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# A-LEVEL GEOGRAPHY

7037/1: Physical Geography  
Report on the Examination

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7037  
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## General

This was the second series of 7037/1. The paper has continued to follow the style of the approved specimen papers. The structure of the paper was identical to last year's paper and the targeting of assessment objectives was also very similar.

In summary, multiple choice and short tariff questions targeted AO1 only ie knowledge and recall. There were two resource based questions: one type targeted AO3 (geographical skills and analysis of data) and the other type targeted AO1 and AO2 (knowledge and understanding applied in unfamiliar contexts). 9 and 20 mark questions targeted both AO1 and AO2 (with specific focus upon links within the specification which are not specified). There is always one question in each examination series which targets AO2 and specifically tests links across specification units. This question was found on 7037/2 in this series.

Students should note that synopticity was tested through the application of knowledge both to unfamiliar situations and by exploring links within/across specification units. Students were required to 'think on their feet' in the examination and apply their knowledge and understanding to the context of the question. Students who recited learned material irrespective of the question set were likely to score low marks on questions which tested AO2. These questions blend content from within one specification unit or across specification units and require students to select and consider subject matter accordingly.

It worth reminding centres that guidance on the assessment objectives can be found in the ['Notes and Guidance: Assessment Objectives'](#) document produced by AQA.

The paper continues to show strong evidence of differentiation of outcomes. The best responses were able to quickly respond to the specific requirements of any given question. Less effective responses tended to rely more heavily upon learned theory, concepts, processes and case studies. Whilst there is still credit for this under AO1, it is the most effective responses which much more successfully applied their knowledge to the context of the questions set.

This examination has allowed the strongest students to score well over 100 marks out of the 120 available with many comfortably achieving Level 3 and Level 4 on the corresponding 9 and 20 mark questions.

The optional units remain unbalanced in terms of uptake. The Hot Deserts unit is the least popular in Section B, with a very small cohort. Glaciation is more popular, but the overwhelming favourite is Coasts. In Section C, almost all centres opt for Hazards, with only a very small percentage opting for Ecosystems. However, it is important to stress that these optional units on Section B and Section C do perform comparably. Whichever options they choose, students have every opportunity to access the full range of marks on an equitable basis with their peers.

Despite the clear guidance and information issued by AQA prior to this series, some students continue to struggle with the different resource based questions. On the 6 mark questions which tested geographical skills, many tried to apply knowledge with limited success. Equally on the 6 marks questions with novel situations, many simply lifted information from the resource without bringing anything new in their response ie applied knowledge – AO2. With further practice and training in subsequent series, this issue is likely to subside.

As in the first series, the paper successfully differentiated between students and it also demonstrated a continuing need for some to hone their skills around responding to the very clearly different assessment objectives demanded by each question.

### **Question 1.1**

Too many students missed relatively straightforward opportunities for credit here. Those who produced simple definitions of flows (such as groundwater flow, through flow, infiltration, percolation etc) readily accessed credit. Some missed the thrust of the question and failed to notice 'hillslope', writing instead about flows within the wider water cycle. There was no credit for this approach.

### **Question 1.2**

This question differentiated between the rather too many responses which drifted into AO2, failing to analyse patterns, and those who analysed pattern and used the three pieces of data to readily access higher marks. Some looked at the peaks and noticed the difference between the measured discharge and the simulated discharge compared to the rainfall event. There was opportunity to manipulate data which many responses took. Those who tried to account for the lag time or the variation between the two discharges scored no credit as this constituted AO2.

### **Question 1.3**

This question appeared to offer good opportunities for students to apply their knowledge concerning factors affecting runoff. The data itself was inconclusive; there was some evidence that removing trees increased run-off (eg in Zone 6), but equally there was plenty of evidence that run-off did not dramatically increase by reducing tree coverage. This brought in further opportunities to apply knowledge with other factors which might be affecting run-off such as rock type or relief. Those who spent too long trying to analyse the data missed the thrust of the question and accordingly scored less credit.

### **Question 1.4**

It was pleasing to see that so many students grasped the concept of positive and negative feedback. This is an integral part of the systems approach to physical geography. Many responses used the concepts well and understood the links to mitigation with good application. Even those who did not explicitly show understanding of feedback could still score credit if they were able to apply ideas around mitigation. These responses scored credit by implying knowledge and understanding without explicit reference to the terms. Less effective responses tended to recite just one case study (usually Amazonia), with a protracted narrative around human impact upon the forest. In such instances, it was hard to tease out material relevant to the thrust of the question.

### **Question 2.1**

Sources of energy related to either wind, water or direct insolation. With a little elaboration on the source of energy, students could make four points and score four marks. The main barrier to students gaining credit was that some could not outline the main sources as they did not appear to have the relevant knowledge to recall. This emphasises the importance of thorough revision of these key terms which underpin the specification content.

**Question 2.2**

Those who saw the connection between soil structure and biomass scored well. It was still possible to score well by seeing connections within each data set. The obvious correlation was that as clay, silt and fine sand reduce, so does primary productivity. Some pointed out the anomaly of the transition from LD to MD where there appears to be a significant disproportionate decline in productivity. Similarly from PD to LD there is actually an increase in productivity. Some took the opportunity to manipulate data which is always creditworthy in this type of question.

**Question 2.3**

Those who identified the inselberg accessed credit with relative ease. Those who did not were still able to score credit by using the evidence in the image. Provided students understood different types of weathering and erosional processes likely to be operating in the landscape, credit was available. Many did try to this apply to Uluru, identifying features and evidence which might point to the different processes shaping the landscape. Those who wrote purely theoretical responses with no attempt to relate to the resource were held to level 1 on the basis that this was simply recall and therefore AO1.

**Question 2.4**

The typical approach by students was to take more of an overview of the impact of human activity on the natural environment in hot deserts. Such approaches were a little generalised. However, many accessed level 3 and some wrote in detail with good support about the damaging impact of human activity upon that fragile inter-relationship. Support typically included the Sahel and southern Europe, though others did also consider desertification issues in the Middle East. The best responses were able to link the human activity (usually agriculture) to some damaging impacts upon soils and natural vegetation growth. The level of detail was impressive in some cases, with a strong knowledge on soil degradation and specific plant species affected. Others considered conservation as a way to counter this impact; this was equally creditworthy.

**Question 3.1**

The development of salt marshes was dealt with sequentially by most students. Some responses focused more on the development of climatic climax vegetation rather than processes usually taking place in estuaries, often behind spits. Credit was still available if taking this approach. However, a number of students confused salt marshes with sand dune development and equally confused pioneer species in dunes with pioneers in salt marshes.

**Question 3.2**

The resource presented lots of opportunity to analyse patterns across the world in relation to erosion and accretion at beaches. Some took a critical view of the resource itself which was a valid approach. The merging of proportional symbols was problematic in terms of identifying patterns and clusters and students correctly identified this. Not much use was made of the horizontal column of bars detailing erosion and accretion by degree of latitude. There was opportunity to identify similarity and difference in erosion and accretion but not many took this with any great precision. As so much data was potentially available for analysis, students simply had to show that they understood the basis of the resource and the patterns/clusters which it displayed as well as any anomalies. Although not a strong feature of the responses, some still found ways of demonstrating data manipulation.

### Question 3.3

It was surprising to see a number of students fail to understand the development of dune systems and the role of vegetation within this. Others simply described dune formation without applying to the resource or the context of the question. More effective responses saw the connection between the vegetation and the dune formation, including the evidence in the background of thicker vegetation coverage and a wider range of species, thus hinting at succession.

### Question 3.4

Shoreline Management Plans/Integrated Coastal Zone Management were implicit in a number of responses. Some simply considered the merits and costs of different approaches to coastal management. Whilst not strictly focused on the question, there was some credit for this approach. Holderness and Odisha featured in many responses though some simply evaluated the policies rather than dealing with the question in relation to the expected eustatic change. For instance, with Holderness, many referred to strategies in relation to coastal erosion and not the expected eustatic change in the coming decades. The best responses understood the basis of the approaches and were able to show how these plans, did at least attempt to take a broader, joined up approach to coastal management than perhaps has historically been the case.

### Question 4.1

Explaining the formation of *roches moutonees* required a sequential approach, which many responses did successfully. Those who had studied this erosional feature easily scored credit. Some responses were partial with hints at erosion but not much more. Some confused the sides of the feature. The least effective responses confused this feature with deposition and moraine.

### Question 4.2

Most students found **Figures 7a** and **7c** to be straightforward resources to engage with. **Figure 7b** proved to be more challenging for some. The idea of melt day anomaly was difficult for some to grasp. The evidence that the south eastern section of Greenland has actually experienced less melting than the 1981-2017 average by up to 40 days was simply not noticed by many. However, provided students found clear connections within the resources or between the resources, level 2 credit was available.

### Question 4.3

Students typically identified the pingo and patterned ground. Application to the resource was generally less effective. The scale of the feature was not really used nor was the evidence of summer melting, hinting seasonal permafrost variations. Those that identified the features were usually able to assess the role of frost action on the landscape. Many considered the repeated freezing and thawing and its impact on the landscape development, linking to either ice wedge polygons or stone polygons. Either approach was credited, as were alternative theories around the formation of pingos.

### Question 4.4

Many students took the general approach of simply looking at the impact of human activity across cold environments without necessarily separating systems and landscape. Such answers were still successful, though not detailed. Impact upon physical landscape was more common than impact upon natural systems, with many considering the impact of tourism, mining and farming in places such as the Alps. More effective responses went further and considered the disruption of human

activity upon the actual system of inputs, processes and outputs. Some also considered wider human activity of fossil fuel combustion and its impact upon climate; this was also a valid approach.

#### **Question 5.1**

The majority of students successfully identified D as the correct answer.

#### **Question 5.2**

Less than half were successful in this response, with many selecting distractor C, ie confusing island arcs with island chains.

#### **Question 5.3**

Over half identified C as the correct answer. Many selected distractor A i.e. confusing ridge push ideas with slab pull theories.

#### **Question 5.4**

Around half of the responses identified D as correct. Many confused this with distractor A ie monitoring tools for volcanic activity, rather than the Volcano Explosivity Index (VEI) which is described in option D.

#### **Question 5.5**

Opportunities to clearly engage with the resource were missed by many students. A number did access level 2 but few scored full marks. In this type of question, students should look for patterns; in this case, how the latest flow compared with previous flows or how the direction of flow varied. Students should also look for analysis of scale and area of coverage. Relatively few did this and instead focused on describing potential impacts and disruption cause by the eruption. This constituted AO2 and was not credited. **Figure 9b** was more effectively engaged with. Many did consider the scale of eruption and direction of ejected material. Many noted the gradual reduction in height of ejected material with distance from the source of the eruption.

#### **Question 5.6**

It was surprising to see so many fail to identify the potential management issues of scale, potential pollution, minimising habitat loss, minimising risk to life, addressing evacuation issues, managing potential respiratory issues and so on. Some students tried to bring in their own case study which was credited at AO1, but could have been used more effectively to identify the management issues in this resource. There were many issues which could be reasonably derived from the resource and too many over complicated their responses. Application of knowledge in this case did not require a lengthy recital of a learned case study. The application required knowledge of the management issues in a wildfire to be applied to this resource.

#### **Question 5.7**

Students were free to argue either way, meaning that responses were very varied. Indeed, these question types are generally constructed in order to allow any reasonable geographically based argument. Evidence suggests that storms are harder to mitigate, as it is tropical storms which are responsible for the greatest loss of life year on year across the world. However, it is equally true to suggest that storms are much more frequent events affecting greater concentrations of populations

across the world. The key to success was the nature and quality of support and it was generally used well whichever particular argument was being pursued. Where it was used descriptively, without engagement with the evaluative nature of the question, responses struggled to gain higher marks.

### **Question 5.8**

Knowledge and understanding of the models was inconsistent. Those that understand the premise of both models generally did well. Those that failed to clearly distinguish between the Park Model and the Hazard Management Cycle failed in turn to engage with the theme and demands of the question. Models have appeared on previous papers and so there is clear precedent for assessing this type of theory in relation to real world events. Those that did understand the models generally applied them to recent seismic events with success. Students were free to argue in favour of either model, though the majority favoured the Park Model through its assessment of impact upon quality of life. After all, quality of life variation is a clear indicator of impact in a seismic event. Others took a more critical view of the limitations of both models and this was a reasonable and therefore creditworthy approach, given the question.

### **Question 6.1**

The majority identified the seral stage as best defined by option C.

### **Question 6.2**

The vast majority of responses identified option D as being correct.

### **Question 6.3**

Most identified option A as correct.

### **Question 6.4**

This proved more difficult as less than half identified option D as being correct.

### **Question 6.5**

Whilst the associated resource presented something of a challenge, many responses did access level 2, despite its complexity. Many saw the connection between cumulative rainfall and soil water content. Equally many saw the inverse relationship between soil moisture and albedo. Data manipulation was a little less effective with seemingly obvious opportunities missed by some. It is always good practice on these sorts of question to support points made with some data which has been manipulated in some way.

### **Question 6.6**

Many students had studied moorland but missed some obvious opportunities to explore plagioclimax. The resources were trying to direct students towards the fact that this area should have a climax woodland as its dominant vegetation. However, **Figure 12b** shows virtually no trees, clear evidence of heather and some obvious human activity taking place in the background, namely farming and vegetation management/clearance. Those students who picked up the connection between the resources readily accessed credit. Those that did not produced limited and generalised responses not adequately applied to the resource.

**Question 6.7**

This was generally well done by many students. More responses tended to focus on negative impact of human activity upon coral, namely fishing, tourism, pollution and global warming. Some went further and considered conservation strategies as part of their possible future prospects. These constituted more rounded responses, though full credit was available for an entirely negative view.

**Question 6.8**

Most understood the small scale nature of the ecosystems in the question with relatively little drift into large scale ecosystems or biomes. Some interesting case studies emerged. Students did try to offer balance around the damaging nature of human activity and genuine attempts to achieve sustainability in such small scale environments. It depended upon the case study as to whether students agreed with the assertion of the question or not. Those who used small scale coastal ecosystems for example, were more negative in their outlook especially considering the issues taking place at coastlines generally. Such students found links between eustatic change and their small scale ecosystem. This was a legitimate creditworthy approach.

### **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.