



GCE EXAMINERS' REPORTS

**GCE
GEOGRAPHY
AS/Advanced**

SUMMER 2023

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GCE GEOGRAPHY
General Certificate of Education
Summer 2023
Advanced Subsidiary
UNIT 1: CHANGING LANDSCAPES

General Comments

- Candidates used resources effectively throughout the paper, many were logical in their approach to analysing data and located information.
- Candidates showed good knowledge of the differences between constructive and destructive waves and between cold-based and warm-based glaciers in Section A.
- Many candidates were able to effectively use a located example to outline the local and global impacts of an earthquake event in Section B.
- Candidates should be encouraged to avoid list-like answers to AO3-focused questions and should look for overall patterns or overviews in resources.
- When directed to use resources to examine or assess evidence, candidates should not focus answers on a description of what is shown by the resource(s).

Comments on individual questions/sections

Section A: Changing Landscapes Coastal Landscapes

- Q.1 (a) (i) Candidates approached this question well with good reference made to the resource and some accurate use of the scale provided. The strongest answers identified the overall pattern of direction of movement as well as the reversal of movement between the 19th and 21st November. This was often supported by accurately developed points such as the distance moved.
- Weaker answers drifted towards a list-like approach on individual time periods, without any overview of the pebble movement. Some candidates also included comments about the movement of the pebble between the 1st and 4th of November, which was not a requirement of the question. Candidates should be encouraged to be more accurate with their use of compass directions and their use of scale.
- (ii) The majority of candidates identified longshore drift as the physical reason for the rapid movement of the pebble. The best answers developed this with an explanation of how this caused lateral movement along a coastline and that this movement might be accelerated by storms or strong winds.

In weaker answers the explanation was not fully developed to show how the movement would be more rapid. To gain credit there needed to be reference to an increase in energy to accelerate the movement. Many candidates achieved 2 out of 3 marks for identifying a reason but not giving clear development points. Candidates could be reminded to make sure they fully develop their explanations for maximum marks.

- (b) This question was highly accessible with many candidates achieving band 3 marks for AO1. There was strong knowledge and understanding of the characteristics of both constructive and destructive waves. Wave swash and backwash, height and energy were most frequently compared along with seasonal differences in occurrence. The strongest answers also linked characteristics to the formation of beach features such as berms being associated with constructive waves and storm beaches with destructive waves. There was some confusion regarding the gradient of beaches associated with each type of wave, and links were over-simplified in many cases. Some candidates made contradictory statements on how constructive waves built up beaches, but the gradient produced was flat and that destructive waves removed material to produce a steep beach. Some candidates drifted from the question to make comments about the types of landforms most associated with each type of wave, rather than examining the differences in characteristics. Many candidates also gained 3 marks for AO2 as they explicitly compared the two wave types. The more sophisticated answers linked the way the waves were different, rather than describing each wave in isolation with a single comparative phrase.

- Q.2 (a) (i) The map was well used by most candidates and this question was generally answered effectively. Most candidates were able to identify the main locations associated with differing levels of coastal protection. The best answers had strong geographical knowledge of England and Wales and were able to identify specific locations to link to the management strategies.

Weaker responses tended to produce a list of isolated statements resulting in a maximum mark of 3. Some candidates had weak geographical knowledge of England and Wales, incorrectly using compass directions, or making general statements without linking to a geographical location.

- (ii) This question was not answered well, with a number of candidates identifying human rather than physical reasons for the option of managed retreat. The best responses identified the geology of the cliffs as the reason, with development points that explained a weak lithology would lead to rapid erosion therefore making it too costly to defend the coastal area. Some candidates suggested that managed retreat was chosen in areas that had geology that was resistant to erosion, but this does not fit in with either the definition of managed retreat or the areas shown on the map where the strategy was being implemented and therefore it could not be credited.

In weaker answers, the reason given was linked to strong winds or a large fetch, but candidates were unable to develop the explanation to explain why existing defences would not be maintained.

- (b) Most candidates found this question very challenging and were unable to identify a landform developed by sea level change. Focus 1.1.8 in the Specification identifies that candidates should be familiar with process and landform changes over millennia: either eustatic or isostatic changes in sea level and their impact on one landform. The question required knowledge and understanding of either submergent landforms such as rias and fjords or emergent landforms such as raised beaches or relict coastal landforms. The most successful answers tended to explain the formation of fjords, identifying the formation and characteristics of the flooded glacial valleys and the role of sea level rise in the development of these submergent landforms. A number of candidates chose raised beaches, but the knowledge and understanding of the formation lacked depth with rather basic statements being made about isostatic rebound. Some candidates focused on the causes of sea level change but did not link this to the development of the landform and so AO1 marks could not be awarded beyond the top of Band 2. A small number of candidates gave very perceptive assessments of the role of sea level change and other factors in the development of landforms for AO2 marks.

A significant number of candidates gave detailed explanations of the development of landforms such as spits or stacks that are not associated with sea level change. There were some links made to an increase in erosion or deposition as a result of changes, but these responses lacked an understanding of the link between sea level change and the development of the landform. Such answers were capped at Band 1 for both AO1 and AO2.

- Q.3 (a) (i) Candidates found the question accessible, though the resource did prove challenging for some. The strongest answers clearly described the overall retreat of the glacier towards the East between 1960 and 2010. Supporting data was also given. Some candidates identified the short period of advance between 1970 and 1980 and a few candidates were able to recognise that the retreat was greatest on the Northern edge. Some candidates incorrectly thought the glacier was retreating towards the West.

Weaker responses tended to produce a list of isolated statements which limited the marks and did not identify any general or overall patterns in the resource. Some answers misread the question and described the trend over the entire period between 1950 and 2000.

- (ii) This question was accessible for most, though few achieved 3 marks. Most answers identified a higher-than-average temperature as the reason for rapid retreat of the glacier. Stronger answers went on to explain that this leads to a significant excess of ablation over accumulation and a reduction in mass balance. A small number of answers discussed a lower-than-average snowfall.

Many candidates achieved 2 out of 3 marks for identifying a reason but not giving clear development points. Candidates could be reminded to make sure they fully develop their explanations for maximum marks.

- (b) An accessible question and most candidates demonstrated good knowledge and understanding of the difference between cold-based and warm-based glaciers. Many answers addressed the AO1 element well, with strong use of terminology. The strongest answers explained the location of both types of glaciers and were able to clearly explain processes such as basal sliding and internal deformation. The strongest answers adopted a comparative structure, comparing and contrasting both types of glacier throughout and included brief concluding remarks. The most sophisticated answers used location to assist in the examination of the differences.

Weaker answers lacked comparative examination and took the two-paragraph approach, the first paragraph explaining the characteristics of a cold-based glacier and the second paragraph explaining the characteristics of a warm based glacier. AO2 marks were limited for these candidates as a result.

- Q.4 (a) (i) This was an accessible question with the map used well by the majority of candidates. Most candidates were able to identify the locations associated with severe glacial erosion. The best answers had strong geographical knowledge of England and Wales or were able to use direction and scale effectively to indicate location.

Weaker responses tended to produce a list of isolated statements resulting in a maximum mark of 3. Some candidates had weak geographical knowledge of England and Wales, incorrectly using compass directions or made general statements without linking to a geographical location.

- (ii) The majority of candidates identified higher altitude/relief as the physical reason why intense glacial erosion only occurred in certain places. The best answers developed this with an explanation of how thicker ice masses would have formed in mountainous areas because of lower temperatures and how ice accumulation would lead to more erosive power. In weaker answers, candidates did not go beyond 'cooler temperatures at higher altitudes'.

Many candidates gained only 2 marks for identifying a reason but failing to give clear development points. Candidates could be reminded to make sure they fully develop their explanations in order to gain maximum marks in these AO2 questions.

- (b) A number of candidates did not attempt to answer this question. Of those who did, the majority found it challenging and were unable to successfully identify any post-glacial processes and relevant landforms. Strong AO1 answers clearly identified post-glacial processes and linked this to their impact on landforms e.g. mass movement and the impact on U-shaped valleys or corries. For AO2 credit, some were also able to discuss the relative influence of different post-glacial processes on a landform e.g. weathering and mass movement, or the importance of post-glacial processes vis-à-vis glacial processes e.g. how post-glacial processes have continued to erode and change the shape of a corrie once the ice retreated.

- Q.5 (a) (i) The map was accessible to all candidates, with a significant number gaining full marks. Many candidates identified the linear pattern as well as the concentration in the southeast of Guatemala. There was good use of supporting evidence from the map. Some candidates listed the number of volcanoes in different departments and this type of response gained a maximum of 3 marks.
- (ii/iii) Most candidates successfully identified the nature of the relationship. However, very few could correctly state and justify a valid statistical test. A significant number of candidates did not attempt this question. Spearman's Rank is identified in the Specification as one of the quantitative skills required and therefore it is expected that candidates would have knowledge of it as a statistical test that could be used to test the strength/significance of a relationship.
- (iv) This question was not well answered due to a lack of focus on the requirements of the question. The question is AO2, but a significant number of responses simply described the map and the graph without applying knowledge to explain why impacts would vary. The best answers identified that population density and proximity/number of volcanoes would influence impacts and then went on to explain how these factors increased risk. Sophisticated answers also linked the vulnerability vs coping index to factors such as higher wealth in these regions leading to more effective mitigation. Weaker answers simply restated the nature of the relationship using data from the graph to illustrate, but then did not develop this to explain why it would lead to variation in impacts. This limited their marks. However, a reasonable number of candidates did refer to both resources and attempted to make links between them.
- (b) Candidates displayed a good level of knowledge and understanding of the processes happening at converging plate margins that resulted in the formation of volcanoes. The majority used the term subduction, linked to the idea of the interaction of different density of plates and the subducting plate undergoing partial melting. They could also identify the characteristics of the volcanoes found at these plate margins and link this to the processes in operation. The best answers also referred to slab pull and ridge push and could discuss both ocean to continent and ocean to ocean boundaries. Some candidates could also effectively use examples to illustrate. Weaker answers tended to lack in depth of knowledge of the processes and typically lacked a sophistication in the use and understanding of terminology. A small number of candidates confused convergent and divergent plate margins; these candidates could gain a maximum of 3 marks.
- Q.6 (a) This question was answered very well. The majority of candidates used the resource effectively and could identify the impacts of the eruption by specifically referencing the images. Some candidates described the impacts but did not make direct reference to the resource. In this instance marks were limited to a maximum of 2.

- (b) The map was used well by the majority of candidates. Candidates were able to identify variations in both the amount of economic loss and also in uninsured/insured losses. It was expected that the elements discussed should be supported using quantification from the map. At times the scale was used inaccurately, and candidates should be encouraged to practice this skill when using resources. There were some very sophisticated answers that linked all aspects of the information together and gave a geographical overview of all of the areas shown on the map. Weaker answers tended to discuss the information shown in isolation, rather than linking to geographical variation. A small number of candidates drifted too much into explanation of the variations, for which there was no credit given.
- (c) Much like question 5(a)(iv) a significant number of candidates simply described the resources, particularly Figure 9, without applying knowledge to explain why the impacts of volcanic ash vary. This type of answer was limited to Band 1 marks. There were some very good answers that acknowledged that some of the impacts would have a longer-term impact or impacts on a wider geographical scale and could support this with evidence from all of the resources. Another successful approach was to identify that impacts varied depending on whether they were social, economic, or environmental. One of the most popular responses was to link variations to the level of economic development of a country and this point was nicely linked to the resources.
- Q.7 (a) An accessible question that was generally answered well, particularly when candidates outlined the local impacts of a named earthquake event. The most commonly used examples were Haiti (2010) and Japan (2011), and these were used effectively when specific details were given to illustrate the impacts. A significant number of candidates gave answers that could identify generic impacts such as fatalities, destruction of infrastructure and disruption to trade, but lacked the level of specific detail needed to support these points and therefore could not access top band marks. Some candidates were still referring to earthquake events such as Kobe (1995) and it should be noted that the Specification states that case studies selected for study by centres to exemplify the content must be contemporary, that is within the last two decades, unless an historical context is useful for a time dimension, which also informs the present context. It would have been good to see reference to more contemporary examples such as the recent earthquake event in Turkey/Syria. A minority of candidates based their response on volcanic hazards, rather than earthquakes and these answers could gain a maximum of 2 marks.
- (b) The majority of candidates were able to demonstrate their knowledge of depth of focus for AO1 marks and explain that the absorption of energy by the earth in deep focus earthquakes resulted in less severe impacts. The most effective answers could also discuss other factors that play a role in determining the severity of impacts, such as magnitude, distance from the epicentre and human factors such as level of economic development. A few responses illustrated their examination with the effective use of examples. Weaker answers tended to simply identify that a deeper focus had less severe impacts as seismic waves had further to travel to reach the surface.

Fewer candidates accessed Band 3 marks for AO2 and often missed out the element of the question that asked them to examine the **role** that depth of focus plays in influencing the impacts of an earthquake. The best answers here compared the relative importance of depth of focus to other factors such as level of economic development or distance from epicentre.

Overall, there was a lack of developed exemplification to support the points made. This was needed for candidates to access Band 3 marks for AO1.

Summary of key points

- Candidates should be encouraged to develop their skills at accurately using a scale and to effectively use compass directions.
- Specific knowledge of contemporary case studies to illustrate points made will enable candidates to access top band marks.
- Candidates should be reminded that when using resources to examine or suggest reasons they need to go further than simply describing what is shown in the resources.
- The most successful candidates showed their ability to effectively use sophisticated geographical terminology to demonstrate their knowledge and understanding.
- Centres should be congratulated on their preparation of candidates who have demonstrated an effective approach to the structure of exam questions.

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UNIT 2: CHANGING LANDSCAPES

General Comments

There was a slight increase in the mean mark for the paper this year as candidates generally found the resources accessible and were able to respond to the command words of compare and analyse used in questions 1(a)(i) and 2(a)(i). Despite the candidates' knowledge being sound for 1(b) and 2(b), once again they did not really respond confidently to the AO2 command words in these questions. A similar inability to address the AO2 aspect of the questions was noted for question 3(b). It is interesting to note that mean score was higher for question 5 than it was for 4 – this was mainly due to many pupils' inability to clearly identify and discuss the findings of their physical geography fieldwork investigation in question 4.

The standard deviation was slightly lower this year. This reflects the fact that whilst candidates managed to access most questions, we saw less 'very good' answers than in pre-COVID times. There was also a tendency for pupils to not fully understand some of the key terminology used in the examination paper, examples include 'globalisation', 'secondary sources' and 'findings.' Poorer than expected returns on questions involving this specific terminology meant that the mean mark was still lower than it was during our last pre-COVID examination series in 2019.

Comments on individual questions/sections

- Q.1 On 1(a)(i) most candidates managed to identify differences between the income of the two different types of farming correctly and made good use of the resource to gain further marks. A minority did not compare, thus clearly impacting their chances of securing the higher marks. The answers to 1(a)(ii) were not as good. Whilst many noted the low income/ poverty as a challenge many other candidates focused on a rural challenge rather than a challenge caused by the pattern of low incomes illustrated by the graph. Question 1(b) showed that candidates were able to identify the impacts of clusters of quaternary industries, however, the examination was not well done with many candidates simply stating impacts and no attempt made to evaluate them.
- Q.2 Again, 2(a)(i) was well answered. Candidates generally managed to identify how all three sectors had changed in importance over the years. However, their application of the term globalisation 2(a)(ii) was disappointing. Many identified causes for the decline in primary and secondary industries but only a minority showed a confident grasp of the role of globalisation in this change. Question 2(b) again showed that candidates were able to identify the impacts of regeneration in urban areas. On the whole case studies were effectively used, however, candidates would benefit from the use of specific examples e.g. the use of Cardiff Bay as a regenerated area is more effective than simply stating 'Cardiff'. However, again, the examination was not well done with many candidates only able to state simple impacts and make basic statements about their positive or negative nature. This lack of development of AO2 was a constant theme throughout this paper and should be a point of focus for centres in 2023-24.

Q.3 In 3(a)(i) most candidates managed to identify reasons why North Wales was attractive to tourists, however, how well candidates were able to use the resource in support varied greatly with some being over-reliant on their prior knowledge. In 3(a)(ii) candidates were confident in recognising strengths and weaknesses of the data presentation method, however, once again the AO2 element was undeveloped and disappointing. With questions like this a broad evaluative statement as to the quality of the resource (balancing strengths and weaknesses) would allow candidates to access the highest marks. In 3(c) and 3(d) a disappointing number of pupils could not identify a relevant secondary source of information. Too many simply used vague terms such as 'a website' or 'the internet'. The most popular answer seen was 'Google Earth'. Where candidates did recognise a secondary source, they were able to offer some comment on its reliability.

Q.4 There is no escaping the fact this was very poorly answered. Many candidates were not able to write effectively about their findings. In fact, many did not identify any findings whatsoever in their responses. It is vitally important with these two 'own fieldwork' questions not to forget about the focus of the question, in this case their findings. Detailed on Page 24 of the specification in Enquiry Question 4 is Analysis and interpretation of **findings**: '*Interpret and analyse data / information from primary sources, and, as relevant, secondary data / information; describe patterns, trends, relationships; apply knowledge and understanding of geographical knowledge, concepts and processes and theory to specific evidence collected to understand field observations*'. Therefore, there is plenty of scope of information that pupils could include in a discussion of their findings.

Where candidates did not write in detail about their findings, it was difficult to comment on their reliability. Most that did note their findings referred to their sub-hypothesis and as a result described patterns or trends; a minority used data to support their findings. It was very rare to see a response that showed an application or understanding of the geographical knowledge and understanding gained from their fieldwork. Most candidates simply evaluated their data collection methods and linked those to the issue of reliability of data collection.

Q.5 Most candidates managed to identify two decisions made during the planning stage and evaluated them. The higher scoring answers chose decisions that allowed them to describe in some detail what they did. Lower scoring answers tended to simply state what the decision made was e.g. 'We carried out a risk assessment'.

Stronger responses noted some of the steps involved in carrying out a risk assessment and, when evaluating the success, noted *why* it was successful in greater detail than providing simplistic evaluative points such as 'because no-one got hurt'.

Page 24 of the specification notes that the planning stage should involve an ability to '*make and justify decisions on the task including data collection methods and how to use them; define the research question(s) that underpin the context of the field investigation; assessment of risk and ethical issues.*'

Better responses also ensured that there was no overlap between the two 'decisions' allowing them to access the highest AO1 band. Most candidates managed to address the evaluative element of the question and within those that scored highly for AO2 there tended to be a summative comment on the effectiveness of the planning stage towards the end of the answer.

In general, there was a lack of confidence displayed in the answers to question 5 that suggests candidates may not be an integral part of the planning stage for their fieldwork experiences. To improve the quality of answers in this section of the paper, it is vital that candidates do have a degree of ownership over their fieldwork at AS level and that the experience is not purely teacher led.

Summary of key points

- For extended questions pupils should be aware of what is required to gain high marks for both the AO1 and AO2 elements.
- The use of case studies can assist an answer when it comes to evaluation.
- Encourage pupils to focus on key words in the specification such as globalisation.
- Candidates should be aware of the range of secondary sources of data.
- Candidates should take ownership of their fieldwork so that they have a full and better understanding of the work they have carried out.

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UNIT 3: GLOBAL SYSTEMS AND GLOBAL GOVERNANCE

General Comments

Candidates are increasingly comfortable and confident with the range of subject content being examined on this paper. They are able to move seamlessly between content and issues relating to Global Systems and those relating to Global Governance; this represents a real improvement compared to earlier exam series (COVID interruptions notwithstanding). Most candidates attempted most questions and there were few rubric errors. In particular, marks awarded for Assessment Objective 2 (AO2) are steadily increasing as Centres become more adept at advising their candidates how to access these marks.

Comments on individual questions/sections

Section A: Global Systems

- Q.1 (a) Many candidates successfully calculated the range from the data; candidates are reminded that they are permitted to take a calculator into the examination room for this paper as there were some avoidable errors; furthermore, in part (ii) only a very small minority accessed either 1 or 2 marks, few having any awareness of the function of the IQR.
- (b) Some candidates were able to describe formation of either the Bergeron-Findeisen process or the Collision process with pinpoint accuracy; unfortunately, a significant minority of candidates described orographic or convectional rainfall and therefore did not access marks for this question. Candidates are advised to read questions very carefully before beginning to write; time is an obvious pressure in these early questions on the paper.
- Q.2 (a) Many candidates successfully used the photo in figure 2 to identify changes to the water and carbon cycles and were able to link this to either positive and / or negative feedback loops. This is clearly an area of the specification that many centres have mastered, and candidates were clearly confident in illustrating the role of climate change in these processes; use of subject-specific vocabulary was impressive in many answers.
- (b) While some candidates were able to describe the relationship between the atmospheric carbon store and the energy budget; many answers related either to the cost-of-living crisis or to *increases* in the energy budget; candidates are to be reminded that they should expect key terms in the specification (such as energy budget) to be examined explicitly.

- Q.3 This optional question was less popular than question 4 (answered by approximately 25% of candidates). There were some excellent answers to this question which required candidates to evaluate the possibilities offered by aquifers in addressing water cycle deficit. Many candidates used a range of examples through which to evaluate the role of aquifer recharge (London, the Ogallala Aquifer and the Coachella Aquifer) at a range of spatial and temporal scales. There was sophistication emerging in the assessment of these and candidates were able to contrast their aquifer case studies with alternative strategies for addressing deficit within the water cycle.
- Q.4 This optional question was the more popular option; furthermore, the vast majority of candidates who answered this question, tackled it from the perspective of tropical rainforests as opposed to temperate grasslands; it should be noted that some of the answers relating to temperate grasslands scored very high marks. Many candidates were confident in their understanding of physical factors of light, precipitation and temperature's role in influencing stores within biomes and it was pleasing to see this illustrated in Gersmehl diagrams. Other candidates approached the answer from the perspective of human factors (namely deforestation, afforestation and agricultural activity) in causing variation. Where candidates had examined only physical or only human factors, they struggled to fully develop the assessment element; unsurprisingly, best answers were provided by candidates who were able to contrast the role of physical and human factors.

Section B: Global Governance: Change and Challenge

- Q.5 (a) It was pleasing that so many candidates scored full marks on this simple exercise in communication and were able to successfully compare numbers of foreign born between Wales and Scotland. However, there were some candidates who used the term 'and' where a comparison term (such as 'whereas' or 'however') was needed, resulting in them not accessing all of the marks available. It was pleasing to see that many candidates included simple data manipulation (e.g. 47,000 more X than Y).
- (b) The vast majority of candidates accessed some of the marks for this question, with many citing the Russia-Ukraine war or the Syria war as international refugee movements. It was pleasing to see some candidates describing detailed geo-political causes for the Syrian war, naming groups involved and including an accurate timeline of events. Unfortunately, too many candidates managed little more than acknowledging 'fleeing for their lives' the single cause of refugee movement. Similar to question 2(b), candidates are to be reminded that they should expect key elements within the specification to be examined explicitly.
- Q.6 (a) There were some excellent answers to this question where candidates eloquently explored the link between Global Commons and ocean management. Many candidates were able to confidently describe the recognition of Global Commons as areas beyond national jurisdiction, further acknowledging the role of UNCLOS in conservation and preservation management.

- (b) Candidates were clearly well-versed in the consequences for landlocked countries of lack of access to resources. Many cited Bolivia as an example and were able to develop their answer to outline the impact on the country's economy of losing their coastline to Chile. The most successful answers identified inequality as the consequence, which opened up content relating to both trade and access to resources (fishing).
- Q.7 This was the more popular of the optional questions in this section; many candidates saw this as the more straightforward question and were able to recognise a range of push and pull factors causing rural-urban migration in developing countries. Unfortunately, there were a number of candidates who either drifted into impacts of migration on rural and / or urban areas or who quoted HIC cities by means of exemplification. Candidates are to be urged to fully engage with every word of the exam question to ensure that content provided in their answer will be awarded credit. Furthermore, the phrase 'relative importance' was ignored by many who were able to elaborate on a range of push and pull factors but not compare and contrast between them, and thus for a significant number of candidates, they have achieved good scores for the AO1 element but very few marks for AO2.
- Q.8 This option was less popular with the cohort; although those who did attempt this question, generally provided interesting and accurate answers, reflecting on content from across the ocean governance specification. This content included detailed examination of the success of UNCLOS, the role of the EU's Common Fisheries Policy as well as smaller strategies such as managing Marine Conservation Zones at a range of scales. In line with notes relating to Q7 above, candidates demonstrated rigour with evaluating individual strategies but only the best candidates examined the success of contrasting strategies. This is to be encouraged in future series of this specification.

Section C: 21st Century Challenges

- Q.9 Whilst this question was more popular than question 10, both questions encouraged good discussion around issues of changes to the Earth's natural systems and candidates were able to apply a range of knowledge and understanding from this unit to support discussion. Candidates also made good use of the three resources provided, linking between them and using them to stimulate discussion. Candidates are to be encouraged to draw on knowledge and understanding from all areas of the specification; there was little content relating to physical systems such as landscape systems (coasts / glaciation or tectonics). Furthermore, the best answers were those where candidates exemplified discussion of natural systems with place evidence. There was some confusion over the terms 'physical', (human) and 'natural' which led to some answers lacking coherence. Very few candidates included planning evidence in their answer booklet (possibly done on their copy of the exam paper); it was felt that weaker candidates would have developed clearer discussion between physical (and human) causes had there been a structure to their answers.
- Q.10 Many of the ideas identified above are also relevant to answers to question 10. Some of the pieces of extended writing were very good and candidates were able to draw from across the specification to identify why resilience varied between places. The best answers discussed a range of physical (geology, geomorphology, tectonic) and human (wealth, political systems and demography) reasons to explain why resilience varies with both time and space. Similarly, candidates are to be encouraged to plan their answer to this question; this is likely to result in a richer range of factors and more detailed discussion.

Summary of key points

In future series, candidates are encouraged to:

- use the Skills Appendix to ensure that they are prepared for questions examining mathematical and statistical skills.
- engage fully with every word of the question to ensure that the answer they provide addresses the command of the question.
- ensure that handwriting is legible; there were some scripts which were almost illegible from start to finish. Where there are potential issues related to legibility, centres are encouraged to explore options available to candidates.
- remind candidates to use the specification to plan their revision so that the wording from focus boxes is familiar (as this is where the wording of questions originates).
- support their ideas with examples of places that they have studied (and / or inhabit) – this specification has place at its heart and good geographers are to be expected to compare between places and exemplify their arguments with reference to a range of places.

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Advanced

UNIT 4: CONTEMPORARY THEMES IN GEOGRAPHY

General Comments

The paper returned to its traditional format this year, following the modifications that were made in 2022 because of the impacts of the Covid-19 pandemic. This year's number of entries (1,275) was slightly down from the 1,355 entries in 2022. As noted in 2022, teachers and learners have been working in very challenging circumstances since the onset of the pandemic and should be commended for their ongoing efforts. The average mark recorded per essay this year (12) is marginally higher than the 11.6 recorded in 2022 and close to the average of 12.4 that was recorded in 2019, pre-pandemic. The comments contained in this report seek to support and supplement teaching and learning strategies for the 2023 –24 academic year.

Comments on individual questions/sections

Section A

Theme 1: Tectonic Hazards

Q.1 48.1% of candidates attempted this question and the average mark was 10.8. Most candidates were able to explain how diverging margins function in broad terms and could outline the hazards associated with these margins. However, there needed to be more exemplification, as candidates referred to diverging margins in very generic terms. For instance, plate names were not provided, and case studies needed to be included. This lack of depth and detail undermined the quality of the arguments presented and hampered the crucial A02 component. Furthermore, when candidates started to discuss the hazards associated with other plate margins, several things needed to be clarified. For instance, the cause of the 2010 Haiti earthquake was attributed to converging or diverging margins by a surprisingly large number of candidates. In addition, candidates needed clarification on what type of margin the San Andreas fault represents, and many were quick to state that volcanic activity in Hawaii is the result of it being on a divergent margin. In terms of converging margins, there were also inaccuracies. Candidates readily muddled up their oceanic-continental and continental-continental case studies. The best responses seen utilised the example of the E15 eruption in Iceland in 2010. Then they compared the impacts of this eruption to examples of converging margins such as the Nevado Del Ruiz eruption (1985), Pinatubo (1991), and conservative margins in the form of the Loma Prieta earthquake (1989) and Haiti (2010). The best responses could discuss the severity of hazards associated with different plate margins by examining the implications of the hazards at local, regional, national, and global scales. In addition, better responses could also discuss the varied demographic, economic, environmental, and social impacts of different plate margins. Specialised concepts were also introduced and discussed by more able candidates. Globalisation, long and short-term impacts, and sustainability were commonly cited.

- Q.2 This was the most popular option in Theme 1, with 51.8% of candidates choosing to address this question. The average mark (10.1) was marginally lower than the average mark for Question 1 (10.8). Most candidates had a wide-ranging knowledge and understanding of strategies employed to respond to volcanic hazards. Aid, education, evacuation, grounding aircraft, lava diversion techniques, and warning systems were commonly cited. However, many candidates referred to these approaches in generic terms, which resulted in them gaining less credit for the A01 and A02 components, as they did not have any evidence to accurately evaluate the success of the schemes presented. Better answers included relevant case studies and an evaluation of the strategies implemented. For example, some candidates evaluated the measures used by PHIVOLCS (Philippine Institute of Volcanology and Seismology) and the USGS. The most common case studies seen were E15, Montserrat, Mount Merapi, and Mount St Helens. Candidates who reached band 3 for A02 could integrate specialised concepts such as place, risk, scale, sustainability, and vulnerability into their responses.

Section B

Theme 2: Ecosystems

537 candidates attempted questions on this theme.

- Q.3 This option was less popular than Question 4, with 169 candidates attempting this question, compared to 368 candidates who opted for Question 4. The average mark was 13.3. The best answers included case studies such as initiatives in Borneo, The Great Barrier Reef, and Sri Lanka (E.g., The Leopard Project). Candidates who utilised such case studies could evaluate the success of the strategies presented by discussing the merits and drawbacks in economic, environmental, and social terms. Better answers also referenced relevant specialised concepts and could highlight ideas such as risk, scale, sustainability, and resilience. It was also pleasing to see that some candidates were able to utilise the knowledge and understanding they had gained from Unit 3 (Global Governance of the Earth's Oceans), as they were able to highlight concepts such as mitigation and place by discussing the implications of Marine Protected Areas (MPAs). Weaker answers were characterised by descriptive and generic content, which commonly referred to 'rainforests', 'The Amazon', 'Africa', and 'The UK'.
- Q.4 This was the most popular option in Theme 2. The average mark achieved was 13.2, which is on par with the 13.3 average attained for Question 3. Candidates could readily identify different threats to the Arctic tundra biome, which mainly consisted of tourism, climate change, and mineral exploitation. However, as has already been noted, the quality of the evidence presented varied immensely. Better candidates were able to include examples such as the Crystal Serenity cruise ship, the Exxon Valdez oil spill, the mining/metallurgy company Nornickel, and The Willow Project. The inclusion of good quality evidence enabled candidates to make reasoned judgements regarding whether tourism is the most severe threat to the Arctic tundra biome. Weaker responses were characterised by descriptive and unsubstantiated comments, reducing the number of marks awarded for the crucial A02 component.

Theme 3: Economic Growth and Challenge: India or China or Development in Sub-Saharan Africa

India

It should be noted that only 72 candidates out of an entry of 1275 chose Economic Growth and Challenge in India. It is the least popular theme on the Unit 4 paper.

- Q.5 This question was only answered by 68 candidates, and it attained the lowest average mark for Themes 2,3,4 and 5. The average mark attained was 11.1. Better responses could examine the relative influence of droughts and floods on economic development in India. Such answers were characterised by detailed knowledge and understanding and case study support. Such responses then examined the relative influence of other factors such as climate, economic and social barriers, and relief. These responses also referred to key concepts such as causality, inequality, interdependence, risk, and vulnerability. Weaker responses were limited, tending to briefly discuss the influence of droughts and floods, commonly with one or the other ignored.
- Q.6 Only 14 candidates addressed this question, with an average mark of 11.9. A major issue here was that candidates failed to address the question set appropriately. Candidates were tasked with evaluating strategies to manage ONE environmental problem associated with economic growth in India. As a result, they were expected to evaluate strategies to deal with ONE of the following issues: Environmental pressures associated with economic growth including fossil fuel use, industrial pollution, soil erosion, deforestation and desertification, environmental issues of water security, food security and energy security, and environmental pressures associated with rapid urbanisation. Some candidates failed to stick to the one issue stipulated. As a result, such answers were self-penalising, as they failed to address the question in sufficient depth and detail, severely limiting the number of marks that could be awarded for A01 and A02. The importance of effective examination techniques and planning should be made apparent to all candidates moving forward.

China

475 candidates attempted questions on this theme.

- Q.7 This question was the most popular option for the China theme, and it recorded the highest average mark of 12.6. Better responses could examine the relative influence of droughts and floods on economic development in China. Such answers were characterised by detailed knowledge and understanding and case study support. For instance, some candidates referred to the impacts of drought on arable crop production in Sichuan and the implications of record temperatures on the Beibei district in southwest China's Chongqing Municipality. Some candidates also discussed the record rainfall in Zhengzhou, Central China's Henan Province, which caused widespread flooding in a major manufacturing hub, disrupting operations of major iPhone supplier Foxconn's plants. Such responses then examined the relative influence of other factors such as climate, economic and social barriers, and relief. These responses also referred to key concepts such as causality, inequality, interdependence, risk, and vulnerability. Weaker responses were limited, tending to briefly discuss the influence of droughts and floods, commonly with one or the other ignored.

- Q.8 Similarly, to Question 6, a major problem here was that many candidates failed to address the question set appropriately. As a result, it scored a slightly lower mark (12.3) than the 12.6 recorded for Question 7. Candidates were tasked with evaluating strategies to manage ONE environmental problem associated with economic growth in China. As a result, they were expected to evaluate strategies to deal with ONE of the following issues: Environmental pressures associated with economic growth including fossil fuel use, industrial pollution, soil erosion, deforestation and desertification, environmental issues of water security, food security and energy security, and environmental pressures associated with rapid urbanisation. Many candidates failed to stick to the one issue stipulated. As a result, such answers were self-penalising, as they failed to address the question in sufficient depth and detail, severely limiting the number of marks that could be awarded for A01 and A02. The importance of effective examination techniques and planning should be made apparent to all candidates moving forward.

Development in Sub-Saharan Africa

318 candidates attempted questions on this theme.

- Q.9 The average mark for this essay (12.2) was 1.9 marks below the 14.1 recorded for Question 10. The Africa theme continues producing very specific and well-supported responses, or generic answers. Here is a good example of candidate work, clearly addressing the AO2 element of the question as well as applying specialised concepts effectively and appropriately: *“However, human factors do not entirely cause desertification and they can have a positive impact ... for instance, in Sierra Leone, they have adopted environmentally sustainable farming practices, which effectively counter desertification ... knowledge of these approaches is taught widely, and this helps to tackle desertification on a local scale, which improves agricultural resilience.”*

Weaker responses were characterised by a generic approach, which introduced over-grazing, over-cultivation, population growth, and drought without the support of case studies and discussion.

- Q.10 Only 59 candidates answered this question out of the 1275 entries. However, this was the highest-scoring question on the Unit 4 paper, with an average mark of 14.1. Some excellent answers were seen, including high-quality analysis and application of the specialised concepts. An example is provided here: *“This example highlights how the development of infrastructure like electricity through schemes like this, and therefore the World Bank’s involvement in Nigeria’s development is extremely important. While smaller-scale bottom-up projects such as the work done by The Fairtrade Foundation, which has helped build toilets or schools across Sub-Saharan Africa, will make a difference to individual communities, larger-scale, top-down projects funded by these huge international organisations are crucial to enabling development on a national scale.”* Weaker responses were characterised by a lack of balance and focus. For instance, the role of the World Bank or IMF was routinely ignored or glossed over, as the candidate pursued other initiatives.

Theme 4: Energy Challenges and Dilemmas

660 candidates attempted questions on this theme. It is the most popular option across Themes 2, 3, 4 and 5.

- Q.11 This was the most popular question for Themes 2,3,4 and 5, with 493 candidates answering it. The average mark recorded was 12.1, which was 0.4 marks higher than the average mark recorded for Question 12, and 2 marks lower than the highest average mark attained on Question 10. Candidates quickly identified technological demands for energy, alongside the demographic, economic and social demands. However, there was a lack of support and discussion of the relative influence of these variables. Consequently, this reduced the number of marks that could be awarded for the A01 and A02 components. Here is an example from a weaker response: *“This means that energy is being required for a wider population than before, that is hugely reliant on technology.” ... “To conclude, I think that technology definitely does have a part to play in the growing demand for energy.”*
- Q.12 The average mark for this essay (11.7) was marginally below the 12.1 marks recorded for Question 11. Some excellent answers were seen, which included comments such as: *“Groups like OPEC cause political discourse and discontent globally ... for example, internal and regional conflicts have been created ...” ... “Conclusively, while economic problems linked to fossil fuels are prevalent, the political fallout has in many cases been more extreme. Also, the two are inextricably linked, with both worsening the other in many circumstances.”* Weaker responses tended to drift from the question set and focus solely on environmental issues. In addition, weaker responses tended to ignore either the political or economic problems command. As a result, imbalanced answers were produced, which reduced the number of marks awarded. In some cases, misconceptions were also present. For example, some candidates were quick to state that the current war between Russia and Ukraine was primarily due to access to fossil fuels.

Theme 5: Weather and Climate

456 candidates attempted questions on this theme.

- Q.13 This was the highest-scoring question in the Weather and Climate section. It was pleasing to see that the average mark of 12.4 was 1.8 marks higher than the average recorded for a similar question in the 2022 Unit 4 examination. There was a better knowledge and understanding of air masses this year, and it was pleasing to see a range of sketches and maps incorporated into the candidates' work. The influence of air masses was discussed, however, there was a lack of specific details, for instance, figures relating to precipitation, temperature, and wind speed. In addition, the relative influence of other factors was thin and poorly developed. Consequently, this hampered the number of marks that could be awarded for the crucial A02 component.

Q.14 The average mark for this question was 11.4, compared to the 12.4 recorded for Question 13. There were a few issues with this question. Firstly, candidates were directed to focus on strategies used at the *national* scale. Some candidates drifted from this requirement and provided many strategies lacking depth, detail, and focus. Consequently, this reduced the number of marks that could be awarded for A01 and A02. Secondly, some candidates clearly did not have a firm grasp of the difference between strategies used to mitigate the impacts of climate change and those designed to adapt to climate change. As a result, inaccuracies and misconceptions were common. Finally, the evaluation component lacked rigour and the application of specialised concepts. For instance, comments like: “... *this is very expensive to do and cannot be implemented everywhere ...*” “*This is the best strategy*” ... “*In conclusion, I think it is best to mitigate climate change.*” were commonly seen. Candidates should be encouraged to apply the specialised concepts highlighted in the specification and to evaluate the geographical issues and information presented in a more sophisticated fashion.

Summary of key points

- Many answers were very descriptive, and generic, and lacked appropriate support. Relevant exemplification needs to be provided, as it offers evidence that will help the candidates to access the A02 marks more freely.
- A02 accounts for 65% of the marks available on questions 1 and 2. In addition, A02 accounts for 50% of the marks available on the rest of the paper. If candidates wish to access the highest marks for A02, they need to move away from being purely descriptive and should aim to analyse the information presented. The inclusion and subsequent discussion of relevant specialised concepts would also be beneficial.
- Balance is often lacking. For instance, droughts and floods were often marginalised for Questions 5 and 6, the IMF was largely ignored for Question 10 and the role of physical factors was poorly developed for Question 9.
- For the Africa theme, many candidates are still talking about the continent in generic terms and not individual SSA nations.

GCE GEOGRAPHY

General Certificate of Education

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Advanced

UNIT 5: INDEPENDENT INVESTIGATION

General Comments

Once again it was pleasing to see a variety of interesting and mostly appropriate investigations being undertaken by candidates, the majority of which were clearly linked to the specification.

Though centre administration of samples was mostly excellent, several issues continue to arise. These are:

- Failure to complete or include the correct proposal forms with the samples (centres must use the proposal form available electronically via the subject website).
- Failure to annotate accurately or provide clarity of how marks have been awarded.
- Failure to ensure candidate and/or teacher signatures have been included on authentication sheets where required.
- Mathematical or mark transfer inaccuracies.
- Failure to ensure titles are appropriate for the candidates. Some centres allowed titles to be attempted that were not appropriate to the specification or were too complex for the capability of the candidates. Many titles were temporal, considering change of a location through redevelopment etc. but then lacked the appropriate data and simply focused on a snapshot in time thereby failing to answer any of the sub-questions posed. Centres should be making use of the Title Approval Service where there is any doubt as to the validity of the title.

Candidates would find it helpful if they identified, at the planning stage, specific focus point from the specification, such as '3.2.10 – Marine pollution and plastic waste' rather than just 'Global Governance'. Such focus allows candidates to identify the relevant bullet points which then drive the data collection process.

There was evidence that candidates were being allowed to attempt topics that were too broad and not achievable e.g., 'How does biodiversity vary along the North Wales coast's sand dunes?', or 'How has COVID-19 impacted the retail patterns in Cardiff compared to Newport?'. Some were outdated e.g. focusing solely on models such as Burgess or Hoyt as a basis for a 21st-century investigation. Topics related to the impacts of COVID or online shopping are often difficult to assess, as there is often little data that is accessible. Candidates also use expressions such as 'to what extent' or 'what are the effects of' in their titles but forget to come back to the key words 'extent' and 'effects'.

Many investigations submitted continue to be considerably overlength, the longest seen consisted of 152 pages and over 10 000 words. Centres must advise candidates of this fact and remind them of the impacts of producing work that fails to meet the assessment criteria. Securing manageable and focused investigation titles for each candidate, through detailed discussion at the outset could greatly assist this process.

Comments on individual questions/sections

Context

Nearly all candidates had sub-questions or hypotheses, which in most cases were relevant to the research question. A number of candidates did not match their data collection to the sub-questions identified. Application of theory still appears to be an aspect of the investigation that many candidates have difficulty with; often just giving some generic background that bears little reference to theory or context.

The use of literature is gradually improving; however, many still have little idea about how to use literature sources. Literature reviews were used by some, while most had a list of literature sources in their appendix, these were mostly references to web sites, such as Wikipedia and Google. The best candidates made excellent use of literature throughout their work, with relevant sources clearly identified in the text, using a recognised system such as Harvard.

Most had clear reference to risk assessments, but they did tend to be generic in nature. Ethics was much weaker and in many candidates was absent. Locational context was frequently poorly developed, while at the other end of the scale it escalated into pages of somewhat unnecessary text.

Methods of Field Investigation

It was noted that some centres still appeared to feel challenged by the impacts of COVID-19, relying very heavily on the use of secondary data, which did not always deliver the required results. It is good practice to include copies of data collection sheets such as questionnaires and environmental quality surveys, which in turn can be annotated to clarify what is being attempted. Some centres encouraged candidate to complete pilot studies which then allowed methods to be adapted more closely to the data required.

Better candidates clearly linked their methods to their sub-questions using a comprehensive table. This allowed for clear description, justification, discussion of relevant sampling strategies and in some cases evaluation. Many candidates used methods of data collection that were not mentioned in their methodology, which suggests a lack of thorough planning.

The best candidates had a good range of varied methods that were clearly aimed at collecting data to allow them to answer their sub-questions. These methods were well described, replicable and clearly justified. Weaker candidates had a limited range, often only two or three, that did little to answer their questions and tended to reflect attempts by centres to shoehorn their standard fieldwork days into the NEA. It was disappointing to note that poor descriptions of methods seemed to be on the increase, with many lacking justifications.

The main weakness with this section was sampling, a requirement of the mark scheme. Most candidates made brief statements and there was clear misunderstanding of strategies, particularly random sampling, when opportunistic sampling would have been more appropriate. Justification of the chosen sampling strategy was often missing or limited. To access Band 5 candidates are required to have a *"sampling strategy that is well designed, explained and justified. The strategy is wholly appropriate to the investigation."*

Data Presentation and Findings

This was possibly the most disappointing aspect of this year's cohort with what appeared to be a deterioration in general standards. Centres are reminded that their candidates need to be made aware of the requirements of Band 5. Wide ranging does not mean over-reliance on bar charts, line graphs or pie charts. In many instances centres over credited this section.

Digital maps were very poorly used, frequently lacking the necessary protocols, i.e., scale, north point, heading and where appropriate a key. These were often too small to be meaningful and lacked clarity due to reduction in size. To be valuable a location map needs to show where data was collected.

As noted last year it was disappointing to see that many candidates did not make use of more sophisticated methods of data presentation. Good examples might include, well annotated and located photographs, data located on maps, e.g., photographs, graphs, proportional circles, and cross sections. Many candidates need to be educated into how beach/dune profiles, kite diagrams, and pedestrian flows should be drawn. All graphs should have axes appropriately labelled and given clear headings. Graphs were also used incorrectly, e.g., line graphs are used for quantitative data and bar graphs for qualitative data, a fact that often confuses candidates.

It should be noted that the reproduction of maps and diagrams solely from secondary sources cannot be credited as they are not the work of the candidate.

Analysis and Interpretation of Findings

Centres are reminded that to achieve Band 5 marks candidates are required to give a sophisticated analysis and interpretation of findings, clearly showing why they were appropriate and relevant to the research question. The best candidates also reflect on their theory, secondary data, and literary review.

The most competent candidates produced a successful analysis which cross referenced geographical theory and individual research to a high standard, compared data sets, and used statistical measures to develop their findings further. In addition, candidates who organised their work under clearly defined sub-questions for data presentation and analysis tended to produce a more focused analysis, often cross referencing their primary and secondary data with skill, whilst linking to the relevant sub-question. The use of relevant statistical techniques assisted the quality of analysis, and this was often evidenced in the centre marks awarded.

In contrast the work of many candidates was very descriptive, with limited consideration of data presented. Where findings were integrated within the analytical context the interpretation was much more effective and focused. It also helped to reduce the word count. Many middle range candidates who attempted statistical analysis often had insufficient data, for example Spearman with less than ten pairs of data, and questionnaires that were limited in sample size, e.g., five questionnaires.

In the weakest investigations the tendency was to methodically describe each graph while some placed their data presentation in the appendix where, if not referred to, it became difficult to credit. This in turn might impact upon marks awarded for structure. In these cases, candidates were unable to develop analysis that supported their sub-questions and overall investigation.

Conclusions and Presentation Requirements

Candidates should be reminded that to access Band 5 marks candidates must have a sophisticated and confident summary that draws thorough conclusions which address the research question and is underpinned by relevant theory. At the same time they must present a well-structured, concise, and logical report that accurately references secondary information.

Confident conclusions were effective in drawing the investigation to a close, linking the findings to sub-questions and the research title. For some the conclusions repeated much from the analysis and introduced new data, which was not always relevant. They lacked conciseness and were often not substantiated. While sub-questions were covered, elements such as assess, contrast and effect, in the title were often ignored.

Returning to the suggested word guidance, candidates should be reminded that producing work that is seriously over this guidance can lead to a lack of conciseness, limiting marks. It should be noted that Bands 4 and 5 require concisely worded investigations.

Evaluation

Candidates should be reminded that to achieve Band 5 marks they must produce a 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 was good to note that candidates are starting to gain a better understanding of what is required for this section, however, it is better to evaluate all aspects of the investigation rather than tackle it sub-question by sub-question as some candidates did.

Many candidates appeared to assume that since this section has the highest number of marks available, they had to write at great length, rather than focusing on the quality and depth of reflection. The focus was mostly on how to improve data collection methods rather than reflecting on the planning and findings. Consideration of the validity and reliability of the knowledge gained could be much stronger and there is still scope to develop ideas for improvements, further research and extension of their geographical knowledge. This section tended to be overmarked by centres.

Summary of key points

Candidates should ensure that they

- have a clear concise title, linked to the specification, that is achievable and is of a manageable scale.
- use their sub-questions to plan their data collection and ensure that sample sizes are large enough to enable meaningful conclusions to be drawn.
- have an awareness of what is required by the mark scheme.
- be aware that the evaluation is worth 25% of the total mark, and therefore, have a perceptive evaluation of each stage of the whole process.
- give further consideration to the validity and reliability of the knowledge gained.



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