GCSE

GEOGRAPHY A

Paper 1 / 90301H Physical Geography
Report on the Examination

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General

Question 1 remains the most popular question on the paper followed by Questions 5 and 7. The least popular were Questions 2 and 3.

There were some excellent case studies on fold mountains in 1(d)(ii), where candidates described uses of the Alps and Andes especially referring to specific factual detail. Specific knowledge was displayed in 1(a)(ii), with reference to factors affecting earthquakes, in 2(a) and 2(b) regarding igneous rocks and the rock cycle, and in 4(a)(ii) in terms of the ways plants adapt to the climate in hot desert areas. Many appreciated the changes shown in 6(a) – and were able to quote evidence in support.

Attention is drawn to the command words document available in the GCSE Geography A area of the AQA website. This lists the command words, plus other key phrases, together with their definitions, which have been used in past GCSE Geography exam papers and which may be used in future exams. Candidates should be familiar with these and understand what they demand. There should be an expectation that any of the command words in the list might appear on the question paper.

In the 2014 exam, candidates struggled to distinguish between the commands 'what is' and 'explain the formation of' or 'explain why'. There should have been recognition that 'what is' warranted a definition, e.g. of levées, an avalanche, cliff collapse rather than of the sequence and process of formation of a levée or an explanation of cliff collapse. Many sought to explain in the 'what is' questions and subsequently failed to gain marks. Candidates should be able to define key terms and this should be an integral part of their learning.

The command 'describe' proved equally challenging, especially in relation to describing features in photographs with many candidates struggling to set out write down what they could see – as in the case of the vegetation in 4(a)(i) and the beach in 7(b)(ii). Again, many incorporated irrelevant explanation into their answers. 'Discuss' featured in three of the 8 mark questions – in Questions 3, 6 and 7. Here, candidates need to understand the command word and appreciate that writing the word 'issue' or 'cost' or 'benefit' do not by themselves constitute discussion – there should be reference to key points, a summary of the debate, some commentary and then the arrival at a conclusion.

Candidates also need to understand the meaning of phrases such as 'with the help of' and 'use Figure 2 and your own knowledge' – both of these allow and encourage the use of case study material and other illustrative material as well as offering some clues or direct information in the stimulus provided by the resources. So in 1(c), candidates could refer to their own information on earthquake drills in Japan and buildings such as the Transamerica Pyramid in San Francisco or in 5(c) to flood strategies such as dams and reservoirs – but such information had to be used to answer the question asked, not just included for the sake of it.

Again in the 2014 exam, as occurred in 2013, some candidates failed to answer questions that required photos or diagrams to be labelled, e.g. Question 5(a)(i). These are relatively straightforward and it appears that candidates simply fail to see that there is a question that needs answering. Candidates are advised to make sure they are attempting 25 marks on each question as a check. It remains important to ensure that arrows connect to relevant features when labelling a sketch or a photograph. For example arrows had to point clearly to a bend in the river channel for

a meander label mark as an arrow stopping short of this would be taken as pointing to the flood plain. The same accuracy was needed in 2(c)(i) so that the gap between the slabs of limestone was not wrongly identified as the clint.

SECTION A

Question 1 The Restless Earth

In **1(a)(i)**, there was a requirement to look at both the largest and deadliest components simultaneously. The key word in the question was 'relationship' which most identified, but a significant proportion did not. Some described what they thought should be the case – that there was a strong relationship; some talked about rich and poor countries and drifted from the focus of the question. Competent responses looked across the two parts of the table and saw that in some years the largest and deadliest earthquakes were the same. Some failed to understand this, for example stating that there were two earthquakes of the same magnitude in China in 2008. There were some who read the tables vertically rather than horizontally, but this could elicit purposeful responses if the relationship was considered. The most perceptive candidates noted that only on two occasions was there a clear link, then provided evidence for this, and then cited evidence against the relationship, finally coming to a view reflective of their evidence. Responses to **1(a)(ii**) were often linked to economic development or population density. Some wrote very generally about 'being prepared' or the 'infrastructure' without specifying adequately. A significant number identified two or even three separate reasons, disregarding the instruction for **one** reason to be outlined, and thus failed to consider an appropriate factor such as population density. The average obtained in the answers to part **1(b)** was two marks, which was a disappointing outcome for a question which should have presented little difficulty for the majority. While a few focused on constructive and conservative margins, many who correctly understood destructive were still unable to set out the full sequence – often setting the scene in terms of the type of plates and movement, but then failing to progress adequately to the earthquake aspect. The diagrams were variable as were the commentaries. The diagram should aid and clarify the written aspect and the labels should be clear. Some candidates made effective use of numbers to show the sequence. There is a need to label or at least to key in the text to the diagram and not, as some candidates did, having a diagram and then separate text. The best showed – usually via a cross section – the plate margin, and then noted the oceanic and continental crust, the subsequent processes and how these linked to an earthquake. It was disappointing that only just under a quarter obtained Level 2 on this question and only a small percentage obtained all four marks. The Three Ps – predict, protect and prepare – are clearly embedded in the specification content, yet many candidates seemed unsure of the exact definition of these concepts in **1(c)**. There was also a need to link these to how the effects of an earthquake could be reduced, an element which proved a challenge for a significant proportion. Some disregarded the photographs – which limited good answers to Level 2. A surprising number of candidates thought that we can predict when earthquakes will happen and then evacuate in advance. Few engaged with being able to predict where or the specific changes that might pre-empt an earthquake. The best took the clues from the photographs regarding protect and prepare and developed their ideas further – such as what drop, cover and hold meant and how this could reduce injuries – and used their own knowledge in this context or with regard to prediction. Some also used the question as a vehicle to describe a case study – whilst such information was permissible, it had to be targeted to the question asked. Almost half of the candidates did not get a mark on **1(d)(i)**. This was frustrating as most candidates do know what fold mountains are but they did not answer the question asked, explaining their formation instead of defining what they are. For those who did answer the question directly, the marks were straightforward to obtain by reference to sedimentary rock being crumpled or buckled. The key to accessing Level 2 in **1(d)(ii)** was to include case study specific information. There were some very good answers on the Alps and the Andes suggesting that advice given in previous summer's reports has been heeded. The best candidates categorised their responses with regard to farming, tourism, hep and mining and described how their selected mountain range was used – such as the Inca Trail ending in the lost city of Machu Picchu; the growing of potatoes on terraced

hillsides. At the opposite end of the scale, answers were vague and generic relating to farming animals and people visiting to ski.

Question 2 Rocks, Resources and Scenery

Many were able to score two marks in part **2(a)** by recognising the origin of igneous rock from cooled magma, the locations of cooling, and its toughness or crystalline nature. Where marks were not gained, this was usually due to answers describing characteristics that were not unique to igneous rocks, such as impermeability. About half of candidates scored marks in Level 2 in part **2(b)** with answers in which links and sequence were established between at least two different rock types and the appropriate processes were noted, such as weathering, transportation, deposition and compaction. Weaker answers considered the rock types separately or wrote very simplistically about bits of rock being broken off and becoming sedimentary rock. The responses to **2(c)(i)** and **2(c)(ii)** were disappointing as limestone pavement is the first surface landform identified in the specification and this has not been examined previously. In **2(c)(i)**, many shifted focus from the limestone pavement to the area in the background of the photograph, while others were apparently just hazarding guesses. Those who knew clints and grykes accessed two marks easily, but struggled to label further aspects such as vegetation growing in the grykes, of the nature of the surface of the pavement. In **2(c)(ii)**, too many candidates believed that freeze thaw weathering was the key factor; but even where carbonation was recognised, this was only partially understood. The best answers related this process to the rock structure especially the vertical joints and gave a clear and sequential account. Part **2(d)** required a brief outline of how water gets underground to allow the subsequent formation of underground landforms – many answered last year's question, explaining the formation of stalactites and stalagmites rather than taking time to consider the requirements of this year's question. Over half the candidature identified the permeable nature of the rock, with fewer going onto qualify the point of entry or the structure allowing the passage of water deeper into the rock. The final part, **2(e)**, was better answered with nearly half accessing Level 2 and a significant minority getting into Level 3. As in 1(d), the best responses had a clear structure – focusing on two rock types (or more) in turn and considering the different uses of each, such as quarrying and building stone for granite and reservoirs as suggested by photos, and limestone and quarrying to produce cement and tourism. The best also made effective use of the photographs and clearly integrated their own specific knowledge, referring to specific landforms, quarries, buildings, tourist attractions. There was some drift to benefits by candidates at the lower end and general points not linked to specific rock types were a characteristic of a weak Level 1 answers.

Question 3 Challenge of Weather and Climate

Just under half gained two or three marks in **3(a)(i)**; those doing so engaged with the need to describe the pattern by noting the highest average hours of 1600 hours along the south coast and the general reduction northwards. However, too many described location, quoting areas and the level for those places without showing an awareness of changes. There is a need to consider how to convey this distinction to candidates. Only about a quarter of the candidates scored one or two marks in **3(a)(ii)**, as most sought to explain temperature via latitude rather than sunshine in relation to cloud cover. Part **3(b)(i)** was much better done, with over a third gaining both marks and over three quarters achieving one mark. There was a need to address both aspects more effectively and to use the appropriate geographical terms in order to convey understanding of the concept. Part **3(b)(ii)** was relatively well answered, with candidates considering rising levels of carbon dioxide and its impact or the underlying causes for this. Some failed to make the link to climate change and there was a significant amount of confusion with the hole in the ozone layer amongst lower ability candidates. About a third of the candidates accessed Level 2 in **3(b)(iii)** with a clear

local focus. Here, there was a consideration of congestion charge, use of bicycles and public transport and recycling and an appreciation of how these measures would affect climate change – i.e. statements were linked. At the lower end, local responses were identified or briefly described but not linked to the threat of climate change. There was also some significant drift to international responses such as the Kyoto Protocol. Part **3(c)** proved challenging for some - a significant proportion identified and described examples of extreme weather with only tenuous links to the question. There was some case study information, e.g. on Boscastle or more recent events, but only the better candidates used this to make points that linked to the question, rather than just writing down anything that they could recall. On the other hand, there were some very good responses in which there was recognition of the time scale of the headlines – all within 5 years – and recent events were used regarding flooding in 2013/14 and the heat wave of 2003 to support the statement. Some very good responses also challenged the statement by questioning the time scale of records and publicity surrounding such 'extreme' events.

Question 4 Living World

In **4(a)(i)**, candidates need to be reminded that they should focus on describing what can be seen in photographs – such as the bushes/shrubs which were spread/sparse – rather than inferring what isn't in evidence (such as roots in this instance). They also need to note the command word was describe, and hence there was no need to explain the features – a quick review of all of the questions in the topic would have shown that explanation was required in part (a)(ii). Failure to observe these requirements meant that less than half of candidates got t or more marks here – a question which should have been straightforward. In contrast, **4(a)(ii)** was better done with over half accessing Level 2. Here, there was a clear appreciation of how small leaves reduced water loss and the role of succulents, and plants having dormant seeds were also well catalogued in a clear sequence, linked clearly to climate. Others disregarded climate and wrote about animals or soil and some were vague in their statements noting that cacti store water but indicating neither how as to why. Some candidates focused on solely on heat, rather than the critical limited supply of water. The section on plants adapting to soils – **4(a)(iii)** – was well done with well over half getting both marks – usually for identifying long roots that was qualified to relate to groundwater/aquifers. There was a need to address both aspects of tropical rainforest in **4(b)(i)** but many disregarded the rainforest part, focusing only on the tropical aspect via location or climate. Thus, only a quarter of answers gained both marks and many gave only vague ideas about the vegetation – such as there being lots of trees or deciduous trees, rather than information specific to rainforest. There was some drift to management in **4(b)(ii)** and a few therefore seemed to misunderstand the concept. Most were able to state basic reasons why trees were chopped down, i.e. for cattle, crops and wood. Some believed that rubber tapping meant the loss of the trees and some failed to explain the need to clear for plantations for oil palm. The best showed an awareness of the reasons why so much had to be cleared linking this to the impacts of improved access, clearing trees above to quarry minerals beneath or the limited fertility that necessitated subsequent clearing for subsistence farmers or cattle ranchers. In part **4(c)** many struggled with the concepts and could not always effectively use and develop the material given in the resource. Many answers indicated that there was no real appreciation how carbon credits worked to maintain the rainforest. There was often a focus on national strategies and the international thrust of the question was disregarded. The best used their own knowledge regarding Malaysia's links to Borneo, the role of USA in reducing Peru's debt and clearly sequenced how these led to the rainforest being managed sustainably.

SECTION B

Question 5 Water on the Land

A significant number did not attempt part **5(a)(i)**. Of those that did, some failed to be precise when marking the landforms with an arrow – so a label indicating a meander and pointing to the land adjacent to the river was not deemed accurate as it was actually identifying the flood plain. Examiners need to see that students have clearly indicated a specific feature rather having an arrow or line ambiguously near several possible features. Over half scored two or three marks here by carefully identifying a landform in each course and interpreting the block diagram correctly. Just over a quarter accessed Level 2 in part **5(a)(ii)** but nearly the same number again scored no marks. This was due to candidates misreading the question and indeed answering previous question on the river channel rather than the valley. Often there was material relating to the valley within the channel focus and equally description was often separate rather than focusing on changes. The best were more precise, noting changes in the overall shape as well as the steepness of the gradient downstream, the valley sides and the width of the floor. There were some clear definitions or descriptions of a levée in part **5(a)(iii)** though many pre-emptively sought to explain their formation (the subsequent question) or looked ahead to what they become – natural flood defences. The explanation in **5(a)(iv)** was variable – candidates need to observe the sequence and process rule. Some omitted the critical flooding aspect, while others confused levées with meanders. Competent responses started with flooding, noted the loss in energy and its impact in deposition and the repetition leading to the build-up of layers and the levées. The vast majority obtained at least one mark on **5(b)(i)** usually for noting that river flooding involves the river overflowing from the channel, whilst fewer recognised the initial filling to capacity. In **5(b)(ii)** there was a significant proportion who referred to a human cause or who gave very vague answers such as 'too much rain'. Many noted a cause but did not elaborate, but over a third correctly identified a cause and then went on to develop this a little as demanded by the command 'outline'. There was some confusion between hard and soft engineering in part **5(c)** and there was a need to select appropriately from the figure – not all of the items were strategies. Some candidates appeared to have answered a different question – on the costs and benefits of hard and soft engineering – rather than explaining how they reduce flood risk. Some explained *why* Boscastle had flooded – demonstrating the need to deconstruct the question before embarking on an answer. The best responses selected and specified hard and soft engineering strategies, explained in a clear sequence how these reduced the discharge or increased the lag time and then they integrated their own knowledge via reference to strategies not shown in the figure or from case study material. Over half of the answers merited at least Level 2 and a further tenth of the candidature accessed Level 3.

Question 6 Ice on the Land

Most recognised the reduction of the sea ice and many then qualified the extent of ice retreat to gain both marks in **6(a)(i)**. Nearly a third accessed Level 2 in **6(a)(ii)** by developing reasons or looking at root causes such as why there was an increase in greenhouse gases or considered the glacial budget in some depth. Many accessed Level 1 only as their answers were too vague, noting increased temperatures due to global warming and the ice melting. Candidates were asked to sketch the lake in **6(b)(i)**, not the landscape but most went on and did this anyway. Marks were awarded only for the lake, i.e. for the correct shape, reflecting that in the photo, for appropriate and labels relating to it. Only a small minority accessed all three marks, a reminder that candidates must respond to the question set and not to one that hasn't been asked. Many thought the lake was a tarn and not a ribbon lake. Less than half of candidates gained one or two marks in **6(b)(ii)**, despite truncated spurs being specifically named in the specification content; candidates should be

familiar with them in the context of glacial troughs when defining the term. Knowledge about their formation was an issue in **6(b)(iii)**, with many noting ice changing a V-shaped river valley into a U and this having some link or processes were noted in isolation. Less than a quarter of candidates obtained Level 3 by incorporating some clear sequence and an acknowledgement of processes involved such as plucking and abrasion. For **6(c)(i)**, most knew what an avalanche is with over half getting two marks and the vast majority getting at least one – though there was some diversion into causes. In **6(c)(ii)**, candidates addressed both the economic and environmental elements with the quality of the discussion varying to different levels. The recognition of economic positives and environmental negatives was one strategy for discussion – but candidates needed to go beyond just describing them. Candidates' own knowledge often involved Chamonix and the Alps and they considered issues like the impact of snow cannons, seasonal employment and erosion in a fragile environment in a discursive way. A significant number described problems to get to the top of Level 1, but failed to do enough to follow the demands of the question to progress further.

Question 7 The Coastal Zone

Some candidates clearly noted how weathering could affect the coast in part **7(a)** – either generically or with reference to specific erosion processes – though some answered as if the question asked them to define 'what is weathering', rather than how it can affect the coast. There was much confusion with other types of erosion – and many did not gain any marks as a result – but for candidates entered for this Tier one would not expect to encounter such a fundamental misunderstanding. In **7(b)(i)**, most identified at least two landforms, gaining one mark, but far fewer actually described them to gain the additional marks. Many answers offered irrelevant explanation, disregarding the command word. In **7(b)(ii)**, although the beach was labelled on the photograph, about a fifth of candidates described other parts of the coast. Many correctly described what was shown in the photo – the sand as the beach material, its gentle or lack of slope – and complied with the command word. Some focused on longshore drift in isolation in answer to **7(b)(iii)** which is a transportation process and which needed putting in context to be permissible. Some answers were vague with regard to deposition. The best offered a clear sequence, recognising the importance of constructive waves and the relative strength of swash and backwash, with some writing about the link to sheltered bays or the origin of the beach material. There was a need in part **7(c)(i)** to deploy different words to those given in the question in order to demonstrate understanding. Many sought to explain rather than define. The best responses reflected on the unstable nature of cliffs, that they fall into the sea and often included reference to mass movement. For **7(c)(ii)**, most looked at erosion of the base of the cliff and developed a sequence from this, with some looking at mass movement linked to rock type and the presence of impermeable lower rock layers, developing a sequence to gain Level 2. However, many other responses were disjointed, with hints of processes but no clarity about where was affected or displaying confusion with hard and soft rock rather than permeable and impermeable. There were some excellent responses in **7(d)** where there was a clear cost benefit analysis, using the diagram as a stimulus and then integrating case studies in a purposeful way. This was typical of the minority of answers which scored Level 3 marks and to a lesser extent the nearly half who got into Level 2. Here, recognition of problems caused by groynes further down the coast was often the start of discussion. Many quoted figures indicative of cost with varying degrees of accuracy – the best used these to consider what was being saved and its relative worth. Weaker candidates drifted into a comparison between hard and soft engineering, looked at advantages and disadvantages of the hard methods shown per se and were often very repetitive in terms of cost and appearance. This illustrates the need for candidates to carefully engage with the command word and the specific question asked.

Mark Ranges and Award of Grades

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

Converting Marks into UMS marks

Convert raw marks into Uniform Mark Scale (UMS) marks by using the link below.

UMS conversion calculator