GCE A LEVEL EXAMINERS' REPORTS

GEOGRAPHY
A LEVEL

SUMMER 2018

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GEOGRAPHY

GCE A LEVEL

Summer 2018

COMPONENT 1: CHANGING LANDSCAPES AND CHANGING PLACES

General observations

- Candidates are to be commended for they way that they have managed to address the demands of the new specification and the demand of addressing both human and physical geography content within this one paper
- The use of case studies was pleasing to see in some questions but their application could be more consistent
- The performance of candidates could be improved by giving further attention to command words and their meaning
- Some centres had prepared candidates well for the AO2 element of the essays but the AO2 element could be more integrated and developed by many
- There was some good use of diagrams in the Changing Landscapes section but they were rare in the Changing Places section
- Candidates should identify the questions they have attempted on the front sheet of the answer booklet
- Time management was an issue for some candidates as they spent too much time on the skills questions in particular.

Comments on individual questions

Q.1 (a) (i) The majority of candidates were able to access the question and used the resource to good effect and so the answers generally scored well. However, students often wrote too much on this for the allocated marks. Almost all responses showed the ability to extract information from the resource concerning the effects of the storm events. The most popular economic impacts cited in the answers related to costs of repair, loss of business in Looe and depletion of income from tourism. Some of the weaker answers expected the reader to finish off the link to the economic impact and stopped their analysis mid-sentence. For example the track was noted as being damaged but the point was not developed to include costs to the rail companies, government or commuters. Some answers were prone to extreme statements such as Devon and Cornwall had been cut off and people wouldn't be able to get to work and would lose their jobs. Better to indicate that commuters would have to use other means, such as car or bus, to get to work which would lead to extra cost.

(ii) Most common impacts stated were homelessness, mental health and stress/trauma and many candidates were able to develop these with reference to Figure 1. Unfortunately, many candidates did not understand social impacts and focused on other economic impacts not stated in (i) or environmental and demographic issues were raised which could not be given credit.

(b) There was a full range of responses here although process was often less strong with just a mention given. There were however a significant number that did address both elements of the question giving some detail to coastal process and linking it to landforms. The vast majority of candidates focused on beach formation as their coastal process, with tourism and associated economic benefits being developed as the positive impact. There were a variety of case studies offered as support with Blackpool, the coasts of Lincolnshire, Norfolk and Essex being popular. Many examined the Jurassic coast and its associated landforms with the better candidates giving a balanced account, dealing with both deposition and erosion and social and economic impacts.

Q.2 **(a)** **(i)** Most students calculated the correct answers for the first 2 calculations, and many all three. There were some centres who skipped the numbers completely.

(ii) Many students failed to interpret the results, while they could work out the values in 2(a)(i), they were unable to use the critical values table or came up with confused answers. Those who understood what the critical values table shows answered the question clearly. A handful of students got 2(a)(i) value for C wrong, but then using their C value were able to interpret it correctly.

(b) Most candidates understood the influence of waves, shape of coastline and geology as physical factors that determine the rate of sedimentation. Better candidates gave attention to the inputs and outputs of sediment by waves and developed the idea of balance between erosion and deposition and sediment supply. Some responses included human intervention as a reason and gave some detail concerning the impact of groynes trapping sediment that may increase deposition in some areas and decrease it elsewhere. These answers normally cited the Holderness coast as a case study. Many responses were however generic and although some had locational support, it was not always appropriate. A number of answers included more than two reasons and a few offered reasons that were similar and overlapping, e.g. wave type and then time of year, where the wave types would be different, or constructive waves followed by a repeat in reverse for destructive waves. Examiners reported that many answers could have been improved by the inclusion of case study materials.

(c) A noticeable number of students failed to even attempt this question. The vast majority of students who did answer it, answered it well using terminology effectively and thus achieved two marks.

Q.3 This was the most popular of the Coastal Landscapes essays and was generally well answered. Those candidates that based their answers around the analysis of case studies scored well. Exemplification that was successful included studies of the concordant and discordant coasts of Dorset, the Holderness coast and the Pembrokeshire coast. Candidates were able to access AO1 marks in a straightforward manner although a number of responses were a simple list-like regurgitation of knowledge concerning erosional processes and weathering. The better responses applied this knowledge to the impacts of geology on landform giving due attention to geological characteristics such as lithology and structure. These answers were thus able to establish the link between geology, process and landform more effectively than those who simply described the sequential development of caves, arches and stacks. Some centres had prepared their candidates for the AO2 element of the essay and responses here had an integrated reference to relative importance of geology. This frequently took the form of direct statements concerning the geological character of the coast in question or the role played by other factors such as subaerial weathering, periglacial processes, wave energy and mass movement. Only a few gave emphasis to temporal variation or the impact of human intervention.

Q.4 This was less popular and provided a broader range of responses. The best answers were usually based on a case study with the most popular, and successful, centred upon sand dune systems such as Studland or Ainsdale. These responses had a clear structure where there was some discussion of the reasons why a strategy was needed, an outline of the operation of the strategy and consideration of the strengths and weaknesses. A similar structure was used where management strategies for coasts of rapid erosion were discussed, frequently using Bournemouth or the Holderness coast as case studies. However, a significant number of responses did not follow this structure and saw the question as an opportunity to describe management methods at length rather than a strategy. For example, many gave detailed descriptions of groynes rather than including these in an analysis of a hard engineering strategy. Candidates were less successful in addressing the AO2 element and although they mentioned strengths and weaknesses they rarely examined stakeholders or temporal/spatial variations.

Q.5 **(a)** **(i)** As with Q1 (a) (i) the majority of candidates were able to access this and scored well. Answers were mainly focused on the impacts on housing and communications as these were the impacts immediately recognisable in the resource. Comment was made on the damage to power lines but only a small number linked mortality with psychological impacts. As with 1 (a) (i) there were a number of responses that gave a simple identification of a potential social impact but failed to develop the point clearly. For example, the damage to the bridge was noted and classified as social but the impacts on communities on either side of the river were not developed. A few failed to consistently focus on social and drifted into economic impacts.

(ii) The majority of the candidates scored well here and were able to apply the information in the resource to economy. Answers mostly revolved around impacts on business, stimulated by the information about shops but others examined the cost of rebuilding and loss of trade as lines of communication had been destroyed.

(b) The most successful answers concentrated on climate change or aspects of winter sports. Well-structured answers gave a brief review of the human activity and then developed the impact on glacial landscapes, which could be based on present or past glaciation. Those that explored climate change reviewed the process (sometimes in too much detail) and then discussed glacial retreat, increased discharge from glacial streams, GLOFs, changing albedo and feedback loops (again in too much depth for the marks awarded). Those that explored winter sports were less convincing when they referred to impacts on the landscape but some managed to review avalanches with some authority. Less successful responses spent too much time on description of human activity, producing an unbalanced answer, or were quite vague. The inclusion of case study material enhanced the quality of all answers.

Q.6 **(a)** **(i)** Most students calculated the correct answers for the first 2 calculations, and many all three. There was a cohort who skipped the numbers completely.

(ii) Many students failed to interpret the results, while they could work out the values in 2(a)(i), they were unable to use the critical values table or came up with very confused answers. Those who understood what the critical values table shows answered the question clearly. A handful of students got 2(a)(i) value for C wrong, but then using their C value were able to interpret it correctly.

(b) Candidates were well prepared for this question and many answers displayed knowledge and applied development. Responses were confident and covered a range of factors including warm/cold based glaciers, ice thickness and speed (sometimes associated with the temperature of the glacier), geological character of the bedrock and the character of the glacial debris. A small number broadened glacial erosion to include fluvio-glacial erosion and referred to seasonal variations in discharge levels. The better answers were able to include some brief reference to case study materials.

(c) The majority of answers displayed a clear understanding and produced a developed outline of plucking.

Q.7 Many answers addressed the knowledge and understanding aspect of the question with confidence and produced a sound summary of the processes of glacial transport and a clear depiction of their selected landform(s). Probably the two most common landforms addressed were drumlins and moraines. Both of these were usually explained accurately, with drumlins discussed using a series of theories to interpret their formation. Less common, and generally less well explained landforms, were eskers, kames and erratics. As with other essays the better answers were characterised by the use of examples with some showing the authority that is gained by first hand fieldwork investigation. Some answers were too focused on the description of process thus giving an unbalanced analysis of the AO1 elements of the question – the link between process and landform. When addressing the AO2 element of the question where that requires an examination of the relative importance of glacial transport most candidates gave simple comments on the magnitude of importance or the link to role of previous erosion. Those that chose drumlins often examined the importance of depositional environments and referred to shaping of the landform by ice movement. However the integration of AO2 commentary was often covert and left to the examiner to decipher.

Q.8 Answers to this question often took the form of management of glacial hazards with GLOFs and avalanches constituting the basis of a significant number of answers. Less common, although equally valid, were answers that focused on periglacial environments, mainly with reference to oil pipelines and associated development. A number of answers gave too much description of the hazard itself, and even extended comment on the causes of the hazard, and this often detracted from the thrust of the question. The better responses developed the strategies used to manage glacial environments, with some giving holistic strategies that included risk assessment, evacuation, rescue and land use planning. Other answers focused on individual methods of management, for example when discussing avalanches some candidates spent a significant part of their answers describing and evaluating snow fences in Alpine. Other methods used as part of a strategy to manage avalanches were ignored. The use of exemplar material was usually good and candidates had obviously been taught through studies of the real world and not just theory. As with other essays the approach to AO2 was variable with better responses able to assess strengths against weaknesses, different aspects such as social and economic as well as examine the impacts on different stakeholders. A number of candidates however did not pay attention to the requirement to *examine*, relying mainly on outlining factual content.

Q.9 **(a)** This was often well answered and most candidates managed to describe many of the changes, although they did not always make it clear in which areas change had taken place. The better answers made good use of compass directions to outline both overall changes and adjustments to the distribution of vacant buildings within the cultural quarter. Good answers were able to use appropriate terminology when describing distribution and many referred to the clustered, dispersed or scattered nature of the distribution on different maps. Many related changing distribution to the size of buildings. It was a shame that some candidates used position on the page rather than directions in descriptions and others focused on occupied rather than vacant buildings. Reference to changes in public spaces were only relevant when it touched on the changing distribution of vacant buildings.

(b) This was answered well with the better responses often based on case study materials. These were often local but successful examples. Those that were noteworthy are Salford Quays and Manchester, Birmingham city centre, the Olympic Park in Stratford, Kelham Island in Sheffield and Ouseburn in Newcastle. Many gave an outline of the re-imaging and reasons why it was needed, although in a number of instances this took over the answer and left little time to examine the impact on individuals and businesses. Most answers displayed an understanding of the process but a number did drift into gentrification. Good answers dealt with the positive and negative impacts on individuals and businesses looking at environmental improvements, improvements in buildings, increased incomes, increased house prices, loss of community etc. Some answers lacked balance between individuals and business and some answers were generic and lost a sense of place.

Q.10 **(a)** This question was probably the best answered question on the paper. Students used Figure 8 well to describe changes in employment structure. Only a handful of students failed to read the correct percentages off the graph. Some, however, insisted on giving reasons for the changes seen.

(b) Candidates generally displayed a sound conceptual grasp of the role of technology and globalisation in the changes of employment structure that characterise the Clark Fisher Model. The better answers were those that could organise their ideas to explain the changes shown in Figure 8. This was usually done using one of two structural formats. One way was to divide the answer into technology and globalisation and explaining their influence on each sector and the other was to examine each sector and apply each factor to the changes shown. Those that tried to combine the two were often confused. Answers were more confident when discussing the primary and secondary sectors whilst the explanations of changes to the tertiary/quaternary sector were often less confident. Some answers were superficial, for instance claiming that the introduction of tractors caused a decline in the primary sector.

Q.11 This was the most popular of the Changing Places essays and a wide range of challenges were identified along with an extensive range of case studies. The best ones focused on real places with maybe three case studies that had varying types and severity of challenge. Candidates displayed a secure grasp of the challenges facing rural places, the main ones including demographic change, decline of services, second home ownership, rural poverty and internet connectivity. Some answers were well structured and examined the different challenges facing rural areas with varying proximities to urban centres. There was a recognition that rural challenges were frequently interconnected in a significant number of responses which displayed a higher level of understanding than those that dealt with a list of issues. Those that adopted a generic approach were also limited by a lack of examples that gave a sense of reality to other responses. Those that reflected that challenges could be overcome by strategies to manage problems gained credit in AO2 as they saw variation in their severity. Other attempts to address AO2 involved comparison of challenges faced by different rural areas, and a comparison of challenges within one place. However, it was often left to the examiner to tease out the subtleties of the points made. Unfortunately, a number of answers failed to address the rural aspect of the question and urban locations were chosen – even if they were set in a rural location. Exemplar material came mainly from the UK but it was most pleasing to see some candidates thinking synoptically and using information from the China, India and Africa units.

Q.12 Many answers displayed clear understanding of the importance of locations near a university outlining that there was plenty of high educated prospective staff available, with the better responses recognising that this was a two way process with companies co-operating with universities to develop technology and ideas. The answers were mainly based on examples with Silicon Valley, Silicon Roundabout and Cambridge being the most popular. There were however other case studies including Reading, Liverpool, Swansea and Dundee. These examples were used to emphasise the importance of a location next to universities. Although answers were focused mainly on science and IT, a small number of answers did refer to clustering of creative industries close to universities such as in Belfast, Bristol and Brighton. The best answers looked at a variety of other non-university factors such as climate (if talking about Silicon Valley), environmental quality, communications and transport, government incentives etc. Where these were discussed in the context of specific cases studies it was easy to award AO2 credit, but again the associated information was often given in a concealed format.

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Summer 2018

COMPONENT 2: GLOBAL SYSTEMS AND GLOBAL GOVERNANCE

General observations

Geography is a 'big tent' subject; and Eduqas A-level Component 2 requires knowledge and understanding of truly diverse topics ranging from peatlands to pirates. Many candidates seemed genuinely enthused by the eclectic mixture of topics included on this year's paper.

There were relatively few instances of candidates running out of time and failing to complete the paper. A minority did, however, leave insufficient time to tackle Section C (21st Century Challenges) most satisfactorily. In some cases, this reflected an over-enthusiastic response to some preceding short-answer questions. In such cases, it was a pity to witness learners writing two or three times more material than they needed to in 6(b) and then, as a result, receiving a low mark in Section C on account of insufficient remaining time.

Often, there was strong evidence of excellent guided learning having taken place in relation to understanding of the assessment objectives. The vast majority of candidates were well-versed in the requirement for evaluative extended writing throughout this paper. Many strategically employed key geographical concepts - including scale, interdependence and resilience - in ways which enhanced their evaluative writing style.

Essays were typically very well-structured, and featured appropriately-sized paragraphs linked by connective words such as however, furthermore, moreover, etc. Most candidates demonstrated excellent discipline by leaving sufficient time to provide a substantial conclusion for each of their three essays. Given the requirement that they must arrive at a judgement (AO2.1c) this is a vitally important thing to do.

Comments on individual questions

Q.1 **(a)** The levels-based mark scheme for this question distinguishes between responses that provide a satisfactory analysis of *long-term* changes - and those that do not. Around one-half of candidates managed to provide a long-term view about the data, most typically by analysing the more frequent recurrence of high precipitation during the last 30 years. In contrast, the weaker half of the cohort applied their quantitative skills in a relatively mechanical and unquestioning way. They usually identified the maximum, minimum and in some cases calculated the range of the data series. However, they did not offer a *long-term* analysis. In some cases no evidence at all was cited for any *long-term* change even though a possible increase *can* be inferred from Figure 1 (though admittedly it is not compelling evidence). The data can be interpreted in varying ways and the best answers recognised this.

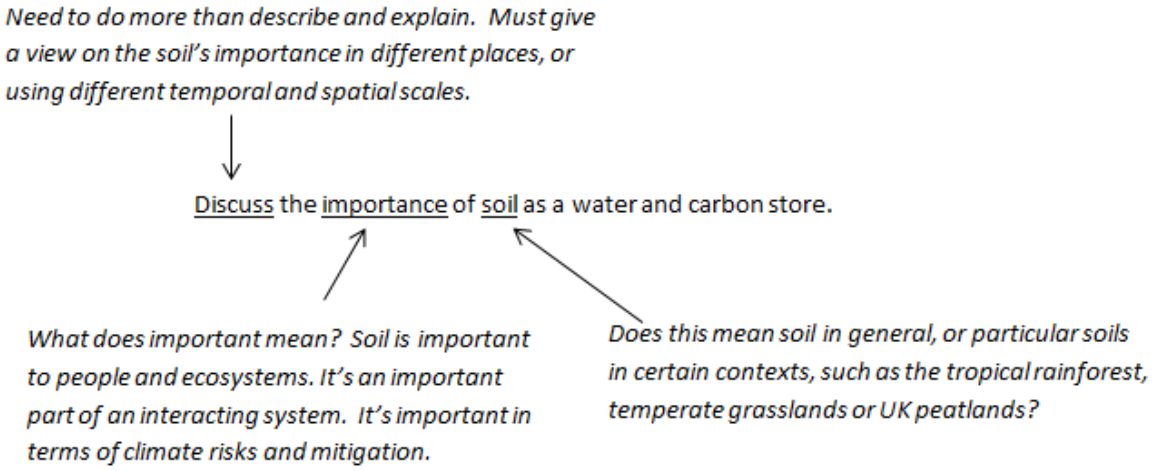
(b) This question targeted candidates' knowledge of precipitation formation and possible reasons for a water deficit occurring in particular years, or for extreme rainfall events increasing in size and/or frequency over time. In-depth knowledge was not required; a brief account of frontal rainfall formation combined with some basic outlining of a possible link between climate change and increased winter precipitation was sufficient for the award of full marks, for example. Candidates who were familiar with historical water deficits in the UK - particularly 1975-76 - were able to put this material to good use given that those years were shown to have low December precipitation in Figure 1.

Q.2 **(a)** **(i)** A surprising proportion of candidates were unable to carry out this simple task accurately. A significant number performed a calculation using the maximum diameter of the forest (2.5km) rather than an estimated mean diameter of around 2km. More worryingly, some candidates were unable to carry out an area calculation: instead they added the length and breadth together. This deficit in quantitative skills only affected a small minority of candidates.

(ii) In a clear and unambiguous way, the question asked for a *description* of the pattern shown *in Figure 2b*. Unfortunately, many candidates - including many of the most able - elected to carry out a far more complicated task which they had not been asked to do. In their answers, they offered a comparison of Figures 2a and 2b yet failed to describe the actual pattern of carbon storage (with reference to points of the compass). This was a great pity; the question had been stated using the plainest possible language in order to give candidates clear guided directions (which were ignored).

(b) This AO1 task differentiated effectively between well-revised candidates and those suffering from 'knowledge gaps'. Brief explanations were required of carbonation weathering and river transport (by solution, suspension or other means). Credit was also given to answers relating to carbon-rich run-off from peatlands or the transport of biological debris. Typically, those who knew the material well scored 4-5 marks while those lacking familiarity with these topics struggled to score one mark.

Q.3 This was marginally more popular than question 4. Of those attempting it, there was pleasing evidence that many candidates thoughtfully constructed a brief plan prior to answering, with a view to meeting the AO2 criterion. Some candidates added 'scaffolding' to the question as shown below:



Once contexts and criteria for discussion have been identified, the chances are greatly improved of a candidate being able to carry out a relevant discussion which arrives at a meaningful conclusion.

Candidates scoring around half marks typically offered a generalised account of how soil forms part of the hydrological and carbon cycles; or provided a comparative but descriptive outline of one or two soil characteristics in the tropical rainforest and temperate grassland biomes. Little consideration was given to different possible interpretations of 'importance'.

A minority of candidates discussed the relative importance of soil *in comparison with* other water and carbon stores, such as the atmosphere and ocean. This approach was not the route to take (otherwise a question would have been set which asked candidates explicitly to discuss the relative importance of soil). In such cases, candidates were awarded marks under AO2, on the basis of they were often able to provide a robust discussion focused on 'importance', but only limited AO1 credit was awarded to those who largely ignored soil altogether in their response (but wrote at great length instead about the ocean and atmosphere).

Q.4 As might be expected, tropical rainforest, temperate grasslands and the UK were the three contexts most frequently discussed. A minority of candidates additionally wrote about cold environments (the cryosphere, arctic tundra, glacial environments). Many candidates provided detailed accounts of water and carbon flows in two or more contexts, and made every effort to frame the material in a discursive way, thereby enhancing their AO2 credit.

The best answers provided a nuanced 'multi-step' evaluation; whereas weaker responses tended to conclude with more simplistic binary (on/off) judgements, as the table below shows.

Basic, binary conclusion	***Nuanced, multi-step conclusion***
All in all, seasonal variations are therefore found in the UK where water flows are far greater in the winter, and carbon flows are greater in the summer. In contrast to this, the tropical rainforest does not experience seasons at all. Therefore, water and carbon cycling remains at pretty much constant levels throughout the year, with high levels of rainfall and photosynthesis always happening whatever time of year it is. Therefore seasonal variations are very apparent in the UK with big summer-winter differences, but there is no variability in the tropical rainforest where high water and carbon flows occur all year round.	*In conclusion, UK winters are often associated with more extreme rainfall events and higher river discharge, while photosynthesis and carbon sequestration reach a maximum in summer. In contrast, there is far less seasonality in parts of the tropical rainforest. It is important not to over-generalise, however, as this essay has shown. Convectional rainfall, infiltration-excess overland flow and flash flooding can take place in the British summertime too, meaning high water flows can actually happen in any season. Equally, drought can limit biological activity and photosynthesis during any season.*

Q.5 **(a)** The majority of candidates provided a competent comparison of attitudes towards immigration in the country shown in Figure 3; many were awarded top band marks. Virtually all candidates compared attitudes in Germany and Greece as the two outliers. The majority also commented on the relatively even split portrayed in Spain and France. Fewer provided a fully comprehensive comparison which offered either an overview of the seven countries as a whole, or acknowledged the numbers of respondents answering 'don't know' or 'both'.

(b) This question discriminated effectively: weaker answers suggested rather simplistically that the governments of countries where most respondents favoured migration would be likely to adopt pro-immigration laws, and vice versa. Occasionally, these assertions were backed up with contemporary evidence; many candidates were aware that Germany has admitted large numbers of refugees in recent years. Stronger responses reaching the highest mark band were more likely to offer a broader interpretation of 'government migration policies'. Typically, they commented on *additional* policies for housing, employment and community cohesion in relation to migration (rather than focusing purely on entry policies). Some of the very best answers suggested that the relationship between attitudes and policies might be complicated i.e. a government might defy the popular will of the people. A few candidates even recognised the apparent discontinuity between the attitudes reported for the UK in Figure 3 and the way the country actually voted in the Brexit referendum; from which they concluded that attitudes such as those shown might not always be mirrored directly by government policy.

Q.6 **(a)** This question was successfully answered by the majority of students, large numbers of whom wrote enthusiastically about maritime superpowers and their capabilities. Many candidates applied their analytical skills very well and correctly identified the numbers of destroyers and submarines possessed by different countries (only a minority of weaker candidates used words like 'many' and 'lots'). The best answers explicitly acknowledged that it is not merely the *number* of vessels that matters but also their *quality*, insofar as one aircraft carrier is doubtless worth more than a handful of destroyers, in terms of naval power. Some candidates drew a useful contrast between China and Japan (as two stronger regional powers) and the Philippines and Indonesia (as two weaker powers). This was a good approach to take which added value to an answer than had already ranked the countries in order.

(b) This was perhaps the most successfully-answered short-answer task requiring candidates to recall knowledge. There was widespread familiarity with Exclusive Economic Zones (EEZs) and the issues they create. The Spratly Islands and the Falkland Islands were the two most popular case studies employed by candidates in support of their outlining of geopolitical tensions arising as an outcome of island disputes. The only caveat which needs to be added for teachers is that their students might sometimes show better judgement when it comes to recognising what is a sufficient amount of information for maximum marks to be attained. Too many highly-able candidates wrote a short essay *in lieu* of a short answer. Sometimes this had an adverse effect on their ability to complete Section C.

Q.7 This was the more popular of the two human geography essay titles. Many candidates provided a strong answer which scored equally well according to criteria AO1 and AO2. Popular themes included: the role played by the internet and sea cables in fostering communication between companies, communities, migrants and their families; the importance of ocean transport for global trade and the activities of MNCs; the extent to which international migration depends on not just transport but also information and communication. The majority progressed beyond description and explanation (AO1); they additionally framed the information discursively (AO2). Typically, candidates offered views and judgements such as these when evaluating the statement:

- Transport was more important in the past in the early decades of globalisation; increasingly, information flows play an even greater role.
- Both are equally important: for instance, commodity flows and online purchases may rely on the internet in the first instance but cannot be completed without physical transport.
- The answer depends on what aspect of globalisation is being discussed: economic globalisation (i.e. global trade) is heavily dependent on container shipping, whereas cultural globalisation (and the growth of global culture) is increasingly driven by social media and YouTube.

A clear distinction was apparent between poorly-revised candidates (who tended to rely on general 'everyday' knowledge of popular culture and online shopping) and well-revised candidates who typically made use of subject-specific terminology (for example, by writing about the way transport supports the *spatial division of labour* adopted by *MNCs*; while the internet can help maintain long distance *community cohesion* amongst *diaspora* populations).

Q.8 Most candidates attempting this question could recall detailed case study information dealing with Somalian pirates and refugees crossing the Mediterranean or fleeing Syria. It was unusual for a candidate in possession of limited curriculum knowledge to attempt question 8 (question 7 probably appeared a better bet in such cases). As a result, relatively few very-low-scoring answers were seen.

The most important fault-line cutting through the cohort - in terms of assessment differentiation - related to the quality of evaluation. On one side of the divide lay largely descriptive case study accounts of efforts to deal with pirates and refugees (with only the most simplistic evaluation offered e.g. 'this has been a success' or 'this has not been a success'). In contrast, superior answers provided a far more nuanced evaluation, such as:

- Localised efforts to tackle piracy may be deemed successful superficially when the problem disappears following a period of action by coastguards or NATO; however, often illegal activities just relocate elsewhere, meaning this is only a partial success.
- Strategies to tackle piracy at sea and global refugee flows could be viewed as successful insofar as the best is being achieved that can be expected given the scale and complexity of the issues involved. But no strategy will be entirely successful unless it tackles the deep-rooted global injustices and inequalities that give rise to refugee flows and piracy in some of the world's poorest conflict-ridden regions.

The material used by students was often up-to-date: they are to be congratulated for making use of contemporary material drawn from the latest headlines. In particular, it was pleasing to see some candidates engaging with the issue of plastic pollution in the oceans and the extent to which this constitutes an illegal activity under UNCLOS (and the implications of this for sovereign states). Some students appeared to have made good use of Royal Geographical Society online resources dealing with this topic.

Q.9 & Q.10 Both questions in section C (21st Century Challenges) were of broadly equal popularity.

Question 9 invited candidates to explore likely changes driven by migration and climate change (Figures 6, 7) in rural areas (Figure 5) prior to offering an evaluation of the extent to which change might be prevented, for example through protection measures (Figure 8). The overwhelming majority of candidates successfully devised a 'road map' along these lines taking them through the four resources sequentially.

Question 10 invited candidates to explore whether human causes of change, such as migration and conservation areas (Figures 6, 8), are likely to have the same level of influence on rural areas (Figure 5) as physical influences such as changing temperature (Figure 7) may do. Again, candidates found no difficulty in navigating their way through the resources in a useful and sensible way.
The strengths and weaknesses of candidates were equally apparent irrespective of which question they chose. These are summarised below.

Strengths	***Weaknesses***
Most candidates made explicit reference to the figures ('Figure 7 shows....') and some drew links and connections ('Some areas showing great change in Figure 6 also show significant warming in Figure 7') *Some candidates drew widely on their course knowledge, making references to: vulnerable rural coastlines; rural locations where significant rebranding has taken place; rural river catchments whose hydrological flows might be impacted on by significant warming.* *The majority of candidates left themselves adequate time to prepare a brief essay plan which helped them to develop an argument. In question 10, for example, some candidates argued that human causes are ultimately of greatest importance because humans are also responsible for the temperature changes projected in Figure 7.* *Some candidates made excellent use of geographical concepts as part of their evaluation and judgement. There was recognition that migration and climate change are both processes that are sensitive to thresholds being crossed, beyond which positive feedback may make further changes inevitable.*	*A minority of candidates lacked any understanding of the assessment objectives for this exercise. A few ignored the figures entirely; others made reference to just one or two of the figures. In such cases, up to 10 (AO3) marks were squandered needlessly.* *Some candidates showed poor judgement in their application of knowledge. They wrote at greater length about one or two particular case studies (e.g. erosion at Holderness) and so failed to demonstrate a breadth of applied knowledge from across the whole specification.* *Some candidates left themselves inadequate time to plan their answer properly. The result was haphazard referencing of the four figures and recalled knowledge that failed to solidify as a coherent argument with a substantiated conclusion.* *Some candidates would have done better to write a shorter and more focused answer instead of hurriedly filling as many pages as possible with increasingly illegible handwriting. More careful planning and use of time might have allowed them to provide a succinct final conclusion demonstrating they could 'think like a geographer'.*

Recommendations for future teaching and learning.

This paper has a high AO3 mark allocation: it is to be expected that relatively challenging graphics will continue to be used in future examinations. Candidates need plenty of exposure to relatively complex data visualisations; and are advised to practice analysing information in ways which reveal what 'the big story' is, in terms of trends, patterns, correlations. Moreover, this is useful preparation for the independent investigation's data analysis section.

When practicing writing under timed conditions, candidates need to develop good discipline with regard to knowing when sufficient information has been provided in response to a five-mark question.

Before answering an essay, students should be encouraged to think carefully about any underlying assumptions they intend to make. What contexts and scales are relevant? What different perspectives could there be? What different interpretations and meanings can be attached to key words in the question statement, such as 'role', 'importance', 'severity' or 'conflict'?

Future candidates need to be clearly briefed on the allocation of marks in Section C and the balance which must be struck between recalled knowledge (AO1), interpretation of the figures (AO2) and the development of a clear line of argument terminating in a substantiated conclusion (AO3).

GEOGRAPHY

GCE A LEVEL

Summer 2018

COMPONENT 3: CONTEMPORARY THEMES IN GEOGRAPHY

General observations

Although challenging, this new paper proved to be accessible to candidates of all abilities but also enabled clear differentiation to be made. Most candidates were able to answer all three questions comfortably in the time allocated and there were very few instances of rubric errors. Although most responses exhibited sound knowledge and understanding (AO1), the inability to apply this acquired knowledge to meet the demands of the question (AO2) limited the marks awarded for some candidates. Several candidates also had problems with the interpretation of questions possibly, in part, due to absence of past papers. Too many candidates demonstrated knowledge that was used without adaptation or close reference to the questions set and this was particularly evident in questions 1, 6, 8, 9, 11 and 12. Many candidates were aware of the specialised concepts and made good use of them, but in the best examples these were integrated naturally into the responses rather than being 'forced'. Causality, feedback, interdependence, mitigation, place, risk, resilience, sustainability, thresholds and vulnerability were the most frequently used and credit was awarded where these concepts were either implied or made explicit. Exemplification was variable, in the best instances topical and detailed, but at the lower end often weak and, at times, inaccurate or very dated. Standards of essay writing were variable, but most candidates achieved a reasonable level of AO3 marks. Diagrams were not very evident but, where used appropriately and well-integrated into the discussion, these did enhance responses.

Theme 1 – Tectonic Hazards

Q1. This was more popular than the alternative compulsory question in Section A and one that elicited a satisfactory amount of relevant information, although success was highly dependent on candidates' understanding of the term 'hazard' and identification of different 'scales'. Some excellent scripts were seen that successfully applied detailed case study knowledge and conceptual understanding to the question posed. A great deal of space was devoted to, fairly accurately, explaining how earthquakes are formed. This provides valuable context but in many cases it meant less time for writing about the hazards, although better candidates successfully related the physics of earthquakes to the nature and scope of different hazards. The best responses clearly identified hazards of ground shaking, aftershocks, liquefaction, landslides and tsunami and linked these effectively to different scales. The approach was often to commence with local scale ground shaking and to analyse spatial and temporal amplification of this local hazard. Exemplification was often detailed and analytical, proceeding from local ground shaking, using examples such as Haiti [2010] and Christchurch [2011], to more regional hazards such as liquefaction (Haiti, Christchurch, Loma Prieta [1989], Kobe [1995]) and landslides (Sichuan [2008] and Loma Prieta) to the regional/global hazards of the physical spread of waves in the Aceh (Boxing Day) tsunami [2004] and the global impact on nuclear power in the Tohoku (2011) tsunami. Where these were then linked to human and environmental damage, credit was given, but those candidates who emphasised impacts at the expense of hazards failed to address one of the key requirements of the question. Reference was often made to the hazard of cholera, but in such cases the link to earthquake hazards was tenuous at best and the cause of the cholera outbreak in Haiti was mostly misunderstood. Reference to volcanic hazards was not credited, although it is acknowledged that volcanic activity is usually accompanied by earthquakes.

Q2. Better responses to this question were anchored by a conceptual framework, such as Park's disaster-response curve model or the Hazard Management cycle, which provided the scaffolding for distinguishing between 'short-term' and 'long-term' responses. Although definitions may be contested, it is useful for candidates to define what they understand by these terms at the outset as it provides a clear framework for their discussion. Some argued convincingly that the short and the long-term could not be easily distinguished, as the rubble and homelessness of Haiti persisted for years. Similar case studies to those used in question 1 were evident and used to good effect. This question on 'responses', rather than the hazards in question 1 proved to be more accessible and resulted in better focused answers. However, many answers were predominantly descriptive of the responses used without the accompanying depth of analysis or evaluation. Better candidates recognised that effectiveness was not necessarily a function of the time-scale of the response, but also dependent on the physical hazard profile of the tectonic hazard (magnitude, speed of onset, duration, areal extent and frequency) as well as human factors, such as levels of development. More perceptive candidates recognised the interdependence between the two, arguing that effective short-term responses were inextricably linked to effective long-term ones. It was encouraging to see the use of recent tectonic events, such as the Fuego eruption in Guatemala (June 2018) and the eruption of Kilauea, Hawaii (May 2018).

Theme 2 – Ecosystems

Q3. Although clearly bulleted in focus box 3.2.2, only the stronger candidates had an explicit grasp of the terms structure (trophic levels, ecological niches, food chains/webs) and functioning (energy flows, nutrient cycling). The terms were rarely mentioned, and many misunderstood 'functioning' and took it to mean 'function', sometimes arguing at length about the functions of ecosystems in terms of their provisioning, regulating and cultural services. Stronger candidates recognised the complexity of the relationships between temperature and other limiting factors, particularly moisture, but also light and nutrient availability, often using the tropical rainforest (selva) and tundra biomes by way of illustration. The interdependence of temperature, precipitation and light in photosynthesis and temperature and precipitation in nutrient cycling was effectively illustrated in this way. Weaker responses were generalised and often inaccurate accounts of different biomes with limited appreciation of the role of temperature. The question was often answered with a range of examples from different environments and scales, including tundra, tropical rainforest, coral reef and candidates' own local park or pond. Generally coral reef was best known and earned reasonable credit with candidates recognising the importance of temperature in these ecosystems and the changes induced through global warming, although this was a temptation to some to write a climate change essay. Others cited precipitation and anthropogenic issues as equally or more crucial without realising the interconnectedness of these variables.

Q4. More popular than Q3, candidates answering this question recognised the human challenges facing the Arctic and clearly understood the concept of sustainability, but often were unable to adequately relate these to the tundra biome. There was much digression into the marine environment with the Arctic tundra biome often interpreted to include anything known about cold areas, particularly the Arctic Ocean. Many candidates wrote at length about marine ecosystems, shipping lanes and the struggle for marine resources, particularly oil. Credit was given where these marine issues impacted on the terrestrial ecosystem, such as the Inuit or terrestrial animals, but only the strongest candidates exhibited specific knowledge of the fragility of the tundra biome, its flora, fauna and soils. The effect of climate change was acknowledged with the boreal forest expanding northwards, but the same answers had deforestation as a problem in the tundra itself! (tundra is a Finnish word for a 'treeless plain'). Permafrost thaw was mentioned, creditably so, although weaker candidates did not always distinguish it from ice. The specialised concept of thresholds or tipping points was often effectively applied in such discussions. Credit was given where reference was made to sustainability of uses. The case study of ANWR was often used effectively to illustrate an understanding of the interactions and interdependencies within ecosystems, native people and how they relate to the environment, species conservation and protection, the implications of habitat loss and fragmentation and changes in species migration patterns due to exploration and drilling in ANWR.

Theme 3 – Economic Growth and Challenge

India

Q5. Questions on India were answered less confidently. Political factors were recognised and distinguished from social, cultural and environmental ones, although it was often argued that these variables might all have a political dimension. Specific knowledge of the political factors influencing the demographic characteristics of India was often missing. Candidates did not always demonstrate an understanding of the term 'demographic characteristics' and these were often taken to include or to wholly consist of social and economic characteristics, such as wealth and jobs. This happened even when students had defined 'demographic' correctly at the outset. Valid demographic points included the dowry system, the need for male heirs, differential migration to cities and patterns of population distribution. Kerala provided a neat example of where a state government could determine a different demographic trajectory. Some wrote at length about women's issues, but these need to be linked to the actual demographic outcomes to earn significant credit, although this was often not the case.

Q6. In general this question was poorly answered. Whilst candidates understood sustainability in India, they tended to write generically about strategies to improve sustainability with inadequate reference being made to specific urban areas. Examiners frequently had to search for possible urban implications in long, seemingly irrelevant responses. There were cases of candidates writing a great deal about India in general: its culture, its physical landscape, its colonial and postcolonial history with a notable absence of any reference to strategies implemented in urban communities. Some candidates did identify various environmental problems (air pollution, water availability) and then discussed strategies to deal with these but made no mention of urban communities or even cities except maybe in name-dropping at the end in a thoroughly unconvincing way. Strategies on an international (UN-HABITAT/UNEP Sustainable Cities Programme), state (Bangalore/Bangaluru Master Plan) or local level (various NGOs) or strategies to deal with specific aspects of sustainability (banning auto-rickshaws in Delhi) would all have been appropriate strategies for candidates to evaluate. Greater referencing of specific Indian urban centres would have been beneficial.

China

Q7. Responses dealt with a wide range of documented policies, such as the One Child Policy, the Open Door Policy and hukou. These were with varying degrees of conviction tied in with the changing political history of China, although there was confusion as to who proposed what – Mao, Deng or Xi. Knowledgeable reference was made to the physical geography of the country and its influence on the spatial distribution of population, although points of the compass and the location of China's major rivers were somewhat confused. Political factors were recognised and distinguished from social, cultural and environmental ones, although the interdependence of these variables was acknowledged, and it was generally accepted that politics is at the heart of everything in China.

Q8. This was less popular than Q7. Candidates did not confine their responses to urban communities or even deal adequately with them, although the failings were less pronounced in the China answers than in the answers on India, probably because there were definite policies such as the hukou and ecocities to deal with. However, a lot of general environmental problems, such as air and water pollution, energy needs and water shortages were raised without relating them to urban communities. Some strategies, such as Three Gorges dam and the South-North Water Transfer Project, were similarly not related to urban communities, although some students did attempt to force a link. Much was made of the South to North water transfer, which could certainly be made relevant to urban water shortages, although this was posited as 'being for irrigation' thereby losing its urban focus. On the whole this question was answered disappointingly. Greater referencing of specific Chinese urban centres would have been beneficial.

Africa

Q9. This was a popular question and answered reasonably well. Although some still argue that Africa is a country and others saw Egypt as sub-Saharan, most did identify rewarding case studies, usually Nigeria, Ghana, Kenya, DRC and Botswana. All did deal with two or more countries and covered economic factors of free trade, trade blocs, the influence of MNCs, tourism and neo-colonial influences. With Nigeria and Botswana, the arguments were about earth resources, oil and diamonds respectively. A Botswana government that favoured the development of the people was contrasted with Nigeria with a corrupt government in the trap of a resource curse. With Kenya the emphasis was on tourism and microcredit, as well as shopping malls and consumerism. Weaker candidates often subverted the question to write about the importance of economic relative to political, social and environmental factors or found discussing the complexities of trade and the role of trade blocs a particular challenge. A number of candidates found it difficult to arrive at an opinion of the importance of different economic factors. This said, some excellent responses were also seen with several candidates attaining full or nearly full marks on this question with some impressive statistics used to support arguments.

Q10. This was slightly less popular than Q9 but answered reasonably well, although without the breadth of valid exemplification of the previous question. 'Desertification' was understood and often defined and both causes and consequences were dealt with convincingly in two or more relevant countries. Perhaps causes were better understood than consequences. Generally, the strategies were less convincingly dealt with, but included groasis technology, magic stones and afforestation (particularly the Great Green Wall), all presented without much critical appraisal. Better candidates produced some good, well-exemplified responses and were perceptive in their acknowledgement that some strategies implemented to manage the consequences of desertification focus on long term perspectives and have also been successful in managing its causes. Some looked beyond the African country, arguing that climate change was the main cause and so the strategies were policies that people in the West could undertake (renewable energies, saving energy, recycling) to mitigate climate change and thereby halt desertification. There was some muddle about geography, mixing up West and East Africa and perhaps an overgeneralisation, not acknowledging that the whole of Africa is not hot and dry, although such errors did not usually affect the argument. Soils were aptly cited but there seemed little insight into soil management. A sizeable minority of candidates wrote about the causes and consequences of desertification with no reference to specific strategies bar brief reference to food aid.

Theme 4 – Energy

Q11. Geological controls on energy supply, both non-renewable and renewable, were generally well understood. Most candidates answering this question recognised the linkage between fossil fuel deposits and geology with some having sound knowledge and understanding of how such deposits were formed. Most also recognised geological controls on the location of active areas for geothermal energy. Able candidates cited climatic factors influencing energy supplies (high insolation rates for solar, constant wind speeds for wind and high precipitation for hydro power), relief factors influencing hydro power and specific locational conditions for waves, tides and biofuels. There was sometimes a misunderstanding of the term 'geology' as it was often conflated with geomorphology with candidates arguing that high valleys were needed for HEP dams and although this is ultimately a result of geology, this was not spelt out. Citing renewables, most argued that geological controls on fossil fuel deposits were becoming less important as the importance of geothermal energy, climate, relief and location on the provision of energy supplies are increasing. A number digressed into the geopolitical issues affecting supply or subverted the question to write about the importance of geological relative to political and economic factors.

Q12. Whilst some good answers to Q12 were seen, several candidates wrote on the changing energy mix and focused on supply rather than demand. Most disagreed with the statement and cited economic development, standard of living and technological advances as being of comparable importance, although a link between these variables was admitted. 'Technology' was well-argued, pinpointing all the new electronic and other energy-demanding items in our homes and workplaces. It was pointed out that a great deal of current demand was coming from China and India. The best answers adhered to the factors influencing the demand for energy cited in the specification (economic, demographic, social and technological) but were able to support their arguments with plenty of locational detail and useful supporting statistics. The interdependence of operative factors was also clearly recognised.

Theme 5 – Weather and Climate

Q13. This question was quite popular and those who attempted it usually answered it in some detail. Too much contextual information was often provided, with candidates explaining low and high-pressure systems formation. Although this was often impressive, it resulted in less time for addressing the question. Most understood the difference between high and low-pressure systems and their associated impacts, although in a few cases high and low-pressure systems were mixed up. These could earn generic credit, as, although they ascribed the droughts of the Sahel to low pressure systems, the features of these droughts were described accurately, however such answers could not come to a meaningful conclusion. A range of examples were used (Hurricane Katrina, Hurricane Sandy, the UK droughts of 1976 and 2003 and droughts affecting the Horn of Africa). Any relevant example was acceptable but some of them were somewhat parochial or did not deal with the most severe manifestations. To answer this question effectively, criteria for establishing severity needed to be established from the outset, such as areal extent and duration, numbers of casualties and the ability to predict and prepare. Greater breadth of coverage was often associated with a more informed discussion as where coverage was restricted to only two events, conclusions were often distorted.

Q14. This question was less popular than Q13, although it would seem to be the type of question that candidates had learnt well, as there is so much information available in the public domain in addition to that provided through the course. Answers were reasonably apt, dealing with mitigation more than adaptation, although most of them failed to define and use these key words. There were a variety of scales and modes of strategies to mitigate climate change, ranging from individual actions to save electricity to the political frameworks of Kyoto or Paris: in this context the difficulty in getting unity of purpose among nations was realised. Strategies employed to adapt to climate change included the implementation of flood defences or the switch to drought resistant crops. Precise supporting examples at all scales for both adaptive and mitigating strategies, together with ongoing evaluation formed the basis of better responses, although overall this question was never answered badly or misunderstood.

GEOGRAPHY

GCE A LEVEL

Summer 2018

COMPONENT 4: INDIVIDUAL INVESTIGATION

General Observations

It was pleasing to note that the majority of centres submitted a series of interesting and appropriate investigations in 2018, which were appropriately linked to the specification. Most samples arrived on time with the moderator and the centre administration was often exemplary.

The success of the Non Examination Assessment (NEA) depends very much upon careful planning and preparation, and allowing candidates ownership of their work. It was pleasing to note that in the majority of cases this happened, however, it was noted that a significant number of candidates attempted investigations that were insufficiently focussed and that a number of centres still very much controlled the fieldwork experience, trying to shoehorn their standard fieldwork into the new requirements of the specification.

While candidates are required to choose their titles independently, if candidates are going to display the skills necessary for attainment at the highest levels, centres have a responsibility to guide their candidates towards appropriate research areas and establish the fieldwork process. Although it is permissible to provide a theme for a class or larger group, deciding for example, that all candidates will investigate sand dunes or deprivation is by its very nature limiting. Candidates must structure their investigations in a thoughtful manner and have appropriate sub-questions/aims that are related to their investigation. These then drive the necessary data collection and analysis and allow meaningful conclusions to be reached. It is recommended that candidates have no more than three or four sub-questions.

Centres are required to submit three pieces of paperwork with each investigation. First, Section 1 Candidate/Teacher Authentication which must be signed by both the student and teacher. It was noted that in some instances these forms were not submitted with the work. Secondly, Section 2, Candidate Proposal Form should be submitted with each investigation. Once again in a number of instances these were not present and sometimes unsigned by the teacher. It is vital to spend an appropriate amount of time working through this form with candidates, as it is an opportunity to give some guidance and support to ensure that they are on a clear and appropriate path BEFORE they embark on their data collection phase. On the proposal form, clear reference should be made to focus points in the specification, for example 1.1.4 Factors affecting coastal processes and landforms, rather than just 'Coastal Landscapes'. Applying their ideas to specific parts of the specification will assist the candidate to focus appropriately on material within the specification, material that will ultimately support their knowledge and understanding as they prepare for the examinations. It was worrying to note that many proposal forms were poorly completed, often with minimal information. Would centres please ensure that they use the downloadable forms, which are available on the Eduqas public website. Please do not photocopy forms directly from the specification.

Centres are also reminded that Eduqas offer a Title Advice Service for tutors to submit candidate proposals for further advice if they wish to do so. This service is not compulsory but offers teachers the chance to gain input from our senior moderators on the suitability of particular candidate proposals. If you wish to take advantage of this service, please complete the NEA Title Advice Form which is available on the public website. For your reference, there is also a guide to developing titles and completing the proposal form available. This document contains numerous exemplars of completed proposal forms and aims to clarify what form of guidance teachers can and should be giving to their students.

It was noted that many investigations were significantly longer than the recommended word guidance, with some being over 15000 words. Centres must advise candidates of the guidance and remind them of the impacts of producing work that fails to meet the assessment criteria. The guidance of 3-4,000 words was introduced by all Boards to give candidates a clear indication of the length and nature of the report required for the NEA. A concisely written, well-directed and focused investigation will meet the Band 5 criteria for Analysis and Interpretation, Conclusions and Presentation Requirements and Evaluation whereas a rambling, repetitive one will not. Securing manageable and focussed investigation titles for each candidate, through detailed discussion at the outset could greatly assist this process.

It was pleasing to note that the majority of candidates had been well briefed and followed the prescribed structure for the investigation (detailed in the specification), however, some did not, having no page numbers, candidate and centre number and ignoring the font size and line spacing requirements. Please encourage your students to follow the prescribed structure and format for the investigation and use a formal system, such as Harvard when referencing sources. This was often poorly done with many candidates having little idea of how to proceed with referencing.

Highlighting each candidate mark sheet in each section to note the appropriate criteria where marks were awarded would greatly facilitate the moderation process and annotation in the body of the work would also assist the moderator to understand where and why the centre marks were given. Annotation of the work varied, from none to quite detailed comments. Where annotation was present it was often helpful and objective, with the strengths and weaknesses of each investigation clearly identified. It should be noted that in some cases comments did not always match the criteria and the marks awarded for a particular level. Some centres did not submit marking grids, while some grids had more than one mark. Where internal standardisation has taken place centres must make it clear which is the final mark for the moderator's consideration. A number of centres made errors in addition and transference of marks onto IAMIS and care needs to be taken in this respect next year.

The following refers to specific areas of the Independent Investigation mark scheme and its application:

Context

It was reassuring to see candidates clearly discussing the context of their investigations at the outset, linking to theory and creating appropriate sub-questions. This gave the investigations a clear framework. Care should be given when choosing a suitable title for the investigation.

Although most were achievable and well linked to the specification, some were unwieldy, having a weak focus on place and the specification. It was good to see many including links to appropriate theory but sometimes this was broached but not followed through, perhaps showing a lack of understanding of its relevance to the investigation. A worrying factor was that a number of centres allowed candidates to pursue investigations based upon theory that does not support the specification content, such as Bradshaw or Burgess. The specification content on water and carbon cycles gives clear emphasis to basin hydrology and temporal variations. Studies of changes in channel characteristics or shape and size of bedload do not support this material. Investigations focusing solely on Bradshaw's model are not permissible so please advise your students accordingly.

It was good to see most candidates discussing risk although often it was generic and not well linked to their investigation. There was little understanding of ethics shown, with many ignoring it. This is something that needs to be addressed in the future, as it could be a limiting factor. Support from literature was often patchy and often not well applied with many just listing sources in their appendix. Candidates had some secure locational context, which was often well justified, although at times this was lengthy, historical and not well linked to the investigation.

Methods of field investigation

This assessment criterion was frequently one where the marks awarded by centres were on the generous side. To achieve Band 5 candidates must show strong evidence of wide ranging and good quality data collection methods, both quantitative and/or qualitative that are relevant to the research question. These methods should be justified and group and/or individual contributions clearly identified. Often, where group work had been undertaken, this was not the case.

Knowledge and understanding of sampling strategies was very variable, in some cases it was well understood and applied, while at times it was totally ignored or just listed, e.g. "I did random sampling", without any explanation or justification. Weaker students perceived sampling as a method of data collection rather than a method of predetermining how the data might be collected.

Methods of data collection were varied with the strongest candidates having a wide range of approaches, which were usually well described and justified and clearly linked to the sub-questions. However, many candidates used a limited range that did not always collect data that was relevant to the task in hand, while some centres allowed candidates to use a range of common methods regardless of what the task was, this was not conducive to independence. A good description of a method is one that can be replicated by the reader; this was often not the case.

Many candidates adopted the approach of using a table to present their methods, this allowed them to link their methods to sub-questions, describe methods, evaluate and discuss strengths and weaknesses. Good descriptions also made use of annotated photographs and diagrams to illustrate methods.

Investigations are required to present/analyse data and information from both primary and secondary sources. Some investigations showed minimal evidence of primary data collection and offered little explanation of how secondary sources were used.

Sample sizes of questionnaires were often inappropriate with many thinking small is beautiful. If using a questionnaire, it would be helpful to see a copy, most probably in the appendix. It could be annotated to show expected outcomes and to justify choices. Better candidates modified their questionnaires as the result of completing a pilot study. It is not necessary to include all the copies showing the raw data, this can be summarised in a table if needed.

Data presentation and findings

Again this was an assessment criterion where centres often were generous with the marks awarded. To achieve Band 5 candidates must use a wide range of methods of data presentation, which are accurate, appropriate and well applied. The use of cartographical techniques was very disappointing with many candidates clearly having little understanding of the value of maps.

Location maps were often very poor and of postage stamp size. While it is important to show where a location is, in terms of the investigation it is much more important to show where the data was collected. It was pleasing to note that some candidates used maps in a more sophisticated way, for example, locating graphs or photographs on the map or presenting isoline or flow maps. To be considered accurate maps must have a clear heading, scale, north point and where appropriate a key. If they are from a secondary source this should be credited. Many candidates did not fulfil these criteria.

Candidates used a range of different graphs to present their data. To be accurate they must have a clear heading and axes should be clearly labelled with the appropriate units. It is also imperative that the correct type of graph is used for the data, e.g. line graphs can be used to compare changes over time for more than one group. Pie charts are best to use when trying to compare parts of a whole. They do not show change over time. Bar graphs are used to compare things between different groups or to track changes over time. It was clear that some candidates did not understand the relevance of this. Scatter graphs should ideally have a line of best fit drawn on them. Some candidates used graphs indiscriminately, for example one candidate had twenty-two pages of pie charts!

Many candidates made use of photographs, although not always to the best advantage. The best were clearly titled, located and well annotated, the worst were small postage stamp sized photos placed on a page with nothing else. To be valuable annotation must be meaningful, rather than just labels. Other presentation methods used included field sketches, Wordle diagrams, pictograms data tables, box plots, and land use maps.

Analysis and Interpretation of findings

To attain Band 5 candidates are required to give a sophisticated analysis and interpretation of findings, clearly showing why they were appropriate and relevant to the research question. Ideally they should show some individuality and/or links between the study and other aspects of Geography, in a word, synopticity. It was pleasing to note that many candidates did.

Ideally it would be best to integrate this section with the data presentation, as direct reference could be made to the data as presented, this was done with varying degrees of success, weaker investigations separated the two and hence often found it hard to produce a sophisticated analysis.

Most investigations were straightforward in their analysis, with candidates describing their data, with stronger investigations making specific reference to figure numbers. Some candidates did apply their findings back to the original question and some applied their knowledge and understanding to the models to which their data was being applied. Links to other aspects of Geography were largely incidental.

There was some use of statistical techniques, this was very much on a centre-by-centre basis, and with the most common technique being use of a Spearman's rank correlation coefficient. Candidates should be made aware that they need at least ten sets of data for this process to offer any reliability. There was often little understanding of significance and many had difficulty relating the results of their analysis to their investigation.

Conclusions and Presentation requirements

To achieve Band 5 candidates must have a sophisticated and confident summary that draws thorough conclusions which address the research question and is underpinned by relevant theory, while at the same time they must present a well-structured, concise and logical report that accurately references secondary information.

Conclusions were best done when linked directly, through sub-headings or sub-sections to the stated question or hypothesis, which were generally quite concise with good reference to data and trends. The best were followed by a summary conclusion drawing the individual conclusions back to the title. The most effective used the full range of data, which was discussed in some detail, and it was pleasing to read the perceptive comments in the best work.

Weaker investigations limited themselves to simplistic statements of the obvious based upon limited data sets. These tended to be straightforward and very descriptive, and in many cases were simply a repeat of the analysis.

Presentation was generally good across the majority of candidates, although the sections were not always clearly delineated. Too many candidates included all their raw data and some put all their graphs, maps and photographs in the appendix. It was obvious that some centres had not briefed their candidates about the necessary structure, particularly in relation to pagination and page labelling.

It would be appreciated if centres could refrain from using plastic wallets/polypockets, simple treasury tag or a light plastic folder will suffice. Several centres sent the work of all candidates, loose leaf, which in one instance resulted in the work of several candidates getting mixed up. It would be desirable to foster some pride in the work that is presented by candidates. Some work displayed serious SPAG errors that could easily have been sorted by the use of spell checking.

Evaluation

This section of the investigation is worth twenty percent of the total mark and should be given due consideration, but not to the extent that it becomes overlong, wordy and ceases to be concise.

To achieve Band 5 candidates must show highly effective evaluation of the knowledge and understanding gained from field observation. They must have a perceptive evaluation of each stage of the fieldwork investigation including the ethical dimensions of the field research; have perceptive and well-considered reflections of further research and extension of their geographical understanding.

It is worth noting that the criteria relate very much to the fieldwork experience, and where candidates show little evidence of primary data collection and effective and independent planning, a good evaluation becomes very difficult to achieve.

The best candidates evaluated each stage of their investigation using sub-headings; but many struggled to make sensible suggestions for further investigation. These suggestions were often very basic such as do more, collect more data, and go on another occasion. There was a real lack of evaluation relating to the knowledge and understanding (of their research area) gained during the process of conducting their investigation. Few questioned the validity of their initial aims.

Many students were reticent to question the theory that underpinned their investigation, with many limiting their evaluation to the methods of data collection.

Discussion of the ethical dimensions was mostly absent and it was also very worrying to note that many candidates only spent a day or less collecting data for their investigation making it very difficult to introduce a temporal aspect to the work.

Please note that the sample submission date for 2019 will be Friday, March 29th.

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