



GCSE

Geography A

90301H Physical Geography
Report on the Examination

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General

Question 1 remains the most popular question on the paper (63 000 responses) – almost universally answered. This is followed by questions 5 and 7(both 46 000 – 47 000) and this is the most popular combination. Question 6 had 15 000 candidates attempt it with question 4 on 16000. The least popular were questions 2 and 3 (8000 and 7000).

There were some excellent answers to all questions. Many made effective use of case studies - even when there was no explicit requirement for one, such as Yellowstone in **1(d)(iii)** and various areas of the Alps in **6(c)**. Many did know case studies in the questions that demanded them (the 8 mark questions in Section A) but many struggled to apply their knowledge to the context of the question asked. There was clear evidence of good subject knowledge in some questions such as **1(a)** and **2(b)** and evidence that candidates can answer multi-dimensional questions well. This was best displayed in **5(b)**, where candidates made very good use of two maps, linked them together and addressed the concepts of water surplus and water deficit.

However, there remain a number of aspects that need to be addressed. As last year, attention is drawn to the list of command words in the Teaching Guidance on the AQA website which gives those that might be expected in the papers and their meanings. Candidates should become familiar with these and understand what they demand. It cannot be assumed that command words that have not appeared previously will not appear. Rather, there should be an expectation that any of the command words in the list might appear on the question paper. There was evidence that some candidates struggled with 'discuss' – which has been present previously - and 'illustrate', which hadn't. Whilst these are challenging and aimed to discriminate and allow the best candidates to show what they can achieve, they should be accessible to all candidates and this is the case if they are prepared for these commands to appear. The same is true of the key ideas. The statements quoted in some of the questions relate to the key ideas which underpin the specification content. This was the case in **2(d)(ii)** and **6(c)**. Candidates should be as familiar with these as with the items that they are broken down into (the content) – and this will enhance preparation and confidence.

There is a need also to remember key rules which have been written many times before. When labelling a map, photo or diagram, it remains important to ensure that arrows connect to relevant features. Similarly, measurements made should be accurate using the scale as in both cases, carelessness costs marks. It is necessary to deconstruct the question, then candidates would not launch into a response that may be irrelevant. For example **5(d)** had an emphasis on changes in transportation and deposition downstream, not just transportation and deposition as processes in **7(e)**; the coastal habitat looked at conservation and then conflict. Candidates must know subject specific words, as well as command words. 'Distribution' is one specific case where candidates struggle to distinguish between this and location and frequently describe the location – with regard to where something is situated - rather than distribution – how it is spread. They must obey the instruction; in **2(c)(i)**, there was a need to label surface landforms, but many labelled those underground. Where resources are provided, there is a need to refer to them. In many cases, notably **3(c)** and **4(d)**, there was minimal reference to the photographs and thus marks were lost as features which were not present in the images and other aspects were described from knowledge. All aspects of the content need to be covered, perhaps spending longer on more challenging aspects to determine understanding – the 8 mark question on The Coastal Zone provides an example of this.

SECTION A

Question 1 The Restless Earth

The first part of this question was well done. Many gained maximum marks in **1(a)** by noting the age of oceanic crust, the fact that it can be renewed or destroyed and its density. Some did this in a comparative context with regard to continental crust although there was no requirement to do so. Basic answers merely listed, such as saying that it was young, thin and dense. The concept of distribution was poorly understood in **1(b)**. Many recognised the spread around plate margins. However, many then drifted onto location, rather than distribution. There is a need to engage with the appropriate language, noting the clustering in areas such as around the Pacific plate/the 'Ring of Fire'. Where candidates could do this, they quickly gained the three marks available – often noting anomalies, such as the volcano in the middle of the Pacific Ocean. Some mistakenly and irrelevantly began to explain reasons volcanoes were found at plate margins. In **1(c)(i)**, there was a need to use the photograph in Figure 2 to draw the sketch profile of the volcano. As with a cross section drawn using an OS map, a single line showing the shape of the volcano was all that was required. However, many disregarded the photograph and drew a textbook cross section showing the internal structure of the volcano, which was clearly not visible on the photograph. Where an appropriate profile was drawn, many lost marks by not connecting the arrow to the feature referred to or by labelling gentle slopes when the line drawn depicted the opposite. There were some very good responses where the outline shape was drawn and the labels applied were appropriate but these were all too rare. Specific case study material was needed in **1(c)(ii)**. Popular choices were Mt St Helens, Soufriere Hills volcano and Eyjafjallajokull but the naming of the case study alone was not adequate to progress through the levels. There had to be specific locations, events etc that made direct use of the example, rather than naming it and then giving generic information. Some did use more than one, in which case their efforts were diluted and the better one credited. Those who did describe the specific immediate and long term responses accessed level 2 often with a hint of analysis/comment that constituted discussion. There was a need to engage more fully with the command word to get to Level 3 commenting on how the strategies worked and how effective they were. Thus, recognising the evacuation of 800 people in southern Iceland from Eyjafjallajokull as a result of the ash and the impact on people, causing choking, was indicative of the necessary discussion. Generally **1(d)(i)** was well done with measurements being accurate and the shape clearly described. In **1(d)(ii)**, differences had to be established to obtain the marks. Description of the supervolcano did not answer the question asked. Thus, marks were awarded when differences were established such as the presence of a cone versus a caldera or the recognition that a supervolcano is much bigger. There was a need to have both a global focus – going beyond stating the word global – and some sequence and/or development in statements in **1(d)(iii)**. For example, random references to ash and its impacts, planes and crops was a Level 1 response whilst recognising that ash from Yellowstone in USA would cut out sunlight in places including the UK and the impact this would have on photosynthesis, crop growth and food supplies constituted a level 2 response. Some were extreme in the impacts noted indicating that everything would be destroyed whilst others used Yellowstone but looked at the impact on USA only.

Question 2 Rocks, Resources and Scenery

The majority were able to access at least one of the marks in **2(a)(i)** and a substantial number both by being accurate in the length of the period. Part **2(a)(ii)** was more challenging as there was a need to refer to an era and not what may also be true for a period. Many gained credit for noting it consisted of a number of periods. Some developed further by looking at the length of time in terms of hundreds of hundreds of millions of years or illustrated the subdivision. Part **2(b)** was well done with a variety of points being given and often more than the required points being made. Frequent reference was made to the fact that it was formed by cooling of magma or lava intrusively and

extrusively, its resistance to erosion and crystalline nature. Responses to **2(c)(i)** were variable. Some could not resist labelling underground landforms even though the question explicitly asked for surface features; others confused landforms with those of chalk so spring lines rather than a resurgence was identified whilst others failed to connect the label and arrow to the relevant feature. The best were accurate and specific in identifying and labelling swallow holes, limestone pavement (or its components) and resurgence. Responses to **2(c)(ii)** were disappointing and the quality of answers was often polarised. Many had no idea and just guessed as to how it was formed; some gaining one mark were aware of the former presence of a river (perhaps taking clues from Figure 5). At the opposite end of the spectrum, candidates gave a clear sequence explaining why water had been on the surface, its role in eroding the valley and reasons why the river subsequently disappeared underground. Some made effective and precise use of the map in **2(d)** to make more than the three points required in **2(d)(i)**. There were clear and specific distances from locations and use of compass points to convey the position of the quarry. Others used vague terms such as near to or got compass directions reversed and therefore incorrect. As in **1(c)(ii)**, there was a need here to refer specifically to the case study selected. Hope quarry was a popular but not exclusive choice. Again, information often became generic after stating the location. A significant proportion drifted into management which was not a part of the question; some stated the advantages and disadvantages instead of engaging fully with the question. There was a need to be aware of the issues such as the provision of jobs in extracting the material for use in construction, but at a cost to the environment or with issues in terms of noise and heavy traffic for the residents of local villages. Some did make such links, having been able to deconstruct the question asked.

Question 3 Challenge of Weather and Climate

In **3(a)(i)**, the climate graphs had to be referenced to describe temperature differences between the four locations shown throughout the year. However, for many this proved a challenge and there was minimal use of the figure as candidates wrote about what they knew. Where the figure was considered, all too often variation was not addressed and many got one mark for manipulating data only. Many recognised the importance of Edinburgh being further north/further from the Equator in **3(a)(ii)** but far fewer could explain the significance of this fact with regard to the curvature of the Earth or insolation levels. **3(a)(iii)** was more challenging with many considering proximity to the sea, instead of altitude as required in the question. Some did recognise that it got colder with increasing height but further development linked to density of the air was limited. The performance on **3(b)** was variable – accuracy was required to identify the centre of the low pressure (often outside the 980 isobar), the warm sector between the two fronts (whereas many identified the warm front) and an area where isobars were close together for high wind speed (often not done by close enough observation so that isobars were relatively distant). Similarly, points made in **3(b)(ii)** were often vague, listed and contained many random types of weather. Few really knew the weather associated with the passage of a warm front and yet this is fundamental in this section of the specification and a frequently asked core question. The use of the photograph was problematic in **3(c)**, with many disregarding what was shown. Candidates that described what was visible regarding the damaged roof and the queues of people in Figure 9a, and the debris in the water and empty areas to the bottom right of Figure 9b were able to access Level 2. There was significant drift to responses in **3(d)** and similar issues with the case study as in the 8 mark questions in 1 and 2. Some gave clear and specific accounts of effects but this only partly met the requirement of the question. There was a need to consider why the effects were different in the place specific locations identified and in this context, responses were relevant as were references to levels of wealth and preparation etc.

Question 4 Living World

There was a need to get **4(a)(i)** and **4(a)(ii)** the correct way around. Where this was done, many noted the leaves falling and then decaying adding to the organic content/fertility in **4(a)(i)** and the soil providing water and nutrients/minerals for the vegetation in **4(a)(ii)**. Some were vague and unclear and there is a need to be aware of the interrelationships between the different components of the ecosystem. In **4(b)(i)**, many understood the idea of the producer generating its own energy via photosynthesis and then this energy being passed on through the food chain, but with some losses. A significant number described what was shown rather than explaining what happened as the herbivore ate the producer. Responses to **4(b)(ii)** were somewhat polarised. Candidates either did not know or had a clear understanding, knowing that decomposers are bacteria and fungi, responsible for the breakdown of dead matter and converting it into a useable form for plants and their vital link in recycling. Some could make a vague link to recycling, but could not explain the sequence effectively. As in **1(b)**, the term ‘distribution’ proved problematic for a substantial number of candidates. Many described the location of temperate deciduous forest, indicating its presence in the eastern part of North America and Western Europe. What was needed instead were comments relating to the largest expanse being in western Europe and extending into Asia, with a focus elsewhere on the eastern sides of continents and an absence between the tropics. There was often minimal reference to the photograph in d and many candidates disregarded it. The answer lay in what was visible on Figure 12 and so many gained few marks as they described features that were not present, such as bluebells – a textbook item of information - or drifted onto soils and explanation. Some were describing tropical rainforest and not temperate deciduous woodland. There was a need in **4(e)** to make it clear that statements were about the selected temperate deciduous woodland via specific locations, species, strategies rather than generic ideas such as putting in footpaths, only allowing dogs in certain areas etc. There was also a need to explain how the strategies worked and how effective they were in a discussion regarding the management.

SECTION B

Question 5 Water on the Land

The vast majority identified the correct distance in **5(a)(i)**, whilst in **5(a)(ii)** there was a need to convey the shape in a way that would give the reader a clear impression of what the shape was. Thus, answers such as Nike sign, elongated foot shape, triangular (which was a popular choice), cone –shaped were accepted and, more conventionally, indicating that it was narrow but widened near the dam – in the latter case there had to be reference to specific area where it widened. This proved more difficult than the shape of the caldera in question 1. Responses to **5(a)(iii)** were often vague and imprecise. There was a misconception that the slope was gentle and often there was no specific height – where this was present, there had to be units given. The quality was poor and basic mapskills weak – an area to work on as candidates should have been able to recognise the close spacing of the contours and identify a specific height in close proximity to the reservoir. Responses to **5(b)** were often clearly focused on the two maps, made effective use of the resources and quoted evidence in support to illustrate the concepts of water surplus and water deficit. This was overall well answered; the lack of use of evidence often prevented progression to Level 2. A limited number confused west and east which had a detrimental impact on the answer and some did disregard the data – but this was a limited number in this question. As with other questions necessitating the labelling of a diagram, map or photo, candidates had to be accurate in the ending of the arrow, ensuring it matched what was visible at one end and the written label at the other. Often, candidates didn't connect the arrow, plunge pool was frequently inaccurate being in the foreground of the picture, and missed the obvious – it was rare to see the stepped profile noted or even the white water. There was a clear need to focus on what was visible and the waterfall as demanded by the question. Responses to **5(c)(ii)** were varied – at one extreme were those who did not refer to rock types or who had the orientation incorrect and had vague ideas about erosion. At the other end of the scale, there were clear sequences noting the horizontal alignment of rocks, with the hard rock as the cap rock. They began with a relatively gentle slope and explained the sequence and processes, such as abrasion and undercutting that led to the steepening of the profile to form the waterfall. A significant number drew diagrams to support their explanation. For some, this clarified confusion where soft rock was on top of and in front of hard rock or the waterfall was present at the start and the explanation focused on the gorge of recession. For others, there was a clear sequence that complemented the text and aided the written explanation given. As in **5(b)**, there were a number of aspects to consider in **5(d)**. However, the execution of this question was less effective. There was a need to understand the different transportation processes and to be aware of the amount and size of load being left behind, and then to demonstrate changes downstream. Some were confused by specific transportation processes, giving terms but incorrect definitions. Many could describe the transportation processes but failed to link to changes downstream. Deposition was the major discriminator as candidates focused on this to a lesser extent. Some drifted to erosion and/or explanation. The best looked at upper, middle and lower course and described which transportation processes were dominant in the different sections and were aware of largest load being left behind at the source, with greater quantities of smaller material nearer the mouth. There was significant confusion on velocity and how it changed and this had a negative impact on the understanding of the transportation and deposition processes which were a focus of the question.

Question 6 Ice on the Land

Most recognised the overall retreat displayed by the graph in **6(a)**. However, some struggled to interpret the trends shown and struggled to understand the cumulative nature of the data in Figure 17b even though this is a common way of showing information on glacial advance and retreat. Thus, there were a number of step by step descriptions of the changes without really engaging with

the data and having an overview of information shown. However, there were some very good answers where periods of advance were recognised in the context of overall retreat and data was given in support. The best cross-referenced the two figures and saw the links between them. Both **6(b)(i)** and **6(b)(ii)** were generally well done, although there was some confusion with 950m in **6(b)(ii)**. There was a clear need to be accurate in the 6 figure grid reference and not just go for an approximation and a nearby figure. Responses to **6(b)(iii)** were variable – some were clearly guessing with drumlins and moraine appearing in random locations – and this was true of glacial troughs and pyramidal peaks to some extent. The key is to go for landforms that can be easily and clearly identified. Thus, those who labelled arêtes radiating from the corrie shown (or an alternative), corrie tarn or ribbon lake fared best on this question. There were some very good explanations of landforms of both erosion and deposition in **6(c)**, although often imbalance. However, there was a need to engage with the statement which represented a key idea and then to obey the command word of 'illustrate'. Thus, there had to be some indication, however implicit, of the differences regarding location, process. The best did engage with explicit illustration of how a different landform results from erosion and deposition via a consideration of being in the mountains where erosion occurred more, in contrast to lower down where the glacier was melting and deposition occurred. Some gave very generalised responses to **6(d)(i)**, instead of taking time to analyse the data and recognise the contrasts, manipulating data in support. Where there was precision and a recognition that some areas would 'suffer' more than others, such as areas in the east in contrast to those in Switzerland, the question was well-answered. In **6(c)(ii)**, there was a need to comply with the 'describe' command in the context of the impact of unreliable snowfall on some resorts. Often this element was missing and the answer could have been written for any resort. Economic was generally better done than social. There was a need to obey the 'describe' command and not just identify impacts. The best responses were aware of this and developed answers, noting specific jobs lost such as ski instructors or cable car operators and were aware of the social impacts with regard to young people moving out of the area or the loss of local facilities. Some did support with a case study, although there was no requirement to do so, this did often enhance the answer.

Question 7 The Coastal Zone

As with many of the other photograph-based questions, there was a need to look at Figure 21 in **7(a)** and then respond to the question. There was plenty in the photograph that indicated erosion but not all appeared clued into the question. Where candidates did engage with the question, many noted the presence of groynes and revetments (not sea walls) and the fact that they were now only partial, some saw the cliff profile and the evidence of slumping via the material at the 'toe', whilst others recognised that the caravans had been moved away or would not have been pitched so near to the coast initially. Some did call these houses. Some weaker candidates saw a wave-cut platform in **7(b)** as a result of the build-up of material, rather than a product of erosion. Some seemed to be unaware of the landform and just guessed and there was quite a common misconception that there was soft rock at the base of the cliffs and hard rock on top. However, there were a significant number of clear and sequential explanations, many of whom also referred to valid processes, ending with the retreat of the cliff revealing the wave-cut platform where the cliff had once stood. There was a need to use both the information in Figure 22 and own knowledge to put forward an argument as to why the strategy selected was the best choice. Those who relied on the table only often put together a coherent response which focused on the positives of the strategy selected and perhaps also the negatives of those rejected. Own knowledge manifested itself with regard to how the strategies worked and/or their impacts regarding providing access and a promenade in the case of a sea wall, or having an impact on longshore drift and deposition along the coast in the case of groynes. The best sought to competently make a case for their selection. Most gave the correct 4 figure reference for **7(d)(i)** – a 6 figure one was incorrect as the question did not ask for this. Similarly, most identified the correct distance in **7(d)(ii)**, although there was some confusion over the scale. Responses to **7(d)(iii)** were variable with the best using the key

and identifying the flat, low lying marshy area. Others wrongly noted cliffs and features of the land, rather than the coast. **7(e)** was often poorly done but there was evidence that candidates could either engage with the question or not. Many did not understand the concept of a 'coastal habitat'. Many saw the question as relating to coastal erosion and management and launched into coastal protection in areas such as Holderness which did not answer the question. Some could describe strategies having named an appropriate area, although information such as providing boardwalks and noticeboards was included in a generic fashion. There was a need to refer to specific locations, species and problems. Where there was specific information, candidates still had to address the question with regard to how the conservation measures led to conflict between different users. This often led to farmers, people visiting for recreation and where this connection was made and support given, there were some very good discursive answers.

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