terminology. A worryingly large number of candidates simply reiterated their statistical conclusion, despite the explicit prompt in the question that this was not acceptable. No marks could be awarded as a result. Centres must continue to reinforce the difference between a statistical and a geographical conclusion. Moreover, they must provide candidates with opportunities to explore the potential theoretical factors that will allow for a more rigorous interpretation of their fieldwork.

**(d)** Candidates performed well in this question. Most recommended a valid modification to their investigation and provided a clear explanation of its possible impact on the reliability of the geographical conclusions drawn. Its important to note, however, that some candidates erroneously based their answer on an extension, which was not what the question demanded.

**Q2** **(a)** **(i)** Well-prepared candidates were able to calculate the correct Rn value, interpret the result using the graph provided and make an accurate comment in relation to the hypothesis stated. However, a significantly high proportion of candidates were awarded [0] marks for the calculation, primarily because they used $\sum d$, rather than $\bar{d}$, in the calculation. In such cases, linear dependency marks could still be awarded for a valid interpretation of their own Rn result and comment in relation to the stated hypothesis.

Some candidates did not calculate the mean distance which therefore cost them dearly in terms of marks as the equation was inaccurate from step 1. In other cases, candidates lost marks when they erroneously interpreted their result using the significance graph or misapplied the equation provided. Candidates must be given opportunities to practise this statistic using the range of examples available in the AS2 legacy materials. Those candidates who had obviously spent a lot of time completing past paper questions and/or fully understood the technique were able to excel.

**(ii)** Examiners agreed that this was the most poorly answered question in the examination, with a modal mark of [0]. The question itself directed students to use Resource 2A on page 11 to help them and to think about the unreliability of the statistical outcome 'in this case'. Few candidates did this, instead presenting pre-prepared theoretical answers relating to the size of the study area. Nonetheless, a small proportion of astute candidates did recognise the linear pattern presented in the resource and were able to connect that pattern to the Mathare River and its valley. As one examiner keenly pointed out in her report: 'Centres need to be teaching wider skills rather than traditional exam questions'.

**(b)** **(i)** It was pleasing to note that candidates generally achieved high marks in this question as they were able to apply the flow line mapping technique to a high standard. Occasionally, marks were lost when flow lines:

- failed to start in the correct source region, with many originating in oceans;

- failed to reach the destination, Africa; and

- were drawn to an inaccurate width.

Centres and candidates should note that this particular flow line map can be successfully drawn without overlapping the flow lines; however, in the context of the examination, this was not a requirement to achieve maximum marks.

**(ii)** This question was generally well addressed with most candidates gaining at least one mark out of the two. Those who failed to achieve full marks did not fully elaborate on the advantage they identified.

**(c)** **(i)** Explanations of stratified sampling were disappointing. While most candidates recognised the need for subgroups within the population, only a minority referred to the need to represent those subgroups proportionally. Despite this, most candidates were able to apply the principle of proportional representation in the context of the question and completed two accurate calculations.

**(ii)** Most candidates were able to access some marks here, although very few achieved maximum marks. In most cases, candidates recognised that random sampling could result in the over-representation of one healthcare district. Well-prepared candidates could extend their response by referring to possible under-representation and omission of particular healthcare districts.

**(iii)** **1.** The majority of candidates successfully calculated the mean and mode for the data set.

**2.** Most candidates could confidently describe how the median of the data set was determined, although some confused this technique with the mean.

**3.**     Marks awarded were generally low.  While most candidates recognised that the mode for this data set was an extreme (the highest) value, only well-prepared candidates could explain why it is more appropriate to use the median to summarise the data set. One examiner was keen to point out candidates' ignorance of the emboldened word 'this' in the question set.  Emboldened words and phrases are there to support the candidate when interpreting the question.  In this case, candidates were encouraged to apply what they know about mode and median to the data set presented in Resource 2H.  Those who ignored the command and simply regurgitated pre-prepared answers could not achieve high marks.

# Assessment Unit A2 1 and A2 2

## Overview

It is pleasing to report that few technical problems arose from the 2019 suite of GCE A2 Geography examinations. Timing did not seem to be an issue and there were few rubric violations, although some candidates presented all three options in (a) sections of A2 Unit 2 rather than choosing two from the three given options. Other rubric violations occurred in a couple of cases when candidates attempted sections (c) first and then came back to (a) and (b), but from a different question. It is best to answer questions in the sequence presented in the examination paper.

The demands raised by the questions were seen to be fair and appropriate reported examiners from all three papers.

A number of general points can be made regarding these three Geography examinations.

## 'To help you'

This is a common phrase used to indicate that the resources are not to be used alone but in conjunction with the candidates' own material. The phrase has been used for many years, so it was surprising to see some candidates ignore it or misinterpret it and write either about their own material exclusively or just about the resources in contravention of the 'to help you' instruction.

## Reading the questions and learned responses

This issue comes up every year and there is every expectation that it will arise again in 2020 and beyond. The point is that quite a lot candidates enter the examination room with prepared answers about their topics, which they proceed to write down in response to a more focussed question, which required them to tailor and select from their broader knowledge. For example in A2 Unit 2 Question 7(c) some wrote about both positive and negatives impacts of ecotourism despite the question being on negative impacts alone. Learned responses often failed to deal with the specific needs of the question, whilst redundant material does not receive reward. Candidates must answer the question that is asked of them in order to maximise their attainment.

## Specification terms

Surprisingly, in both A2 Unit 1 and A2 Unit 2 there were reports of candidates seeming to be unaware of the meaning of terms present in the specification: 'beach nourishment' and 'honeypot sites' are just two examples from a larger selection. Anything written into the specification can be examined and candidates must be aware of all the terms and issues to be found there.

## Use of resources

When a resource is presented as part of a question it should be used. Details should be taken from it and presented within the candidate's answer. This applies to all three Geography papers, not just A2 Unit 3. However, note that the correct use of resources precludes candidates quoting verbatim from the resources. Excessive verbatim use is, of course, a long-standing issue at A2 Unit 3, but it was seen this year also in the other two papers.

# Assessment Unit A2 1    Physical Processes, Landforms and Management

## Overview

The demands of the paper, and the source materials therein, appeared to be accessible to candidates of differing abilities, offering them appropriate opportunities to respond positively to the questions posed.  The number of rubric violations was limited, and the majority of candidates responded to the required number of questions and sub-sections.  Rarely were questions incomplete and there was little evidence of candidates running short of time.  However, a number of candidates answered questions and parts of questions out of sequence; this is not advisable, as the question flow may be interrupted.

In respect of resource-based questions, candidates should be encouraged to probe fully or analyse the information presented, manipulating it to address the demands of the question.  For example, specific figures, names, locations or values enhance the quality of description or evaluation.  Candidates should be reminded that extensive verbatim quotation cannot be rewarded with higher level marks.  The better responses displayed extensive use of appropriate subject-specific terminology and employed high standards of grammar, spelling and punctuation.  It was pleasing to note that the more able and well-prepared candidates developed their responses in a discursive manner and demonstrated their high level of knowledge and understanding through application of detail.  Good candidates were strong on sections that demanded an interpretative response using both the resources and selected case study detail.  In particular, it was pleasing to note the growing strength of the higher-order skill of evaluation, including the provision of the candidate's own opinion, when appropriate.

Although often cautioned against it, evidence remains that, within some centres, candidates are encouraged to learn standard responses to case study questions.  Such responses are unlikely to address the explicit demands of the question and are thus self-limiting, perhaps preventing entry into Level 3.  Therefore, candidates should be strongly encouraged to manipulate their knowledge to address the specific demands of the question as it is set.

There was some evidence that the quality of the diagrams presented has improved, suggesting that candidates have been encouraged to practice under time constraints and that they understand that the information contained on a diagram should be accurate, relevant to the question, and explanatory.  Unfortunately, however, this was not universal across all sub-sections.

## Option A: Plate Tectonics: Theory and Outcomes

**Q1**  **(a)**  Although this was a straightforward question, a number of candidates described 'island chain' rather than 'island arc' formation.  In addition, 'general reference to places' proved an issue for a significant number of candidates.  The quality of geographical terminology employed by candidates was, at times, disappointing; candidates should be reminded of the need to embed detailed and appropriate geographical terminology into all responses.

**(b)**  Those candidates who took time to describe the patterns illustrated on the resource map accurately, usually went on to identify the processes at work correctly (hot spot and plate migration).  The best candidates provided very accurate and detailed responses, utilising information provided on the resource.  However, a number of candidates did not identify the influence of hot spot activity whilst the interpretation of the direction and rate of movement proved confusing for some, even when the process was recognised.  Others neglected the description aspect of the question in spite of the wealth of information provided on the resource.  Locational terminology was often restricted in nature.

**(c)** The better answers identified the key management and preparation issues from the resource, added similar examples from their own case study and, subsequently, developed a wider range of management with detail from their study. However, some candidates ignored the resource completely. In a number of cases, candidates provided a descriptive timeline of events relating to their case study, rather than addressing the focus of the question. Overall, candidates should be reminded of the need to identify their case study explicitly (using a date, for example).

**Q2** **(a)** While most candidates handled the description of the three named seismic waves with competence, the explanation of the potential impact of seismic shaking was too often lacking in range and detail. Comments were often superficial and cursory in nature. Often restricted to falling buildings and destruction of infrastructure leading to injury and death, answers could have been extended to include landslides, fires, tsunamis and liquefaction. At times, responses were lacking in precision and clarity.

**(b)** It was disappointing to note that a number of poor-quality diagrams were presented, suggesting lack of practice. Although the majority of candidates were able to identify the destructive margin correctly, this was not universal. The focus was on description and explanation of process and, especially, the tectonic landforms and activities. Seismic patterns and, specifically, the widening foci in the Wadati-Benioff zone were only rarely linked to the contact zone along the subducting oceanic plate. Again, sub-plate processes were often neglected, with responses merely identifying the margin type. In a number of cases, a generic response was given, without reference to the resource context.

**(c)** In the main, candidates were well prepared for this question and the level of detail and evaluation provided were often good. However, at times, candidates restricted the quality of their response by providing a detailed timeline of events relating to a specific volcanic event, without broadening their response to include all the preparation elements or an evaluation of preparation and response.

## Option B: Tropical Ecosystems: Nature and Sustainability

**Q3** **(a)** The better responses utilised the materials offered by the resource with competence; others, however, provided a generalised response lacking in resource connections. In general, the descriptions and explanations of possible solutions were well-handled.

**(b)** Whilst it was pleasing to see that the diagrams presented in response to this question were often good, the explanations too often lacked precision, clarity, detail or development. Some candidates neglected to note the relevant climate characteristics whilst others either ignored or over-played the role of the shifting ITCZ.

**(c)** The case study details provided in response to this question were often pleasing and drawn from a range including agroforestry, eco-tourism and conservation fields. Most were Latin American in context. The best responses were overtly structured on facts and the evaluation of the benefits and problems of both the named aspects of sustainable development. In some cases, reference to the focus of sustainable development was absent.

**Q4**  **(a)**  The better responses to this question included specific details from the resource to support their response and addressed both socio-economic and environmental sustainability in the given context.  Others, however, neglected to focus on sustainability.

**(b)**  Again, in general, an improved quality of diagrams was presented.  The better responses provided specific detail relevant to the stated context both descriptively and in explanation.

**(c)**  This was a straightforward case study question.  The responses were differentiated by those who merely described what they knew of their case study, and others who used the benefits/problems and environment/socio-economic elements to structure an evaluative answer.

## Option C: Dynamic Coastal; Environments

**Q5**  **(a)**  In response to this question, the drawing of relevant diagrams proved frustratingly inadequate from too many candidates.  The sequence link of wind direction to wave formation to potential refraction was not made clear in many cases.  Although the majority were able to distinguish drift- from swash-aligned coastal environments, this was often not expressed with clarity or precision.  Candidates should be reminded of the need to embed detailed and appropriate geographical terminology into all responses.

**(b)**  The majority of candidates were able to draw upon the resource to identify some of the issues relevant to the use of beach nourishment effectively.  However, some candidates merely identified these, whilst others went on to evaluate them in sustainability terms.  In their evaluation, the best candidates evidenced wider understanding of the positives and negatives of the strategy.  However, a number of candidates appeared unclear as to the nature of beach nourishment.

**(c)**  Again, a number of candidates appeared to have learned a 'standard' response; too often, candidates set down their factual knowledge of a relevant study with scant regard for the demands of the question.  The focus of the question was sea level rise; a key element was evaluation of the severity of the changes and too few respondents acknowledged this requirement specifically, but rather implied it through the scale of impacts that were described.

**Q6**  **(a)**  Although a number of candidates handled this question well, some using diagrams (which were not an essential requirement) to good effect, this was not the case for all.  Some explanations of spit formation lacked precision, clarity and detail. Terminology and explanations relating to process need to be enhanced at this level.  Reference to place for illustration was, too often, restricted.

**(b)**  The descriptive element of the responses was, too often, lacking in detail as many candidates did not fully analyse the resource material.  Most candidates used the resources to identify a sea wall and groynes, but better candidates recognised the designations (SSSI, SAC, SAP) as strategies for protection rather than only reasons for protection.  The reasons for the importance of coastal protection in the given context were too often lacking in development.

**(c)**  The strongest candidates identified themselves by discussion of what a Shoreline Management Plan (SMP) is, with its scope (sediment cells), timeframe (short, medium and long), various aims (hold the line, managed retreat and so forth) and the use of Cost-Benefit Analysis (CBA) and Environmental Impact Assessment (EIA) within a chosen context.  Others did not address the demands of the question and did not explain **why** SMPs are important to sustainable coastal management.  In a number of cases, the candidates did not appear to have knowledge of SMPs.

### Option D: Climate Change: Past and Present

**Q7** **(a)** Although, in response to this question, most candidates were able to distinguish the two processes, the selection of appropriate landforms was not always made clear.

**(b)** The majority of candidates utilised the resource materials presented effectively. The better candidates drew relevant information from the resource, and then paralleled and broadened this information to include reference to problems and benefits from their own knowledge.

**(c)** The candidates utilised a variety of evidence to support their responses: ice core; ocean sediment; pollen analysis. Differentiation was through details, range and appropriate place illustration presented by the candidate.

**Q8** **(a)** Better candidates distinguished the two approaches with clarity; the use or lack of appropriate examples differentiated between responses.

**(b)** Despite positive responses to this resource, it proved difficult for some candidates to present an appropriate and useful diagram in their response. Only a few went on to describe the advance and subsequent retreat of an ice sheet in the formation of this lowland landscape.

**(c)** A number of candidates addressed this question with competence. This question was an invitation to describe and explain the current and potential impacts (positive and/or negative) of climate change. The only spatial requirement was reference to both LEDC and MEDC locations.

# Assessment Unit A2 2  Processes and Issues in Human Geography

## Unit Overview

Standards of response to this paper varied as might be expected and, indeed, wished for – examinations do rank candidates after all. However, the examiners reported that candidates of differing abilities could relate to the questions. One thought that the fact that there were some section (c) questions which did not contain resources made them more accessible to weaker candidates, who might struggle to integrate resources with their own material. Generally the (a) and (b) sections were answered better that the longer section (c) questions. Option D Tourism was the most common; Option A on Cultural Geography the least popular, especially Question 2, which few attempted.

Few candidates used inappropriate case studies; nor did they tend to leave blank spaces in the scripts, since most attempted all their questions. There were few rubric violations, just a handful who wrote about three factors in some of the (a) questions when asked to choose any two. There was little or no evidence of timing problems

A main issue – as in other years – is that candidates sometimes presented extra material that is not for reward in terms of what the question asked: for example environmental issues from mass tourism in Question 8(c); positive impacts of ecotourism in Question 7(c) and reasons for out-migration rather than just its implications in Question 1(c). Candidates need to focus their answer directly to the purpose and wording of the question and try to avoid presenting prepared answers that take a broader approach than the question allows. Redundant material is greeted by examiners with a wiggly line down the edge of the text, which identifies effort and time that has been wasted.

Other general points would be that candidates:

- should make full use of resources, but refrain from copying directly from them;
- should realise that, where indicated, resources and their own material should be presented, the phrase 'to help you' is the commonly used instruction in such cases;
- should distinguish between simple description and evaluation.

There were no problems with the language or terms used in the question paper. However as noted some specification terms such as 'UNESCO World Heritage Sites', 'honeypot sites' and 'retail parks' seemed not to be known by all, which is a problem from candidate preparation: questions can and will be asked directly on topics and terms which appear in the specification.

## Option A: Cultural Geography

**Q1** **(a)** This question was generally well answered, with gender being the most popular choice. Some candidates failed to ensure that they linked their answer to social inequality and did not simply describe the factor. Answers with exemplification were generally better.

**(b)** Responses here were mixed. Some did not understand what the memorial shows even if they could demonstrate their knowledge of cultural nationalism. The distinction between the celebration of European settlers and the less attention paid to the original aboriginal inhabitants was often missed.

**(c)** A few answers lacked focus and talked about the reasons for out-migration rather than its implications. Candidates need to ensure they read the question carefully and focus their answer on it. Others just wrote about the limited range of services available in their case studies – usually Barra and Vatersay or Achill Island – rather than dealing with the implications as asked. Often good answers were seen which dealt carefully with service provision, economic activity and social stability as required.

**Q2** This was the least popular question on the paper with very few candidates choosing to answer it.

**(a)** Push and pull factors are widely known and this question was well-handled.

**(b)** Some candidates answered this without reference to the resource. Others did not focus specifically on socio-economic activity as required, but most approached this question well, with good use of figures.

**(c)** That there are global contrasts in the use of cyberspace was fully accepted. There was a good deal of evidence from the resources, which could be brought to bear on answers here, in fact some candidates failed to move beyond the resources as required. Some used only one of the resources, which impacted their marks.

## Option B: Planning for Sustainable Settlements

**Q3** **(a)** Some candidates answered only about parks, evidence of their not reading the question carefully. Leisure and sport were usually lumped together, which was acceptable. By contrast some went into welcome detail about activities such as concerts and shopping, making the appropriate link to planning and design.

**(b)** The required focus on traffic management was not always seen, some candidates writing instead about personal health and financial benefits. Some tied their answer to case study material instead of the resource. However, benefits and drawbacks were often well covered and one examiner reported that most of their candidates made good use of the resource, many gaining Level 3 marks.

**(c)** The essays in this option tended to be strongly answered overall with sound knowledge of the case studies. In this question most opted for Leicester, presenting named policies for both energy and waste with direct links to environmental, social and economic sustainability. A few chose Belfast, but such candidates tended to have less material to present.

**Q4 (a)** This was answered well on the whole, particularly by candidates who went on to show how brownfield development could save the necessity for taking greenfield sites. Some strengthened their answer with place reference, though this was not obligatory.

**(b)** Some candidates seemed confused about retail parks – although this is a term from the specification – which led to misinterpretation of the resource. One examiner reported that this answer was sometimes not well structured; that candidates seemed to struggle to pick out information from the resource and present it in a cohesive way. Some focused only on online shopping, but most dealt with both environmental and social sustainability.

**(c)** This was generally well-answered, almost always using Cambridge as the case study. The best answers placed each strategy in its own paragraph, describing and evaluating them in turn, with a brief conclusion to round things off.

## Option C: Ethnic Diversity

**Q5 (a)** There was no particular partiality for any of the factors, although nationality was probably the one least often chosen. The examiners reported that factors had been well learnt.

**(b)** Residential concentration was generally understood, but some answers focused on the reasons for it, without explaining how it influences identity, thus failing to achieve a Level 3 mark.

**(c)** Some candidates took an historical approach, presenting a chronological reading of what had happened in their case study. Better answers had three distinct sections on causes, nature and outcomes, using both their case study and the resource in tandem. Unlike some questions here there was a range of case studies: Israel (which often became just Jerusalem), Sri Lanka, East Timor, Northern Ireland (which often became just Belfast) and Rwanda. Weaker candidates failed to distinguish properly between causes, outcomes and nature of conflict. The resource was sometimes integrated and sometimes stand alone, but was rarely fully omitted. Depth of response varied with case study, but generally this question was well-answered, despite it being quite demanding.

**Q6 (a)** One of the examiners reported that she saw good answers with strong links to the creation of ethnic diversity, but that others spun out their case studies, which didn't quite answer the question. In particular the impact of colonisation on the ethnic diversity of the colonial power was sometimes neglected.

**(b)** Good use was made of the resources for this question, which presented plenty of scope to illustrate multiculturalism. However, some candidates needed to be aware of the danger of presenting near verbatim rewrites of the material.

**(c)** Jerusalem and Belfast were the cities most commonly used as case studies. Some candidates would have benefitted from presenting greater detail about their chosen place. Facts/figures were lacking in places reported one of the examiners, referring particularly to the spatial outcomes relating to Belfast.

## Option D: Tourism

**Q7** **(a)** One examiner reported with surprise that some of her candidates did not seem to understand what a honeypot site is, despite the term featuring on the specification. Other ways marks were lost was to ignore the requirement to answer on mass tourism and/or to fail to have place reference. Pollution and honeypot sites were the most common factors chosen.

**(b)** This question was at times not well answered, especially when candidates failed to bring in sufficient of their own material despite the standard 'to help you' instruction in bold. Some neglected the photographs from the resources and just used the text. The ideas of ecotourism and its economic and environmental benefits were usually clearly handled.

**(c)** It seemed that this question with its somewhat narrow focus threw candidates who were assuming a broader positive and negative approach would be asked for; some gave positives as well or even instead of the negatives required. Answers in some cases lacked depth with time wasted on introductory paragraphs, which did not always focus on the demands of the question. Candidates must ensure that they read and respond to the actual question on the paper before them.

**Q8** **(a)** This question was generally done well, although some candidates lacked the necessary focus on mass tourism, one examiner noting that she had had answers on tourism to Antarctica. Lack of place reference was a problem in a few cases. Transport developments and the increase in disposable incomes were the most common factors chosen.

**(b)** There were some good answers here from candidates who demonstrated a good grasp of the material. However, examiners reported that some candidates appeared to never have heard of UNESCO World Heritage Site designation, despite this being mentioned in the specification. Another problem was that those who knew about the UNESCO designation might have focused on it and ignored the resource. The 'to help you' instruction is both common and straightforward and requires both the use of the resource and the candidate's own material.

**(c)** As with Question 7(c), this question adopted a narrow focus, in this case by dealing only with social impacts of mass tourism. Candidates who presented a logically structured answer with problems, strategies and an evaluation of the strategies used to reduce the negative social impacts of mass tourism with reference to their case study scored well. However, some missed the focus and presented material about their case study that was not relevant. Some listed the social problems but did not deal with the strategies.

## Assessment Unit A2 3    Decision Making in Geography

### Overview

This is the second year in which the Decision-Making Exercise has been examined as a standalone paper.  The examining team feel that this makes the challenge less onerous than completing it in combination with another section of the specification as used to be the case.  Nonetheless, a Decision-Making Paper retains considerable challenges and candidates have to be well prepared individually, and by their centres where appropriate, for the particular demands of this paper.

The context this year was a coalmine in Australia.  All of the usual resources were included in the Resource Booklet.  There were maps showing where the proposed Carmichael Mine would be located, and the proposed rail links between it and the port at Abbot Point, with an inset map showing Queensland.  Another map showed a little more of the detail of the proposed mine, indicating where the coal was going to be removed by underground working and where it was to be open cast.  Some Nature Reserves were also indicated.  The third map had features of an infographic about it, with facts and figures around the area annotating a location map; an astute candidate could employ that as part of the discussion.  There were two more conventional, and relatively simple, infographics, along with a range of photographs.  The usual text was available in the Resource Booklet, to be used in conjunction with the text in the question paper, and it included quotations from some individuals and groups who held strong views on the proposed development.  The examiners reported that they saw little evidence that these resources were inaccessible and most candidates appeared to grasp the issue easily and use the resources to support their discussions.

This year, yet again, there was some evidence of verbatim use of resources.  Centres should continue to alert candidates to the need not to be tempted to give the resources back to the examiners with minimal or no alteration.  Only when the candidate has shown a full understanding of the issue, and the nuances within it, can they be considered for the full range of marks available.  It has been noted before that the use of key phrases from the text is likely to be unavoidable: 'the Paris Agreement on Climate Change', 'new railway line extension' or 'surface disturbance area' are used in the text provided and it is not surprising that they were replicated in candidates' responses.  However, it is when the whole sentence is replicated, and occasionally the whole paragraph, or a series of them, that the candidate is considered to be demonstrating more limited understanding of the issue and, if excessive use is made in this way, the answer will be confined to Level 1.  That any marks can be awarded at all will be determined by the relevance of what has been used verbatim.  It should also be noted that changing an occasional word, or swapping around a couple of words in a sentence, is little better that fully verbatim use of resources.  The report should be, except for unavoidable phrases, in the candidates' own words.

### Section A: Introduction

This year candidates were asked for a description of the proposed project.  Many centres may have inculcated into their candidates the more usual introduction, which has generally included aspects of both need and description.  The attentive candidates, and most of them were alert to this, confined themselves to description.  There was a lot to describe in relation to the proposed mine, railway line extensions and the port developments at Abbot Point and a lot of figures were available to candidates to maximise their marks in this section.  While some did stray into 'need', most stayed well clear, and the introduction was well-handled in general.

There were some reports of poor structure in this section from some examiners. One commented that 'candidates lifted information from the Background and Introduction, not realising there was an overlap in some parts of the information so they started to write about the mine and rail and port and then onto something else and then back to some details on the mine and rail and then back to previous information and then to the port'. A greater degree of organisation during the first 30 minutes of the examination should improve how information is 'pooled' and then used to construct the answer.

## Section B: The likely Impact on:

### i) Employment and the economy

Most examiners reported that this section as 'well done' with a lot of data available to candidates. One examiner noted that, for some candidates, 'there was little use made of resource material in the form of maps, diagrams or infographics' with only candidates using these to their full potential alongside the text achieving Level 3. However, she later noted that '…this section saw many candidates expressing good point development, showing understanding and sophistication in their responses'.

A couple of examiners noted that important aspects of the argument were not brought in: one noted that 'the key economic counterargument focussing on the future market for this coal, with India moving away from coal-fired power stations, was often omitted', and this will have weakened those responses.

### ii) The environment and people

There was a little flexibility to candidates this year as the question paper did not require answers to address potential 'negative' impacts on the environment and people. With the word 'negative' omitted, candidates could start with mitigation measures and those aspects of the proposed development which could be argued to help people. However, it was probably easier for them to come at it from the negative first, and then to examine the counterarguments for that. There are few benefits to the environment in this proposal – indeed the developers are reasonably transparent about this when they concede that 'human activity inevitably has environmental consequences'. It is the mitigation measures that they put in place here, to protect the archaeology, for instance, or to monitor the impact on groundwater which form the counterarguments to the negative impacts. The infographics were of particular value here, and some examiners noted that several candidates did not use these sources, to the detriment of the quality of their answer.

It is often possible to use some material in a section that might be considered more suited to another part of an answer. For example, a small number of candidates wrote about economic impacts in this section. This can be appropriate, but only if the aspects of the content being used are clearly identified as to do with environment and/or people. The same applies for environmental or 'people' information in Section B(i).

As is usually the case in Sections B(i) and B(ii), imbalance between the sides of the argument, especially when there is abundant content to draw on, generally indicates a weaker answer.

## Section C: Decision

This often remains the most challenging part of this paper for most candidates. Coming at the end of the examination, there was some evidence of this section being rushed by some candidates. However, one examiner reported that she only came across one candidate in her whole allocation who failed to complete this section and generally timing was not a major issue.

The best candidates understand that this section is where the various arguments are 'weighed up', where the strength of the economic/employment and environmental/social arguments can be pitched against each other. There are no easy answers, and candidates who suggest that there are, are generally missing many of the nuances.

The decision by most candidates was against the development. One examiner noted that only in 14% of the scripts that she marked was the decision to go ahead with the mine. Nonetheless, it is possible to argue the strength of the economic argument and the overwhelming benefits for the Queensland, and wider Australian economy of allowing the mine, just as there is an equally strong argument that could be made for not allowing the mine to proceed.

Mark schemes never include a model answer for 'Decision' in the Decision Making Exercise. It would be difficult to provide that in any convincing way, as much of it is adjudged with reference to what has gone before. For example, those candidates who repeat swathes of material that they have used in Section B(i) and Section B(ii) are unlikely to convince examiners that they are using this opportunity to synthesise the whole issue, unconstrained by the categories that Section B(i) and Section B(ii) enforce. While such an answer might look excellent if presented outside its context within the whole paper, if it is largely a 'rehash' of what has been provided before, it may score only modestly. Demonstrating a sophisticated grasp of the issue, clearly balancing the argument, using facts judiciously and effectively and, when inevitably covering ground that has been touched on before, doing it in a fresh way: such a candidate is likely to do well here.

## Format

These are generally a straightforward couple of marks for candidates, and that was the case this year as well. All that has to be done is to use the headings and subheadings as provided. Care has to be taken that they are exactly as provided, without an 'a' or a 'the' if they do not exist in the question booklet. The reason for such an apparent stringent requirement is that it is well-nigh impossible to adjudge how far a candidate can stray from the original before a mark is lost. Thus any 'creativity' in these will result in a mark not being awarded. Occasionally, candidates used Conclusion instead of Decision and a mark was lost. Very occasionally, there were candidates who did not use any structure in the report which resulted in both marks being lost.

## Role

Most candidates gained both marks for adopting and maintaining the role of Ms Sheila Gildea. Some examiners remarked that the role was sometimes over-stated – all that is required is, in two different parts of the report, a recognition that there is a role being adopted. This can be done in ways which require little ingenuity or effort and simplicity is often the best approach here.

## Graph

The table of data might be thought a little trickier than usual this year. A total was provided alongside the figures for open cast and underground mining and, despite being asked to complete the graph 'using all of the data from Table 1', many omitted the total data. It had been anticipated that many candidates would complete this as a compound bar graph, and the total figure would be useful information for that. A minority of candidates did take that approach, but others plotted just the Underground and the Open Cast data, and omitted Total, losing a mark in consequence. A line graph was probably not the most straightforward choice, but some took that approach and did it well.

Examiners recognise the challenges of an unseen Decision-Making Exercise. However, candidates have to expect the challenge of a graph and have experience in deciding what scale might be appropriate for example, to show accurate plotting of the data, and what graphical technique might be suitable for a set of data. Similarly, they should be well prepared for the challenges of the construction of the graph. For example, if a line graph is used, they should be alert to the fact that Year 90 is not the same distance from Year 80 as Year 80 is from Year 60. Practice, in timed conditions, using past paper data might be a useful preparation for this aspect of the exercise.

Graph paper was more widely used this year in many centres. Perhaps this reflects the challenges of this particular set of data, or it may indicate that candidates are being advised to use graph paper more. As has been discussed in previous reports, there are arguments on both sides in relation to this. However, advice that has been provided before is still appropriate. If using the booklet to present the graph, candidates should be careful to use an appropriate scale. Graphs crammed into a few lines are often seen in booklets but not often if graph paper is used. If using the booklet, candidates would be well advised to use most of or all of a page for the graph.

## Update on issue

Candidates will know and it is stated in the paper itself that they should not use any information that they might know about any issue which is not present in the Resource Booklet and Question paper.

However, it may be of interest for teachers and candidates to know that permission to begin work on this controversial mine was given on 13th June 2019, coincidentally the date on which candidates were sitting this Decision-Making paper. See details here:

https://www.abc.net.au/news/2019-06-13/adani-carmichael-coal-mine-approved-water-management-galilee/11203208

Despite the permission, protests continue and the issue is still highly contested in Australia and further afield:

https://www.theguardian.com/environment/2019/jul/23/adani-protest-french-journalists-charges-should-be-dropped-media-union-says

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