AQA

AS
Geography
7036/1 Physical geography
Report on the Examination

General

In general, the paper proved to be accessible for most candidates. The average mark on the paper was 43. This was slightly higher than the average mark last year and is in line with expectations that as centres become more familiar with the new style of question setting, it is expected that outcomes will continue to improve with further increases in the mean mark on this paper.

Although it appeared that most candidates were comfortable with what the assessment objectives expected of them it is worth reminding centres that the application of the assessment objectives does differ significantly from the previous specification.

AO1: Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.

This is worth up to 40% of the overall AS.

This is a very straight forward and fairly traditional assessment objective. It tests knowledge in isolation and recall of specification content. Multiple choice questions and short tariff questions are all testing AO1. Learned material as part of the course of study should be used to support answers. This includes the use of case studies, where they have been signified in the specification. AO1 also forms the basis of longer responses i.e. it is the knowledge of the specification content which is used to underpin the 9 mark and 20 mark questions.

AO2: Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.

This is also worth up to 40% of the overall AS.

AO2 – This is a significant departure from previous approaches to the way in which questions are set. This is the synoptic assessment objective. Previously AQA A-level papers set generally broad and overarching questions, which allowed students the opportunity to bring in their own synoptic links. The key difference now is that the question setter will identify links which students are expected to respond to. Here students are expected to respond to links made in the following ways:

- Elements not specified within specification units; novel situations which students are required to apply their knowledge and understanding to. These types of question will always come with a resource.
- Links made by the question setter within specification units which are not signalled in the specification.
- Links made by the question setter across specification units which are not signalled in the specification.

This assessment objective encourages students to apply their knowledge to unseen material in the examination, exploring links within, units, across units and to novel situations.

Teachers should ensure that their students understand that learning subject knowledge from a course textbook, without considering a range of potential connections between different aspects of their study, will only secure a limited outcome in the examinations. Up to 40% of the public examination will be testing this approach to synopticity.

It is clear that some students were better prepared than others when it came to assessing this element. Instead of applying their knowledge to the context of the question, some simply regurgitated specification content around the theme of the question. This constituted AO1 marks only as these answers always lacked application of knowledge to the context of the question.

Centres should note that both the 9 and 20-mark questions will no longer have direct links to identified specification content. Students need to be prepared to use their knowledge understanding of content, concepts and processes. This should then be applied to the context of both the 9 and 20 mark questions, rather than narrative approach of reciting learned materials which some more limited responses showed.

AO3 – Use a variety of relevant methods and techniques to:
- *investigate questions and issues*
- *interpret, analyse and evaluate data and resources*
- *communicate findings*

These skills were tested in this examination paper whenever a stimulus resource was used. The main issue here is that many students demonstrated AO2 type answers by applying their knowledge, offering reasons for patterns for example. This was not the question. The command 'analyse' in this this context, simply required students to interface with the data and deconstruct the information.

Question 1

About 34% of the candidates attempted Water and Carbon Cycles.

1.1

Students found this straight forward with 92% correctly identifying option C as the correct answer.

1.2

93% of students identified D as the correct option.

1.3

Students found this question quite challenging, with 33% scoring no marks, and only 27% achieving full marks. The key to achieving maximum marks was to show clear understanding of the concept of positive feedback. Most achieved credit by making links between elements of the water cycle. For example, many linked higher atmospheric temperatures to melting ice, but failed to 'close the circle' of positive feedback and show how this could lead to further warming and then more melting.

1.4

This question proved accessible to most students with over two thirds accessing Level 2 and scoring 4 or more marks. Those achieving the highest marks made clear attempts to use and manipulate the data, for example giving estimations of the extent of change in emissions through use of the scale. Others showed careful use of the figures and gave specific map detail to support statements, for example that the UK was an anomaly with emissions decreasing by about a half

over the period. A number of responses did not score well as they quickly drifted into explanation or possible reasons for the changes in emissions which is AO2 and not valid in this AO3 question.

1.5

This question combined both AO1 and AO2 elements. The question expected students to make links between two areas within the water and carbon cycles specification. Students had to make an evidenced assessment of any impacts to life on Earth resulting from natural changes to the carbon cycle. Many limited the credit available to them by making human impacts on the greenhouse effect and enhanced global warming the focus of their argument, rather than natural changes. A number of the better responses explored long-term change in the carbon cycle and the role of natural processes in controlling concentrations of carbon the atmosphere, which impacts on life on Earth by controlling temperatures. Others explored shorter-term impacts, for instance the impact on vegetation as carbon is transferred from biosphere stores to the atmosphere via wildfires. The average mark for the question was 3.9 suggesting that students need more preparation in the application of knowledge to questions which require them to make links between different elements of the specification.

1.6

Students generally engaged with this question well. Over 50% of responses gave clear answers to the question set and accessed Level 3. Many candidates scored well with respect to AO1 with clear and detailed knowledge of both human and natural factors that affect stores of water over a range of time scales. The key to scoring well with respect to AO2 was the quality of the judgements made about the nature of the impacts on the stores of water, and most importantly the extent to which human activities are more important. Many made the enhanced greenhouse effect resulting from the emissions of carbon dioxide from various human activities the focus of their response. This was creditworthy and gained more credit for the level of detail given regarding impacts on specific stores and the sophistication of the assessment.

The weaker responses tended to be quite vague. Many lacked technical terminology relating to processes affecting changes in stores of water e.g. evaporation, condensation, cloud formation, precipitation and cryospheric processes. Others showed little awareness of impacts over different time scales e.g. how natural processes may have more significance over longer time periods, while human activity may cause quicker changes and may be more important in the future.

Question 2

Around 60% of candidates attempted Coastal Systems and Landscapes. This was the most popular core option.

2.1

86% of students correctly shaded lozenge D.

2.2

Most students correctly identified D as the description of a Dalmatian coast. Whilst 76% of students were accurate, some clearly knew the response related to sea level change and incorrectly chose option A instead.

2.3

Most candidates clearly knew what eustatic sea level change was. There were a small number of responses that confused isostatic and eustatic change, and these gained no credit. Most students made the link between warmer temperatures and the melting of ice, and also stated that it was a global rise or fall in sea level. To achieve the highest mark, it needed to be clear that the student understood that it was the melting of ice on land that added to the height and volume of the oceans. Some tried to suggest that the melting of sea ice caused the additional height and volume of sea water, this was not credited. Many good responses also referred to warmer temperatures leading to the thermal expansion of the oceans which again was credited.

2.4

This question proved reasonably accessible to most candidates with around 63% scoring in Level 2. For most this involved using and manipulating data from the graph. Many gave an analysis of the changing extent of beach recognising a 5-fold increase between 2005 and 2009 followed by a smaller increase of about a fifth by 2013. Many made comment on the sudden appearance and disappearance of the spit. The best responses made clear use of both figures. Often these referred to the spatial distribution of a feature including distance or directions that could have only come from the map and supported this with some analysis of data from the graph. The weakest responses simply lifted data from the graph. Some drifted into possible explanation or reasons, many suggesting longshore drift was occurring along the coast. This constituted AO2 and application of own knowledge. There was no credit for this approach.

2.5

60% of responses reached Level 2 or better, showing most students found this question accessible. However, the mean mark was 4.23 indicating that many were not able to access the full range of marks available. Answers that did not score well often confused processes of erosion and weathering. Others showed poor AO1 knowledge of the detail of processes of weathering. Some responses could not access the higher marks as they lacked AO2 application of their knowledge and had limited assessment. The best answers had detailed assessment of the role of weathering in relation to specific coastal landforms, supported with detailed knowledge and understanding of specific weathering processes. Some assessed the role of weathering in relation to other factors, such as erosion or mass movement, as long as the role of weathering was key to the assessment this route was creditworthy.

2.6

This question proved reasonably accessible to most candidates. 56% of students reached Level 3 or better. The thrust of the question was coastal management in the future in response to impacts of climate change. Many students did make clear reference to possible impacts of future climate change, with detail relating to possible sea level change and changing weather events. These generally scored well. The specification identifies "hard and soft engineering" as traditional approaches and "shoreline management/integrated coastal zone management" as sustainable approaches. Very few responses followed this interpretation. Most responses gave a debate between "hard" and "soft" engineering, with hard presented as the traditional approach and soft as the sustainable. This was credited and could score well as long as the assessment focused on their importance in terms of dealing with the impacts of climate change. Many misinterpreted the question and presented a debate focusing on which is more sustainable, hard or soft engineering. This was not the thrust of the question and did not score well. Many of the best responses were

supported with specific detail from illustrative examples. These were often very perceptive and showed a clear engagement with specific issues places are going to face in the coming decades as sea levels rise and coastal populations increase. Many had detailed discussions about the costs and benefits of maintaining and enhancing current defences against making difficult land use planning decisions in the light of future impacts of climate change.

Question 3

Only 6% of candidates opted for this question, making it the least popular core option by far.

3.1

This caused few problems for students with around 99% accurately selecting option C.

3.2

80% of students scored this mark by shading lozenge D.

3.3

Responses that did not score well often did not convey the idea that glacial budget relates to the balance between inputs and outputs. Without highlighting the relationship between accumulation and ablation in some way it was difficult for answers to score well. Other low scoring responses often gave straight reversals when giving an outline of positive and negative balance, credit was only given once. The best answers tended to be succinct and achieved the maximum three marks easily with a definition highlighting the idea of balance, together with an illustrative example of inputs/outputs and an outline of the nature of a positive/negative budget.

3.4

This question proved to be accessible by most candidates with around 71% reaching Level 2. Most responses identified the clear difference between Antarctica and Greenland, with ice loss in all areas of Greenland, but significant areas of ice gain in Antarctica. Some quickly drifted into an explanation of ice loss, generally referring to emissions of greenhouse gases and enhanced climate change. This constituted application of knowledge and AO2. There was no credit for this approach. The best answers made clear use of the maps to identify specific patterns in the distribution of ice gain or loss. They supported this with accurate location detail including compass directions and use of the scale to give the extent of any areas of loss or gain. Some gave straight visual comparisons of the extent of ice loss or gain between Greenland and Antarctica without noticing the difference in scale of the two maps. This gave confused responses that suggested Antarctica and Greenland are similar in size.

3.5

This average mark for this question was 4.91, and 71% reached Level 2, with 25% scoring in Level 3, suggesting that students were generally able to engage well with this question. Most showed that erosion does indeed play a significant role in areas that have been glaciated. It was expected that students would make their local scale glaciated environment case study the focus of the question. Many did build their response around a specific glaciated valley in the English Lake District, Snowdonia, the Scottish Highlands or the European Alps. This allowed the opportunity for candidates to refer to specific landscape features and landforms and give clear assessment of the

role of erosion in their formation. A significant number of responses referred to relatively large scale currently cold or glaciated regions. This was problematic as the focus of the question was a local scale. Credit was given to responses that focused on a relatively small named glaciated area, such as Snowdonia, the English Lake District or the Cairngorms. However, where responses only referred to a generic large-scale area or region such as "The Alps", "Alaska" or "Antarctica" for example, it was felt it was difficult to award marks beyond level 1. Many of the best answers assessed the role of erosion in relation to other processes. For example, assessment of the original role of glacial erosion in carving out a specific glacial valley, with subsequent glacial deposition, fluvioglacial and periglacial processes, and more recent weathering and mass-movement shaping the landscape features as seen today.

3.6

Periglacial landscapes were the thrust of this question. Inevitably some confused this with other kinds of cold environments, e.g. glacial/glaciated or fluvioglacial, these did not gain much credit. Answers that scored well gave assessments of the current and potential future impact of higher temperatures in named periglacial settings. They included exploration of impacts on landscape features such as permafrost, patterned ground, ice wedges, pingos, blockfields, solifluction lobes, terracettes and thermokarst. Assessment often came to a view relating to increased rates of ice melting and subsequent landscape change. A number of candidates opted to address the impacts of climate change on people in cold environments. Potentially there was limited credit here as landscape was the focus of the question. Credit was given for responses that assessed impacts on features of the human landscape. For example, melting of permafrost leading to collapse/sinking/destruction of communication networks such as roads, or buildings collapsing. There was no credit for general impacts on people's lives or human activity. 51% of candidates reached Level 3 or higher, but the average score was only 9.64 indicating that a number of students were unfamiliar with periglacial features or focused on people rather than landscape.

Question 4

76% of candidates answered this question, making it the most popular optional unit on Section B.

4.1

71% of students accurately chose A as the correct answer.

4.2

83% of students scored this mark by shading lozenge B.

4.3

Many were well prepared for this and gave succinct summaries of the process, with a clear grasp of the role of gravity at destructive plate margins. Others clearly had little or no understanding of the process.

4.4

Over half of candidates got into Level 2, but the average mark was only 3.48. Those scoring well made good use of the data in the table, with clear manipulation of the figures to compare and contrast the different numbers of storms in the different basins. Many used the map in conjunction

with the table to give an analysis of the numbers of storms north and south of the Equator, and the difference between the eastern and western sides of the map. The weakest responses simply lifted data from the table and made no use of the map. Significant numbers drifted into an explanation of why tropical storms are distributed in this way. This is AO2 application of knowledge and was not credited here.

4.5
This question required students to make a link across specification units. It is clear that many students were well prepared for this. It is important to remind centres that every series there will be one question which crosses specification units at both AS and A Level. In this case, the link was to Changing Places. The concept (from that unit) of people's lived experience of place, was integrated into this hazards question. It is an Ofqual requirement that such questions are set every series so that students can demonstrate understanding and learning from across the breadth of study.

There was a pleasing range and variety in case studies used. Most candidates went beyond a simple list of impacts of their chosen fire and did at least begin to assess how these affected the lives of the people affected. This was shown by 69% of responses reaching Level 2 or higher. However, only 18% reached Level 3, so there was scope for further, or more detailed, links to be made. Those that did not focus on how the fires impacted on people's lives remained in Level 1.

4.6

This question differentiated reasonably well with 47% of candidates reaching Level 3 or higher. This suggests that alongside these clear, and at times detailed, responses there were many that did reach this level of clarity. The better answers were rooted in located examples. Many good responses were able to give clear and detailed AO1 knowledge and understanding of the nature of plate boundaries and the impact this has on the frequency, severity and magnitude of the volcanic events experienced. These also explored how the level of development of the place affected the level of impact. Many explored the extent to which the level of development affected the level of vulnerability, ability to cope and any mitigation that may be in place. This was creditworthy. Some made general statements that implied low levels of development inevitably led to more severe impacts. Whilst others made assessment relating to specific locations. Some of the weakest responses had very limited awareness of the nature of volcanic activity in different tectonic settings. It was difficult for these responses to move beyond Level 2 as partial responses. Generally, it was the quality of assessment that moved responses through the levels.

Question 5

This was the less popular option on Section B with only 24% of students choosing this question.

5.1

This caused few problems for students with around 93% accurately selecting option B.

5.2

68% of students scored this mark by shading lozenge C. Those getting the question wrong most often chose option B relating to particulate pollution.

5.3

Whilst 18% of responses gained all three marks on this question, 16% failed to achieve any credit. Credit was not given for an unsupported statement of "urban sprawl". Those scoring well engaged with the expansion of urban areas involving the outward movement of people, services and employment away from central areas. They often referenced the factors that had facilitated this process, such as the spread of communication networks and increased personal mobility and wealth of some groups in society. Credit was not given for responses that referred to movement away from urban areas, as this became confused with counter-urbanisation, which is a separate process.

5.4

The maps provided in this question gave students a large amount of information they could engage with. Many did engage well, and 53% of responses reached Level 2. Many candidates used the map detail well giving clear locational detail. Good responses used direction and scale to identify and describe distribution and patterns on the maps. Many sought to compare the patterns in the distribution of both variables, when done well this constituted clear analysis. Most were able to use the key for Figure 9 with ease, whilst few saw that even the darkest shading on Figure 6 still only represented relative small numbers of people. Those who drifted into explanation or possible reasons for the distributions did not score well. This was applying their own knowledge (AO2) and therefore was not answering the question. There was no credit for this approach.

5.5

This was the comparable question to **4.5**. The requirements of this question crossed specification units. It is important to remind centres that every series there will be one question which crosses specification units at both AS and A-level. In this case, the link was to Changing Places. The concept (from that unit) of the character of place, was integrated into this contemporary urban environments question. It is an Ofqual requirement that such questions are set every series so that students can demonstrate understanding and learning from across the breadth of study.
The nature of impacts on the character of places depended on the choice of river restoration and conservation project. A significant number of responses did not move beyond outlining the nature of the chosen project, often with little more than a summary of the positive and negative achievements. Better responses needed to clearly engage with how the project impacted on the character of the place. Where this was done well there was reference, not just to the physical character of the place, i.e. aspects of the built environment and land use, but also to other aspects of the character of the place. These could have included the cultural and social character of the place, i.e. how different people engaged with, or felt differently about the place following the project. Others referred to improvements in the economic character of a place, with improved opportunities for tourism or increased property values, and the subsequent impacts on character that these would have had. Some engaged with this cross specification link well, however many struggled. The average mark was for this question was 3.69. 52% of responses reached Level 2 or above, but only 14% achieved Level 3. Surprisingly, of those who answered the other parts of question 5, 4.47% did not attempt this question and 7.75% scored zero.

5.6

Many candidates found this question quite challenging. Whilst 51% did reach Level 3 or higher, only 12% scored in Level 4 and 10% failed to get out of Level 1. Many were confident in their AO1

knowledge and understanding of the characteristics of their two case studies, but often failed to give clear assessment of specific environmental issues or specific attempts at sustainability in these locations. The best answers engaged with the assumption of inevitability suggested in the question. These applied their knowledge and understanding of their case studies to either argue for against this inevitability. Many came to the view that urban areas are inevitably unsustainable and that they will always pose environmental issues. This approach was valid and could score well if the argument was clearly supported with evidence from their chosen urban areas. A limited number of responses self-penalised by only referring to one urban area. Any scale of urban area was accepted. Some focused on whole cities, e.g. Mumbai, whilst others focused on more local scaled examples, e.g. Dharavi in Mumbai. Either approach was valid. As long as there was some clear difference in some aspect of the chosen case studies, examiners were open to most contrasting places offered by candidates.

It is worth reminding centres that both 20-mark questions in section B will not have direct links to the identified specification content. Students need to be prepared to use their knowledge and understanding of content, concepts and processes. This should then be applied to the context of questions, rather than a narrative approach of reciting learned materials which some more limited responses showed.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.