AQA

AS

Geography

7036/1 Physical geography and people and the environment
Report on the Examination

June 2017

Version: 1.0

General

In broad terms, the paper proved to be accessible for most students. The average mark on the paper was 42. As centres become increasingly familiar with the new style of question setting, it is expected that outcomes will improve leading to further increases in the mean mark on the options and across the paper.

It worth reminding centres how the assessment objectives have impacted upon the papers.

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 A Level.

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 A Level.

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, many 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

Around 37% of the candidature attempted Water and Carbon Cycles.

1.1
68% of students scored this mark by shading lozenge A.

1.2
84% of students correctly identified option D as the correct answer.

1.3
Over 90% of the students accessed credit here but only around 17% scored full marks. The key to credit was in linking photosynthesis to the carbon cycle. Most achieved credit by outlining the fact that CO_2 is taken in by plants, but few went further than this. Opportunities were missed to refer to carbon sinks and / or how the release of oxygen as a by-product of photosynthesis maintains the balance between carbon and oxygen in the atmosphere – this was a potential development mark.

1.4
This was an accessible question with around 68% of students accessing 4 or more marks.

Most students accessed the two marks for completing the graph. There were some who stopped their vertical line at 600 for living biomass rather than extending this to 800 carbon units as required i.e. they missed the cumulative nature of the exercise.
Weaker analyses were repetitive or offered straight reversals of the same trend. These responses failed to manipulate data or consider more complex aspect of the trends e.g. tropical rainforest is the only ecosystem where biomass contains more carbon than soil stores.

1.5
This was the first combined AO1/AO2 based question. This meant that the thrust of the question did not lie explicitly stated in the specification. Students had to make an evidence based assessment as to whether storm events are likely to become more severe because of changes to the carbon cycle. Many argued that this was the case. This was due to increased temperatures caused by global warming, itself caused by increased CO_2 emissions. The increased temperatures were argued to lead to increased sea temperatures and increasing likelihood of tropical storms. Others suggest increased evaporation would lead to increased storms do to the increased water vapour in the atmosphere. Although this approach did not deal particularly well with the notion of severity.
The average mark for this question was 4.3 suggesting students need more preparation in the application of knowledge to questions which do not arise explicitly out of one area of specification content.

1.6
This question was reasonably well engaged with. Almost 50% of the candidature accessed Level 3, producing clear responses to the question set. The key to a successful answer was in producing a response which was clearly rooted in a chosen place with logical potential human impacts. There is no specification requirement to study human impacts in the chosen catchment and so this constituted the AO2 element. If the impacts were geographically sound and logical, credit was available. Many students referred to dam building, deforestation, the impact of farming practices and urban development. This was all creditworthy and gained more credit if it was rooted in place.
Weaker responses were vague and generalised. Many could only cite basic impacts of human activity in drainage basins e.g. rivers are more likely to flood flowing storms in urban areas due to increased surface run off compared to rural areas. Whilst creditworthy this was considering as only a partial response.

Question 2

Around 52% of the candidature attempted Coastal Systems and Landscapes. This was the most popular core option.

2.1
83% of students correctly shaded lozenge C.

2.2
This did cause some confusion to students. 46% correctly identified lozenge D as being correct. There is significant overlap between the definitions of wave quarrying cavitation

and hydraulic action. By process of elimination students should have worked out that the other definitions linked to attrition, abrasion and solution.

2.3
The mean mark was 2.0 for this question and so it proved to be accessible. Some responses drifted into the impact of these types of waves rather than their physical characteristics i.e. their typical height, wave length and frequency. This was easily achieved by comparing with destructive waves. Reference was also made to the relative power of swash and backwash.

2.4
This response only averaged 2.9 out of the available 6 marks, with 45% accessing Level 2. Students simply had to show understanding of the potential impact of the variable projections upon the coastal states of the USA.
Too many failed to engage with the projections graph, dealing only with the basic patterns displayed upon the map which constituted a limited answer. More sophisticated responses showed that there are potentially millions of people at risk of coastal flooding if the intermediate projections materialise.
There was no credit for offering reasons for the sea level change or drifting into the potential impact and mitigation / coastal management strategies that could be employed in response. This constituted application of knowledge (AO2) and was not being tested in this question.

2.5
This response produced a mean mark of 4.69 and showed that students generally engaged reasonably well with its requirements. Most showed that wind has a direct impact upon the size and power of waves. Others went further to consider fetch and the role of tides. Not many considered local factors such as the local geomorphology. Some drifted into description of low and high energy coastlines and their features. This scored little credit as it was considered to be the output of the energy and not a factor determining the impact of energy.

2.6
Students generally engaged well with this question but it also differentiated well. 58% accessed Level 3 or better with a clear focus upon the context of the question. Students were required to contrast the impact of human activity with natural processes upon coastlines. Some were a little unbalanced favouring one or the other. This was permissible if coherently argued. For human activity, many considered the role of intervention through coastal management and its unintended consequences, for instance at Hornsea on the Holderness coastline. For natural processes, many considered erosional and depositional processes and their impacts. Human induced climate change also featured and its association with sea level change. This was also a valid approach.

Question 3

This was the least popular core option with around 11% of students selecting this option.

3.1

80% of students correctly identified Option C.

3.2
83% of students correctly identified Option A.

3.3
This question differentiated well with 25% scoring all of the available marks but also 13% scoring zero. Some drifted into the causes of the formation of patterned ground. This would have been a slightly higher order question as this required explanation. There was no credit available for this approach. Most identified the basic nature of patterned ground: the variety of forms it can take (polygons circles / steps / stripes), its nature (unsorted/sorted, size of stones and sediments) and where it is found (periglacial areas, slopes, bare ground).

3.4
This appeared to be a fairly accessible resource, though the unusual presentation of one of axes did confuse some students; with the descending values ascending up the vertical axis, indicating glacier retreat. Most noted that the average glacier length had already started to retreat before the acceleration of carbon emissions. Others also considered the notion of a period of glacial advance between 1700 and around 1820. Most achieved the clear and evident link between accelerated carbon emissions and the apparent reduction in glacier length. Manipulation of data was also evident in more sophisticated responses. Weaker responses drifted into reasons for accelerated emissions. This constituted AO2 and application of knowledge. There was no credit for this approach. 52% of responses accessed Level 2.

3.5
Whilst not explicitly stated in the specification, this proved to be an accessible question. 64% of students accessed Level 2 or better. However, the mean mark of 4.29 shows that many failed to really capitalise on the full range of marks available.
Many noted that it is the increase in temperature above zero which causes glaciers to melt and release the meltwater. There was further opportunity to consider diurnal variation and seasonal variation where appropriate but many failed to take this broader approach. Some did consider the role of climate change and the likelihood of increased ablation and meltwater landscapes becoming more widespread with further glacial retreat.

3.6
The thrust of the question was glaciated landscapes. This gave scope to cover those landscapes which are currently ice covered or have been previously ice covered. Many considered locations such as the Alps or the Cumbrian / Cambrian mountains in the UK. Credit was also allowed for those locations currently or seasonally affected by ice.
In considering the impact of human activity a range of activities could be considered such as farming, tourism, mining and HEP for example. Some also considered the impact of climate change and the retreat of glaciers as a direct impact of human activity. Management generally came through less clearly in student responses - this should be given consideration in preparation for future examinations. Too many simply could not articulate management strategies in glacial settings. Only 32% of responses accessed Level 3 in award for this question.

Question 4

This was by far the most popular optional unit on Section B, with 77% of students answering this question.

4.1
It was surprising to note that only 76% of responses showed knowledge of how a rift valley is formed. These are relatively straightforward marks for basic knowledge which some students are missing out on.

4.2
It was even more surprising to note that only 42% of responses knew that nuee ardente was option C.

4.3
Only 4.5% of students scored all 3 marks for this question. Most responses confused storm surges with tropical storms. Whilst there are similarities in cause (low pressure and strong winds), these are fundamentally different geographical phenomena. Some students need more depth of preparation in order to understand such differences. For example, very few responses showed awareness that regional topography plays a vital role in the development of a storm surge e.g. funnel shaped bays.

4.4
The mean mark for this question was 3.12 with only 39% accessing Level 2. Many failed to spot the inverse relationship evidenced in most years i.e. that when precipitation levels are above the mean, areas affected by wildfire are generally relatively low and vice versa. Data was often lifted to support trends but not used in a more sophisticated way to analyse the relationships. Some responses simply dealt with the lines separately and failed to see the relationship. Others drifted into the cause of forest fire or the reasons why rain reduces incidence. This constitutes AO2 as it is application of knowledge. No credit was available for this approach.

4.5
The requirements of this question crossed specification units. It is important that centres note 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 past and present processes of development, 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.
Most considered levels of development and compared relatively recent earthquakes in Haiti and New Zealand. This was a legitimate approach provided there was clear consideration of impact of seismic events. Others considered developments in technology and how these have been developed over time to minimise impacts. This was also creditworthy. The mean mark of 4.6 showed students were able to 'think on their feet' and apply their knowledge in this more sophisticated way. However, there was also room for improvement with only 16.5% accessing Level 3.

4.6
Students generally engaged well with this question and it also differentiated well. 58% of students accessed Level 3, producing clear and focused (if not detailed) responses to the question set.
It was impressive to note the number of case studies which were used to support responses. These were generally used well to support and exemplify but also to address the AO2 element. This required comparison between the two types of hazard.
Students were free to argue either with the majority arguing that storm hazards present greater impact that volcanic hazards.
Less impressive responses failed to compare and largely recited learned case studies with limited clarity. This constituted AO1 only and was held to a maximum of Level 2 as a partial answer.

Question 5

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

5.1
The distractors were fairly lengthy but 77% managed to pick out B as the correct answer.

5.2
Students were almost as equally secure in correctly identifying C (73%).

5.3
14% failed to secure any credit on this question. There were a number of approaches that students could have taken but many appeared to be guessing. Those that had clearly studied this concept scored three marks. Most made reference to SUDS being used to control flooding. Few went further to consider the reduction in pollution, creation of habitats and leisure opportunities for people.

5.4
Some students appeared to misunderstand the y axis. This was comparing each country's employment and manufacturing output as a percentage of its own 1970 data. Essentially the data was indicating the increased productivity over time in the three countries, as well as subtle variations between them. It was not clear that all students understood this. Some tried make comparisons which could not be evidenced e.g. that Japan had more people employed in manufacturing that the USA by 2010. These responses missed the opportunity to relate the percentages to the 1970 levels and instead incorrectly inferred comparisons of total numbers employed. Only 38% achieved Level 2 on this question with an average of 3.15 out of available marks. Those who drifted into reasons for the lower employment levels were applying knowledge (AO2) and therefore 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 that centres note 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 past and present processes of development, 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.
Depending upon the choice of urban area, there were a variety of past and present processes of development which students could refer to. In general, this was not particularly well done and opportunities were missed by many. Some chose processes such as urbanisation, counter-urbanisation and gentrification. Others considered deindustrialisation for example. Another approach was to consider urban regeneration strategies as processes of development. The point really is that it was for the student to choose and apply. It was then simply a matter of assessing the impact of the process upon the area's characteristics. The average mark was 4.33 with 66% accessing Level 2 or better. Only 16% accessed Level 3.

5.6
This question was not particularly successful for a number of students. Too many failed to grasp the opportunity to consider ways in which attempts have been made to address disadvantage through a variety of actions at local regional and national level. For action in the environment, many failed to consider the built environment and housing/community regeneration projects. For action with people, many failed to consider opportunities to refer to education, training and employment creation schemes. Support was also patchy. Most did understand the concept of inequality and considered the wealth gap as the main inequality.
Centres should note that both these 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 questions, rather than a narrative approach of reciting learned materials which some more limited responses showed.

Use of statistics

Statistics used in this report may be taken from incomplete processing data. However, this data still gives a true account on how students have performed for each question.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results Statistics page of the AQA Website.