AQA

ASSESSMENT and
QUALIFICATIONS
ALLIANCE

General Certificate of Education

Geography 2030
Specification

GEOG1   Physical and Human Geography

Report on the Examination

2010 examination - January series

General

In Section A, Coastal Environments continued to be the most popular option choice, followed by Cold Environments and Hot Deserts and their Margins clearly a minority choice. In Section B, Food Supply Issues was the least popular choice (although not by the same margin as Hot Deserts in Section A), with Energy Issues next and Health Issues being the most popular choice. This was predictably the same as in June 2009, given the fact that the vast majority of the 3500 or so candidates were re-sitting the exam.

A significant number of messages were clearly sent out in the first report. Some of these need repeating here in the hope that they will be heeded more fully by a wider ranging cohort in the summer series. Candidates must revise thoroughly so that they have a good working knowledge of the specification content. Where this was apparent, the responses were sound e.g. in Question 1 (c) and 5 (c). However, often responses to relatively straightforward questions displayed a lack of precise knowledge e.g. Questions 2 (a), 3 (b), 5 (a) and 6 (b).

There was some evidence that candidates were struggling to complete properly their response to the final extended writing question. It is imperative that time is allocated appropriately. Thus, 30 minutes per question, with 15 minutes allowed for the final 15 mark part should be the norm. Some clearly wrote too much for some of their earlier questions leaving an inadequate amount of time for the last one or two. They must resist the temptation to spend longer on a question they prefer as they cannot compensate for the marks subsequently lost on a rushed and, at times, only planned answer. It is essential that the extended writing question is answered in continuous prose. Bullet points are not acceptable here and will gain credit only within the Level 1 mark band. It was clear that candidates found it very difficult to achieve consistency across all four questions in what is a demanding paper.

There remains a clear need for candidates to be made more aware of exam technique. There is a need to read the stem of the question where one is present, as this will indicate what a resource is about and indicate the thrust of the question. Similarly, there is a need to look at the key to a map which will reinforce the question thrust. This was apparent in Questions 6, 7 and 8 (ai) and (aii).

Candidates should deconstruct the question – they should firstly identify the command word(s). They should be familiar with each likely command and know how to respond to these before they go into the exam room. Thus, revision programmes must incorporate this vital element as well as practice of past questions. They need to identify the concept concerned and its actual thrust. So for example with Question 1 (d), (Discuss the advantages and disadvantages of hard engineering as a flood management strategy) candidates should identify the command word as 'discuss' and recognise that a debate is being invited and that evaluation, comment can be included. They should identify the need to consider both positives and negatives of hard engineering – which is a key concept. They should perceive this as relating to aspects such as dams, straightening channels, building up levees etc. However, it is not hard engineering per se but the need to focus on the use of these to control floods should be recognised. It is this aspect and the debate that triggers Level 3.

Thus, there is clearly a need to obey the command word. Where two command words are given, there is a need to address both. Failure to do so will result in an answer generally being confined to Level 1. Ideally, there should be a degree of balance. Where the command words included 'describe and explain', it was often the limited quality of the former that precluded entry into Level 2. Linked to this is the need to use resources. In Questions 2 (bi), 3 (ai), 6, 7 and 8 (ai) and (aii), candidates were required to make specific use of resources. Thus, there was a

need to use the photographs in the Physical Geography Options and the maps in the Human Geography Options. Too many candidates make vague and over-generalised references – at times that are incorrect. For example, there was not a valid MEDC/LEDC split visible in Figure 12 for 7 (ai). Too many write very vaguely, referring to 'the country of Africa', perceiving North America as being the same as the USA, see the Tropic of Cancer as a divide between the two hemispheres and refer to top and bottom. There is a need to write in appropriate geographical terms, referring to continents and using the lines of latitude appropriately. Some clearly do this and further the quality of their answers as a result. Some have a good knowledge of countries and can identify them as exceptions. There should be greater recognition of what the phrase 'Describe the pattern' means – too may refer to individual countries (not in the context of an exception) and relate to location rather than looking at an overview. There is a need to use the resource(s) precisely and relate to what is actually shown as opposed to what candidates expect to be visible.

Although there is not always a requirement to use case studies in the extended writing sections, this is clearly one way of exemplifying and developing answers. As such, candidates should be encouraged to both revise and use these. For example, they certainly enhanced the quality of responses in Questions 1 (d) and 5 (d), although they were not a specific requirement.

Section A

Question 1 Rivers, floods and management

Part (a) provided a range of responses. The focus of the question was on the transfer of rainfall to the river channel. There was some mistaken reference to drainage basins, watersheds, sources and tributaries. Equally, there was some consideration of how the water might be delayed in reaching the channel. More purposeful responses considered relevant transfers such as surface runoff, throughflow and groundwater flow. There was some confusion between groundwater flow, throughflow and baseflow.

Some candidates seemed unfamiliar with the drawing of sketch hydrographs in part (bi). Some merely drew a line around the rainfall bars; some added further bars, whilst the better responses began at a similar place on the X axis and showed a much higher peak and more steeply rising limb in Figure 1 (b) than in Figure 1 (a). There seemed to be confusion with the lag time. Many drew the hydrograph with a longer lag time in 1 (b), although this did not necessarily mean they could not get the three marks available.   About 50% of candidates got 1 mark in (bii) for noting the higher rainfall in Figure 1 (b). The best candidates, having read the stem of the question, realised that the correct response lay in developing the implications of the higher, more intense rainfall between 19th and 21st July. They went on to refer to the limited infiltration due to saturation and the resulting faster transfer via overland flow. Too many failed to recognise the fact that this was the same area and so there were no differences in rock type, vegetation, level of urbanisation etc.

In part (c), there was a focus on interception and many related to a reduction in discharge as a result. Fewer made links to the lag time.   To access Level 2 there had to be two effects. The best noted the likely increase in evaporation and the loss of water in this way. Some seemed to think leaves absorb water, whilst better responses noted roots taking in water and then subsequent transpiration losses. Some considered the seasonal variation within the deciduous forest. Some drifted onto soil features, considered the question in reverse – how the river affected the forest- and some talked about deforestation. Clearly, there is a need to answer the question asked.

There was an awareness of hard engineering and relevant techniques. Some described these and how they worked. Some drifted into soft engineering – despite this not being relevant to this question. The better responses adopted a case study approach. The Three Gorges Dam and straightening and the use of levees on the Mississippi were popular choices, although not the only ones. Too many did not fully engage with the question. Where advantages and disadvantages were addressed Level 2 was awarded and some reference to flood specific advantages such as controlling the flow of the water and protecting settlements downstream of the dam whilst flooding places above allowed access to Level 3 depending on the depth of support and debate. There is a need to target the response to the question asked. Too many candidates see 'hard engineering' and launch into a response without considering the actual emphasis required by the question.

Question 2 Cold environments

Many candidates scored 0 on part (a). This was despite the mark scheme allowing 1 mark for naming two mountain ranges. This required knowledge of what alpine cold environments are and an appreciation of the concept of global distribution. Sadly, some appeared to understand neither aspect. Too many talked about high latitudes and the Arctic and Antarctic areas. The best and relatively few referred to alpine cold environments along the west coast of Americas, the Alps within France, Switzerland and Italy, and had a degree of precision in their answers.

The response to (bi) was more encouraging. However, there was a need to describe, rather than merely identify the landforms and there was also a need to refer to the photograph (Figure 3). Often, answers were generic, noting the presence of corries, arêtes rather than describing them and some added those that were not present such as roche moutonnees. Pertinent responses referred to the three pyramidal peaks present and their jagged nature and the knife edge ridges – the arêtes leading up to them. There was some drift to explanation, a failure to comply with the 'describe' command here and pre-empting the next question (bii). The corrie was the most popular choice of the landform. Some opted for arête and pyramidal peak and less often a glacial trough. These were often less well done. The response was overall disappointing and lacking the precision of the best at GCSE. There was a need to explain the relevant processes, not just identify them. The process should have been linked to where it operated and how that led to the formation of the landform. There should have been a clear and complete sequence – often this was partial with too many concentrating on the initial formation of ice rather than the erosional processes. Too many perceive the corrie glacier to be pivoting rather than displaying an understanding of rotational slip movement and how this contributes to the shape. Similarly, there is a need to explain processes such as freeze thaw weathering, plucking and abrasion. These should be located and linked to the landform specifically.

Responses to part (c) often engaged more with the sustainability aspect. Some relied heavily on the article (Figure 4), whilst better responses used their own case study information. Oil in Alaska and the Exxon Valdez disaster featured as did whaling, fishing for krill in the Southern Ocean and especially tourism in Antarctica. Some came up with their own suggestions – (putting litter bins on route to the top of Everest!), instead of using what is actually being done – limiting numbers going ashore in Antarctica and the role of the Antarctic Treaty. The best sought to explain the fragility aspect and linked that to the need to look after cold environments. Too many candidates clearly did not understand the concept of fragility and disregarded it.

Question 3 Coastal environments

The first part of this question (ai) was well answered. A significant proportion of candidates made effective use of one or both of the photographs. Reference was made to the loss of buildings, the shortening of gardens, the coastal protection measures in place, the retreat of the cliffs etc. However, (aii) was much less well done. Many noted the weakness of the revetments and the fact that they were made of wood so not strong enough during storms, but few went on to consider why they had not been maintained. Some went on to explain how they work or the need to protect larger areas, whilst better responses noted their ineffectiveness with regard to weathering and mass movement processes on the cliffs behind.

The responses to part (b) were disappointing. As with 2 (bii), better responses are to be seen at GCSE on longshore drift. Here, candidates had to make the link between transportation and longshore drift and then consider other means of transportation as well for Level 2. However, too many gave inaccurate descriptions of longshore drift. The swash was seen to approach at right angles and the backwash go at an angle or both were seen to be at angles. Many referred

to longshore drift only. The best also considered traction, saltation, suspension. There was some confusion with erosion processes, some reference to rivers and to human influences.

Part (d) was a purely physical geography question relating to changes in sea level and its impact on landforms. There were some very good answers, but these were relatively rare. Generally, cause was much better done than landforms. Most had an idea about isostatic and eustatic cause – although the terms were at times confused and explained in colloquial terms. The best briskly wrote about the eustatic changes in sea level and underlying causes and then considered the impact of the weight of ice on land masses and its removal with regard to isostatic change.   Some wrongly linked one to landforms of submergence and the other to landforms of emergence. The best noted the rising sea level and landforms such as rias and falling sea levels relative to the land with regard to emergent landforms such as raised beaches. There were few who explained these adequately – more identified and described them. Too many, however, merely considered landforms of erosion and wrote about caves, arches and stacks and/or headlands and bays. Thus, it appears that some had failed to revise this part of the specification.

Question 4 Hot desert environments and their margins

This was attempted only by approximately 200 candidates this series. Parts (a) and (b) on causes of aridity related to climate and both proved to be challenging. In (a), many did not appear to understand the role of the cold current, despite the fact that the stimulus used in the question is a standard textbook diagram. The rainshadow was better explained, but this was relatively simplistic. Too many candidates described Figure 7 in (b) without really seeking to answer the question asked. There had to be a focus on what happened at 30 degrees North, rather than at the Equator – this merely put the descending limbs of the Hadley and Ferrel cells into context. The high pressure was usually recognised, although far fewer understood the implications of it for aridity. The surface off shore winds were identified even less as a cause of the limited amount of rainfall.

Diagrams were frequently used in (c). However, they need to form part of the answer or be fully labelled to include the explanation of the landform rather than its characteristics as the role of the wind in the formation of yardangs and zeugen was the requirement of the question. Abrasion linked to the different structures proved to be the basis of the best answers. There was some confusion between the two landforms and the horizontal structure for zeugen versus the vertical for yardangs. Few appreciated the importance of the sandblasting process in formation.

Part (d) focused on the cause of desertification in contrast to last summer's question on the responses to it. However, a significant proportion focused not on the cause, but on the responses to it. Some looked at causes of deserts, rather than focusing on the margins with regard to the desertification process. The best responses considered pressure put on the areas by population growth and increasing demands for food and fuel. There was an expected imbalance here between human and physical causes. However, the physical aspect was often very weak with reference to climate change in vague terms and without support.

Section B

Question 5 Population change

The terms 'birth rate' and 'fertility rate' are basic and fundamental aspects of this section. Yet, for many, there is an uncertainty with regard to their meaning.   Birth rate was better known than fertility rate – although some carelessly omitted the per year aspect of the definition of rate. The fertility rate included reference to number of pregnancies, babies that survived as opposed to those that didn't. There was scant attention paid to the need to 'distinguish between' the terms in the command words and too few were aware of the age and gender specific nature of the fertility rate when compared to the birth rate.

Part (b) was better done. Many made direct use of the table and identified the link between higher levels of GDP and lower levels of infant mortality. This was often supported by evidence from the table and exceptions were noted as the validity was questioned. Some explained the links to health care – the best relating to post natal care – food supply and clean water.

There is a need to develop techniques of describing a pattern. This was the first of two questions in this section where candidates had to describe the pattern shown by a map. There is a need to be precise and a need to describe what is present. For example, it is wrong to say that Africa has the lowest life expectancy – only parts do – largely sub-Saharan Africa. Similarly, it is incorrect to say that Asia has a life expectancy below 68.8, when some countries, including China are above this. Individual countries should be discussed in the context of exceptions only. Description was often the weaker aspect of the question and prevented progress into Level 2. Explanation overall was more confidently addressed. There was reference to sanitation, food supply, clean water, provision of healthcare and the presence of diseases such as AIDS, specific to areas noted.

It appeared as if part (d) was more accessible than the comparable question in May last year. However, the quality of responses show little difference. Most chose to compare an inner city to another area. Some confused inner city with CBD – the latter was not permissible. Although case studies were not a requirement, many chose to use them. This was a good approach, but the level of depth varied significantly. Some merely named areas, others clearly referred to them. The best used their own examples that were local to them, whilst textbook examples of Newcastle and the Isle of Purbeck featured frequently also. Too often, there were vague overgeneralisations and stereotypes. Frequently opinions were given about quality of housing rather than specific facts such as about the type. Too often, there was an 'over the garden fence' style to the language instead of appropriate geographical terminology. Better responses referred to housing type, cost, characteristics of the environment and the socio- economic characteristics of the population, supported by evidence – often from the census. The next requirement was to note differences as this was the question focus. Too often, these were implicit with often two largely separate accounts, with comparative statements in the second one. The best answers integrated these contrasts throughout. Social welfare was a key discriminator. There was limited awareness of this concept – some perceived that it related to people on benefits and crime only. The more informed related to provision of services, including healthcare, education achievement and the extent to which people felt safe in the area.

Question 6 Food supply issues

This should have been a straightforward question and more candidates should have been able to access the higher marks. There was a largely MEDC/ LEDC split here, although parts of South America clearly were the exception. This was the start of an answer and other elements of the pattern had to be considered, such as the concentration of areas where the calorie intake is under 2000 in central Africa. Candidates often sought to make links between Figures 10 and 11 in (aii). These were often tentative and not clearly identified. There was a need to provide evidence from the figures. Exceptions could have been noted or the strength of the relationship assessed in order to access Level 2 as the command was to 'investigate the relationship.' Too many drifted into explanation, failed to appreciate that Figure 11 showed changes in agricultural production or referred to expected links rather than what was actually observable. Thus, reference could have been made to the fact that some areas with highest consumption of 3000 or more calories – North America - showed an increase in production, whilst others such as UK, France showed a decrease.

Intensive and subsistence were often seen separately in part (b). Frequently one aspect was appropriately described. At times, intensive was linked to commercial – the latter aspect was clearly not appropriate. The best put together the two aspects of the farming system and recognised the importance of the role of labour in the production of food crops, such as rice.

Part (c) was poorly done. Even where strategies were known, relatively few made the link between the strategy and the need to control food production and how they operated. There was reference to subsidies, quotas, tariffs, set aside, environmental stewardship often in a descriptive way. Where there were direct links to food production, this reflected a more purposeful approach. The better responses noted the success of early strategies such as subsidies and the need to change the approach and to control food production. Some could link in environmental approaches to this, but many just described. Too many did not appear to be familiar with appropriate strategies. Some drifted to GM crops and even to the Green Revolution.

Question 7 Energy Issues

This again should have been a straightforward question and more candidates should have achieved the higher marks. In the context of this question, an MEDC/LEDC split was inappropriate. There was a need to have an overview and not the uneven pattern, with the lowest levels of energy consumption largely within African countries between the tropics, but countries like Greenland being the exception. Similarly, highest levels of production were in parts of Northern Europe, North America, parts of North Africa and Australia/New Zealand. Candidates often sought to make links between Figures 12 and 13 in part (aii). These were often tentative and not clearly identified. There was a need to provide evidence from the figures. Exceptions could have been noted or the strength of the relationship assessed in order to access Level 2 as the command was to 'analyse the relationship.' Too many drifted into explanation or wrote in vague terms that high matched with high and low with low.

Part (b) was much better done. Responses were generally clear.   Linked statements and those offering some precision accessed Level 2 so that reference to them being infinite and so won't run out and clean so that carbon dioxide was not produced and thus they do not contribute to global warming was a sound basis for Level 2. Less able candidates merely described features without explaining why they were advantageous or drifted into disadvantages.

Responses to (c) were too often very generalised. They did frequently engage with the theme of co-operation but via anecdotal comment, rather than valid support. Often, therefore, there was mention of the need to keep in with Russia because of all the gas they produce and the need to be wary of how terrorism might be used. OPEC and the role of TNC's were relatively rare. Better responses offered some support with reference to Gazprom and the situation in the Ukraine or referred to the need to trade between energy rich and energy poor countries. The best looked at the need for cooperation in the development of renewable resources and attempts to become independent via developing a country's own resources.

Question 8 Health Issues

The description of pattern here was better than in Questions 6 or 7. There was often reference to the highest rates of TB being in sub – Saharan Africa, with almost all of Asia in the 100 – 299 category. North America and much of western Europe, with the exception of Spain and Portugal, were noted as having the lowest occurrences of 0 – 24. Sometimes, candidates unclearly referred to the north west, south east corners of the world. Candidates often sought to make links between Figures 14 and 15 in (aii). These were often tentative and not clearly identified. There was a need to provide evidence from the figures. Exceptions could have been noted or the strength of the relationship assessed in order to access Level 2 as the command was to 'examine the relationship.' Too many drifted into explanation or looked at the possible links in a very piecemeal fashion. There were some clear links such as the low occurrence of TB in much of western Europe and similarly the smallest incidence of maternal deaths. But there were exceptions such as Spain and Greece.

Many referred to HIV/AIDS and these generally responded better than those candidates that referred to cholera or malaria. There was a need to look at impact on the person's lifestyle and indeed those linked to them, not the country and its economy or provision. A significant number looked at the impact at this level. Many were aware of impact on health. Better responses were more diverse and considered impact on carers, children who became orphans, impact on work and social life and the stigma that might be attached to the disease.

Part (d) displayed a better response than the comparable questions in the option topics in Section B although the mean mark was only 0.9 better than 7 (c). Generally, candidates sought to address both aspects – but often at a basic level. Some explained the cause – which was not relevant. Few sought to define obesity. Impact on health related to coronary heart disease, strokes and diabetes. There were some relatively full descriptions and there were links to mental health and arthritis. The strategies were often linked to healthy school dinners and Jamie Oliver, eat five-a-day campaigns, weight loss as well as surgical procedures and producing larger size furniture. Too often, strategies lacked support and it was this that was the key to progressing through the levels. It was pleasing to note from some answers that there was an awareness that obesity is an issue in countries such as India, Singapore and not confined to areas such as UK and USA.