



**General Certificate of Education (A-level)
January 2011**

Geography

GEOG1

(Specification 2030)

Unit 1: Physical and Human Geography

Report on the Examination

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General

There is a clear and repeated pattern with regard to the option questions in each section. This is to be expected as the specification becomes established. In Section A, Coastal Environments remains the most popular option choice, followed by Cold Environments and significantly fewer choosing Hot Desert Environments and their Margins. In Section B, Food Supply Issues continues to be the least popular choice, with Energy Issues next and Health Issues being the most popular choice.

In recognition of the compressed grade boundaries in previous examinations and to encourage clearer differentiation between candidates a conscious attempt was made to encourage a greater use of the full mark range and thus award more marks for relevant responses so that the marks required for the relevant grades would be higher. This does not mean that it was harder to get a grade, just that the marks achieved would be higher and so too would the number of marks needed for a specific grade.

Candidates must be aware of exactly what any resource material is showing and so must get into the habit of reading the question stem, looking closely at keys etc. The single most important discriminator between candidates' responses lies in their ability to deconstruct a question. The recognition of the command word(s), the concepts and overall recognition of what a question is asking are critical to success in answering a question set successfully. Candidates seem to struggle with command words such as 'describe' and 'explain'. Whilst the latter may demand/be facilitated by some descriptive background and gain credit, explanation is not relevant to questions with the command word 'describe'. Candidates must be aware of this and alarm bells should ring if they write words like 'because', or 'as'. There should be an awareness of whether a case study is specifically required and an appreciation that such information can be used in support effectively – even if not specifically required. In this context, it is clear that candidates should also be made aware of what they must do to achieve the different levels. An appreciation by the candidate of what is needed to reach Level 2 (or indeed Level 3 for the 15 mark questions) should lead to further progression.

Clearly, candidates practise past exam questions – and this is an integral and important dimension of preparation. However, they must ensure that they answer the actual examination question they are faced with – applying *principles* learnt during practice without simply repeating their answers to an earlier practice question. For examples there were many references to sources of water in 4c – which provided some background but was not essential to answer the question but were presumably given because candidates had used the equivalent question from the June 2010 series. Help and guidance is often given in the potential structure of longer questions. Thus was the case in 1(c), where a list of possible channel characteristics was included. Despite this, weaker candidates disregarded the list and went on to talk about long and cross profile, landform formation and even rejuvenation.

There were problems for some in selecting an appropriate coastal flooding case study in 3(c). Some discussed Bangladesh clearly in the context of river flooding and others used Boscastle. Whilst some generic marks are available for impacts, the thrust of many answers was wrong due to a lack of understanding of which case study to select and how to use it. Guidance on which case study to use in what context is essential. The use of the Mississippi and New Orleans for both river flooding (in the context of failed levees) and coastal flooding (with reference to Hurricane Katrina) is counter-productive as candidates fail to selective relevant information to answer the question. Separate case studies may be a safer option. Some candidates who referred to tobacco transnational corporations in 8c clearly had not read the question with any care – given the pharmaceutical TNCs role in researching, producing and distributing drugs.

A significant number of questions ask for candidates to come to a view via commands such as 'assess, to what extent, discuss the view and discuss issues' were examples from this paper. Candidates must be encouraged to come to a view that summarises and reflects the content of their answer. Giving a forthright view at the start often does not reflect subsequent aspects of the answer. The assessment is better placed at the end, where it is reflective and summative of the content. This considered approach, mindful of points made in the answer is the hallmark of a Level 2/3 response – depending on the total number of marks for the question.

Section A

Question 1 Rivers, floods and management

Most noted in (a)(i) that magnitude equated to the severity of the flood and many went on to qualify that with reference to how much damage was done, size of area flooded. Few used examples but this was a good way of obtaining both marks available. Part (a)(ii) proved to be more of a challenge. Some – about a third – did not understand the graph and saw it as what was going to happen to the River Ouse over the next 200 – 500 years. A basic response noted there was a positive correlation. Better answers cross referenced both axes on the graph. About a fifth were clear and purposeful in their answers gaining all 3 marks by noting the correlation and providing evidence of it or noting exceptions.

In (b)(i), it was imperative that landforms described were present in Figure 2. Many noted and described ox bow lakes – although there were none present. The command word was 'describe' and so there needed to be some text building up a picture of what these landforms are like – rather than just identifying them. There were 2 marks awarded for this. A significant number drifted away from the question and either described land use or went onto explain the landforms – neither of which were relevant. Marks were awarded for the identification of relevant landforms in (b)(ii). These were usually levees or floodplains, but ox bow lakes (not meanders only) and bluffs were also well used at times. About a fifth of candidates accessed Level 2 here. This was because they made the link to flooding – recognising for example the loss of energy and the deposition of the largest material first in the build-up of the banks or the increased discharge leading to a straighter course and the formation of the ox bow lake.

In (c), there was a need to focus on both description and explanation. Although not the only ones, a list of channel characteristics given in the specification was included in the question to help students. Marks most often awarded were 7 or 8. Despite the information given in the question, a significant number disregarded this and included irrelevant information on changing landforms such as potholes and waterfalls and meanders or changes in long and cross profile. Some clearly had not got a grasp of the meaning of the terms and therefore struggled to make the links between them – such as wetted perimeter and hydraulic radius. There was a lack of clarity regarding efficiency – with many seeing a river as most efficient near to its source and roughness with reference to the water rather than the bed. Some went stage by stage using outdated terms such as youthful, mature and old age rather than upper, middle and lower course. The best answers looked at the channel characteristics and noted how and why they changed downstream – often bringing in other aspects in the process.

Question 2 Cold environments

Over half of the candidates gained all 3 marks on (a)(i) with just over three quarters getting 2 of the marks. Most saw the retreating nature of the glaciers and were aware of the different rates and supported this with evidence from the figure. A few weaker candidates believed that the glaciers were advancing. There was less understanding apparent in (a)(ii) where only a fifth accessed 3 or 4 marks. Some attributed the retreat to tourists walking on the glaciers; others talked about ice movement. Better responses identified global warming and some went on to note underlying causes. The best referred to the glacial budget and accumulation and ablation – although often not making a link between the relative importance of these and the mass of the glacier.

The response to (b)(i) showed disparities in the understanding of how the glaciers are different. Most were able to describe aspects of temperature change in one glacier – the best openly contrasted and had a clearer understanding of the significance of the pressure melting point. Less than a fifth entered Level 2 in (b)(ii). This is largely due to a limited understanding of the significance of the pressure melting point – and the fact that the ice will melt at temperatures below zero. This provides meltwater and acts as a lubricant, facilitating the movement of the ice. A significant proportion noted this aspect, but not how the water got there – perceiving it to begin with friction from movement and not further meltwater being added by the movement.

There were some very good answers to the meltwater deposition element of (c). However, many candidates did not seem to know about meltwater channels. Good answers described and explained the formation of eskers, kames, kettle holes clearly and in sequence. The lack of the erosion aspect limited some answers to level 2. Some candidates did not know which landforms were fluvio-glacial in origin and there was reference to glacial and periglacial landforms – both of which were irrelevant.

There is a need in such a question to weigh up the role of meltwater erosion and deposition in the formation, rather than just describe and explain. Again, the need to obey the command word must be reinforced.

Question 3 Coastal environments

The first part of this question (a)(i) was generally clearly answered. Most recognised the change to the east and many noted the anomalies. The simple data had to be manipulated/used to gain a mark for use of evidence, not just lifted from the table. About 70% got 2 or 3 marks on this question. Some drifted onto explanation (a)(ii) and a minority got the change the wrong way around, perceiving a reduction to the west in particle size. Most noted longshore drift in (a)(ii). Over a third had significant precision in their answers to obtain 3 or 4 marks. Here, it was clear which way waves were approaching the beach, terms like swash and backwash were appropriately used. Weaker responses were imprecise, often with angle of approach incorrect and some believed the wind moved the sediment, rather than the waves.

The responses to (b)(i) were variable. Some candidates largely disregarded the information in Figure 6. Most noted the increase in height; yet observation of the diagram offered precision in terms of height change and perceptible changes in steepness of slope, colour, stability. A significant minority talked about vegetation change and succession – despite the fact that this was neither shown on the diagram, nor is it a specification requirement. Some as in (a)(i) drifted to explanation – again a need to be reminded of obeying the command word(s). About 13% obtained level 2 on (b)(ii). This was disappointing as the specification focuses on the dunes as a landform. Some wrongly explained a psammosere. Often, there were vague notions of a large supply of sand, the need for vegetation and wind. Better responses saw the need for an onshore prevailing wind to blow the sand inland, marram grass to stabilise the sand and stop it from blowing away.

There were some very good answers to (c). Case studies used included Towyn, 1953 North Sea storm surge, Hurricane Katrina and New Orleans, the Indian Ocean tsunami and Bangladesh. The degree of precision showed variation and proved to be a good discriminator. The tsunami did not have such an impact on Bangladesh; yet this was often assumed whilst Banda Aceh in Sumatra was disregarded. There was confusion between river and coastal flooding and many in the context of Bangladesh referred to deforestation in Nepal and clearly discussed river, not coastal floods. Examiners were left to unpick responses and credit relevant material, hidden within that which was irrelevant. The best responses noted human causes (such as clearing mangroves, failed coastal protection) as well as physical; gave some evidence to support consequences that was accurate and assessed the relative importance of cause, consequence in different contexts.

Question 4 Hot desert environments and their margins

This was, as expected, a minority choice. However, the candidates selecting this option performed relatively better – by about a mark overall. (a)(i) was generally well done – two thirds obtained 2 or 3 marks. There were often clear statements about distribution of areas within 30 degrees north and south and the juxtaposition of the semi-arid to the arid. About a third got 3 or 4 marks in (a)(ii). There were often vague notions and unclear explained information in the whole of the tricellular model, rather than a focus on the relevant parts. Some wrongly focussed on the ITCZ. Some had vague notions of falling air as a result of air rising over the equator. Better responses made links and gave a sequence in their explanation – either in the context of the global circulation or rainshadow or cold ocean currents.

About three quarters of the candidates got 2 or 3 marks in (b)(ii). Here, most used the diagram to relate the size of material to the different means of transportation. Some mentioned pebbles for saltation, despite the smaller size being identified. There was some confusion with traction – used instead of surface creep. About 12% accessed Level 2 in (b)(ii). Here, many could describe the processes of deflation and abrasion. They struggled, however, to link them to the transportation processes – a requirement for the higher level.

Answers to (c) were diverse in content and quality. There were some very good responses. Here, candidates described and explained the formation of features such as wadis, alluvial fans, pediments and mesas. There was a clear awareness at the top end of what the water does and often explicit statements of this role and its importance. At the opposite end of the spectrum, there was identification and description of the landforms – and at times landforms resulting predominantly from wind were to the fore. The best included this in a discussion, recognising that water was not the only factor responsible for desert landforms.

Section B

Question 5 Population change

Almost half of the candidates scored maximum marks on (a), with about 80% getting 2 of the available marks. There was a focus on pattern, with many perceiving west-east contrasts and providing evidence to support. Weaker responses listed locations, discussed absolute numbers, or had a focus on cities, rather than used the information displayed in Figure 9.

Part (b) was characterised by candidates describing reasons for population change, with particular reference to migration and push and pull factors. Fewer mentioned natural change. Better candidates – in excess of 40% of the cohort here – linked the reasons to changes in population density to access Level 2.

About 30% of candidates accessed Level 2 in part(c). Most could offer some accurate description, although with weaker candidates this often led to a focus on separate age groups in a piecemeal fashion. Better responses noted the changes and considered the increasing number of elderly, the reduced numbers of children. The key discriminator was the linking of this information to the concept of sustainable development for Level 2. The most able saw mixed implications over varying time scales. Conversely, others saw the phrase ‘population control policy’ and launched into an account of the one child policy per se.

There was a focus on ageing and youthful populations at a national scale by some candidates – perhaps reference to a practice question from June 2010. Some disregarded the urban and rural focus and concentrated on countries, disregarding the thrust of the question. Only 18% achieved double figures in this question. Those that did considered the urban and rural areas and focussed on how areas change – either with regard to the residents or the area – and considered whether these were for the better or for worse. The best offered support – describing what services would be lost to areas suffering from rural depopulation and which specific residents (young and/or professional) would leave and who would stay (elderly). There was a need to link the change of either increase/decrease or other to the changing character. Some described the character of settlements without reference to the impact; others the cause of change but did not link to the changing character. There is limited evidence of planning – which may help candidates to focus once they launch into an answer. A list of ideas in sequence would be useful. Once again, there is a need to de-construct the question and to follow the structure suggested in the question itself.

Question 6 Food supply issues

There is an expectation on the part of candidates that there will be an economically poor and economically rich split when asked to describe patterns relating to food supply, as in (a)(i). Frequently, this is an oversimplification, as was the case with Figure 11. Some qualification was needed for a mark. Fewer gained maximum marks on this option in the first part of the question than in the other two – largely due to inaccuracies/oversimplifications in the description. There were some very good answers where differences between continents was highlighted and also exceptions in this context. Others adopted the highest and lowest approach effectively. Candidates must realise that pattern is not just random listing of countries/areas. Equally, some disregarded the ‘describe’ command and went into explanation. In (a)(ii), most were able to consider reasons, although somewhat simplistically at times. For example, there would be a recognition that there was not enough land, the climate wasn’t appropriate without taking the next step of outlining why there was a lack of suitable land, how being too cold or too dry had an impact on food production. The best noted clear links between the reason and the implications for food production. Many offered illustrations/exemplification and this

enhanced their answer. For example noting that in UK there was a demand for fruits that could not be grown here because it was not hot enough for tropical fruits.

Only a quarter of candidates reached 4 marks in part (b), with 12% achieving Level 2. This was a somewhat disappointing response to a straightforward question – if genetically modified crops were known. There was much confusion with the Green Revolution where high yielding crops had been developed, but not via manipulating DNA. Many marks were lost because of this misapprehension. Candidates who described GM crops made better progress. The best realised how developing pest resistant varieties or drought resistant varieties would result in an increase in food production – and illustrated their answer convincingly – e.g. adding genes of cactus to produce plants that will grow better in drier areas.

In (c), the more perceptive candidates took their cues from the question and discussed both organic and locally sourced produce with regard to advantages and disadvantages of each. They then considered the extent to which these approaches were good environmentally and economically. There were some cogent answers, supported by relevant examples and a view that was reflective of information included. Over a quarter of candidates reached 10 or more marks here. The content often noted the reduced and beneficial impacts of using fewer pesticides and developed a linked sequence; the reduction of food miles and carbon footprint contrasted against the increased labour costs of organic produce and adverse impacts on economies of poorer countries due to local sourcing. Too many answers were very generalised and did not seek to distinguish between organic and locally sourced produce.

Question 7 Energy Issues

Part (a)(i) was well done with over a quarter of candidates achieving maximum marks and almost 60% getting 3 out of 4. Some noted the overall increase as displayed by the size of the divided circles. Better responses manipulated the data to note the size of the change. Very few used the proportional aspect of the pie charts in any other way. The percentages were focussed on with regard to the different areas and changes noted. Despite the minimal change in percentage in the Middle East, this was a focus of the answer of many candidates. A standard response was to note those that had increased and those that had decreased. Better answers noted the extent of the change. Some – disregarding the command word – went on to explain. Over a quarter of candidates reached Level 2 in part (a)(ii). Most concentrated on the demand aspect and related increased population to increased demand, partly linked to changes in lifestyle such as increased car ownership, air travel. The discriminator was to make the link to explain how the factor would cause the exhaustion of oil supplies. Some drifted into how its lifetime might be extended – beyond the remit of this question. Relatively few considered the limited likelihood of finding more reserves and being able to extract them.

In (b), 20% achieved level 2, with a further 22% at the top of Level 1. One sided accounts remained in Level 1 as did those that did not obey the command word. Often advantages and/or disadvantages were listed – or a better approach was to describe – but still there had to be recognition of why these aspects were positive or negative. There was a misconception that biomass releases no carbon dioxide into the atmosphere. A more informed response noted that the plants absorb carbon dioxide and release less carbon dioxide than fossil fuels.

Responses to (c) were variable. A significant proportion focussed on nuclear waste – a part of, but not the only component of the question. This was typically a Level 1 response. Many knew about aspects of nuclear power and discussed it in the context of the primary energy mix – for example with reference to France and UK. Those who applied their knowledge to the specific question and entered into a discussion linked to the relatively long lifetime of nuclear power and its pluses and minuses environmentally showed that they had understood the thrust of the question. The best made the link explicitly to sustainability and used accidents such as Chernobyl, countries such as France in a purposeful way. Here, candidates sought to weigh up the pros and cons and come to a considered view – that for example accepted the view that it was sustainable because of its extended lifetime, but that there were major risk factors involved in the process.

Question 8 Health Issues

Two thirds of candidates achieved 3 or 4 marks in part (a)(i), with over a quarter gaining maximum marks. Many noted a basic north – south divide and went on to give evidence of this – a response which was worth 2 marks. Again, there is a need to look for a pattern – not to just list locations that fit a category. Many noted the highest percentages in South Wales and relatively lower levels – below 7.3 in the South and South East. Candidates who stated that these areas had the lowest levels were inaccurate and there is a need to emphasise that candidates must be correct and precise in what they write. Selecting anomalies is a valid approach. A disconcerting number described patterns in Scotland – even though this was not on the map. 57% accessed Level 2 in part (a)(ii). Many made clear attempts to cross reference the two resources and depending upon areas selected either noted the presence of correlations and/or the lack of them. South Wales and Greater London area were often used in the former context, with the northern conurbations and parts of the North East as evidence against. Many were clearly aware that these maps were not a ‘perfect match’. The weakest responses stated what they may have expected but what was not apparent from the map – a need therefore to use the resource(s) with care.

A similar question to part (b) appeared in the first GEOG1 as the 15 mark question. Perhaps this explained the unnecessary length of some of the answers. Vague generalisations about poor conditions up north, poor diets and binge drinking were inadequate unless linked to areas specifically or in the context of wealth, occupation. Many described relevant factors – but did not link to regions as requested in the question and demanded by the specification. Thus, relatively few reached Level 2- 13%. The best answers related the factor to a region with some exemplification – e.g. unemployment levels being high in South Wales due to closure of mines and heavy industry giving rise to stress and affecting mental health.

Part (c) saw 18% reach 10 or more marks. At the lower end of this question were responses that were generic to TNCs – although pharmaceutical TNCs don’t necessarily display the expected characteristics. Nevertheless, some credit was available for this. Some wrote about tobacco TNCs despite the question demanding pharmaceutical TNCs. The wording of the question did give a structure and better responses followed the three sections – writing about research, production and distribution. There were some very good answers that used a case study to support their answer (usually GSK). Key issues related to the economic versus moral with reference to research and distribution, questioned the patenting of drugs, the diseases that were targeted and their location and the role of pharmaceutical TNCs.

Mark Ranges and Award of Grades

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