

# **GCE**

# Geography

Advanced GCE A2 H483

Advanced Subsidiary GCE AS H083

**OCR Report to Centres June 2016** 

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Reports should be read in conjunction with the published question papers and mark schemes for the examination.

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# **Advanced Subsidiary GCE Geography (H083)**

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# F761 Managing Physical Environments

#### **General Comments:**

Candidate performance on this unit was very variable. Some high quality scripts were seen, in which candidates demonstrated wide-ranging knowledge and a good depth of understanding. The best scripts revealed that the candidates were able to interpret question demands fully and accurately. However, there was a significant number of weak scripts in which there was evidence of gaps in the knowledge of candidates. Difficulties with question interpretation were also seen, especially in Section B where key words in questions seemed to have been missed or ignored. One particular issue was an apparent lack of knowledge of the term "fauna" in questions 3(b) and 4(b). This term appears in the specification and so candidates should be aware of its meaning.

#### **Comments on Individual Questions:**

#### Section A

- 1(a)(i) Many candidates were able to identify channel characteristics, such as the presence of meanders and ox-bow lakes. However, these were not always located with evidence from the map, such as accurate grid references. Irrelevant material was sometimes included which did not relate to the channel, such as features of the landscape around the river and human land uses.
- 1(a)(ii) Most responses to this question included mention of erosion and deposition. Some candidates developed their answers by explaining process mechanisms, such as corrosion and hydraulic action, whilst others explained why erosion occurs on the outside of meander bends and deposition on the inside. The best answers were then able to link the processes explicitly to the shaping of the channel, such as the development of ox-bow lakes from meanders.
- 1(b) Answers to this question were generally of high quality. Valid aspects of development such as deforestation and urbanisation were often the focus, with good links to flood risk made through processes such as interception, infiltration and surface run-off.
- 1(c) This question required <u>a</u> located example, and so if a second one was used as well, it was not credited. Common examples used were the Thames, Yangtze and Brahmaputra rivers. The focus of the question was on different land uses, and sometimes this was lacking in candidate answers. This was especially true in answers that addressed the impact of human activities on the environment. The best answers made explicit links between the management methods used and the conflicts that existed. Weaker answers tended to simply state that there were different land uses in the same basin, without making it clear how one land use was negatively impacting upon another in order for there to be a conflict. Reference to management was often rather vague. This was especially true in the use of zoning, with specific detail of the location of the different zones in the basin lacking.
- 2(a)(i) Many candidates were able to identify characteristics, such as the presence of bays and headlands. However, these were not always located with evidence from the map, such as accurate grid references. Irrelevant material was sometimes included, such as the presence of nature reserves and settlements.

- 2(a)(ii) Most responses to this question included mention of erosion and deposition. Some candidates developed their answers by explaining process mechanisms, such as corrosion and hydraulic action, whilst others explained why erosion occurs more rapidly on areas of weak rock compared to resistant rock. The best answers were then able to link the processes explicitly to the shaping of the coastline, such as the development of arches and stacks from caves.
- 2(b) Many candidates were able to explain the issue relating to the installation of groynes, and the consequent sediment starvation down-drift. However, many struggled to provide a sufficiently detailed second issue. References to habitat destruction and species extinction were often vaguely related to noise and pollution from machinery used in the installation of defences. A better alternative was modification of sea bed habitats caused by off-shore dredging for beach nourishment. Even here, though, details of the impact were very vague and often suggested nothing more than "destruction" and "damage".
- 2(c) This question required <u>a</u> located example, and so if a second one was used as well, it was not credited. Common examples used were the Solent, St. Lucia and Studland. The focus of the question was on different human activities, and sometimes this was lacking in candidate answers. This was especially true in answers that addressed the impact of human activities on the environment. The best answers made explicit links between the management methods used and the conflicts that existed. Weaker answers tended to simply state that there were different human activities in the same area, without making it clear how one activity was negatively impacting upon another in order for there to be a conflict. Reference to management was often rather vague. This was especially true in the use of zoning, with specific detail of the location of the different zones in the area lacking.
- 3(a)(i) Most candidates were able to identify changes in rate with distance, and plenty of data was used as evidence. Some recognised that changes in rate occur at different speeds. However, very few offered an overview of the pattern.
- 3(a)(ii) Most answers referred to potential differences in the resistance of geologies to erosion and variations in the velocity of glacier movement. Other valid reasons offered included the amount and type of debris being carried in the ice. However, relatively few answers correctly linked these reasons to specific mechanisms of erosion. Many wrongly asserted that a higher velocity would lead to more plucking, for example. Seldom were such stated links clearly or accurately explained.
- 3(b) The quality of answers to this question was disappointing overall, with many not seeming to know the term "fauna", hence writing instead about flora. Those with the correct focus were able to offer suitable physiological and/or behavioural adaptations, such as fur, migration and hibernation, although these were not always explicitly linked to the climate. A legitimate alternative approach would have been a more general view of how climatic difficulties result in low species diversity and low population totals.
- 3(c) Responses to this question were generally sound or better, with many candidates drawing upon more than one example. Locations such as Alaska, the Alps and Siberia were widely and appropriately used, although those choosing Antarctica found it difficult to make the example relevant to the question. It is expected at the top level that candidates should be able to provide evidence of jobs, earnings or tax revenues to show the gain achieved. To emphasise the short-term nature of this gain, an understanding of unsustainability and the finite nature of some resources was expected. Reference to negative social and environmental impacts of the exploitation were helpful in explaining this.
- 4(a)(i) Most candidates were able to identify changes in rate over time, and plenty of data was used as evidence. Some recognised that changes in rate occur at different speeds. However, very few offered an overview of the pattern.

- 4(a)(ii) Many candidates found reaching Level 2 in this question challenging. Most were able to suggest valid reasons such as variations in wind speed and sediment supply, but few were able to explicitly link these to the pattern shown in the figure. Explanations were often limited or lacking, with disappointingly few linking wind speed to available energy and the process of entrainment and different mechanisms of transportation.
- 4(b) The quality of answers to this question was disappointing overall, with many not seeming to know the term "fauna", hence writing instead about flora. Those with the correct focus were able to offer suitable physiological and/or behavioural adaptations, such as the production of concentrated urine, large ears, migration and nocturnal habit, although these were not always explicitly linked to the climate. A legitimate alternative approach would have been a more general view of how climatic difficulties result in low species diversity and low population totals.
- 4(c) Responses to this question were generally sound or better, with many candidates drawing upon more than one example. Locations such as the Draa valley, Arches NP and Valley of the Kings were widely and appropriately used. It is expected at the top level that candidates should be able to provide evidence of jobs, earnings or tax revenues to show the gain achieved. To emphasise the short-term nature of this gain, an understanding of unsustainability and the finite nature of some resources was expected. Reference to negative social and environmental impacts of the exploitation were helpful in explaining this.

#### Section B

5 In this question, answers really needed to be focused upon the <u>need</u> for management of risk. Risk may relate to the likelihood of the flood event occurring, or the potential impacts that it could have. The likelihood could depend upon vulnerability factors, such as climate, topography and geology. The impacts could be social, economic and/or environmental. Evidence was required from more than one located river basin, with contrasting examples offering the best evidence of varying need. Commonly used examples were basins of Boscastle, Bangladesh and the River Thames. For high marks in AO2, explicit comments were expected in the body of the answer about how and why need varied.

Disappointingly, many responses lacked a clear focus on the precise demands of the question. Many wrote at great length about HOW the flood risk was managed, rather than explaining the NEED for management. Comments about variations in need were often lacking, with the emphasis being on variations in management strategies. The best answers had sufficient focus on variations in likelihood and impact.

6 In this question, answers really needed to be focused upon the need for management of development. Need could depend upon vulnerability factors, such as climate, topography and geology. The impacts could be social, economic and/or environmental. Evidence was required from more than one located coastline, with contrasting examples offering the best evidence of varying need. Commonly used examples were Dubai, St. Lucia, Poole Harbour and Studland. For high marks in AO2, explicit comments were expected in the body of the answer about how and why need varied.

Disappointingly, many responses lacked a clear focus on the precise demands of the question. Many wrote at great length about HOW the development was managed, rather than explaining the NEED for management. Comments about variations in need were often lacking, with the emphasis being on variations in management strategies. The best answers had sufficient focus on variations in vulnerability and impact, with useful comments made about cost-benefit relationships.

7 Answers to this question really needed to be focused on the challenges FOR economic development, whereas many responses tended to concentrate on the challenges FROM economic development. References to environmental damage caused by development could have been made more relevant with appropriate reference to the fragility of cold environment ecosystems. Challenges for development include social, economic and environmental. Most importantly, in having to overcome such challenges, additional effort, time and costs are typically incurred which reduces the benefits of development. Common examples seen included Alaska, Siberia, the Alps and Antarctica.

Good answers had the correct focus, provided evidence from contrasting locations and explicitly commented on how and why there is such a range of challenges in the body of the answer. This could be achieved by linking challenges together, such as climate and ground conditions. Good contrasts could be achieved by selecting examples with and without conflicts with indigenous populations, for instance.

8 Answers to this question really needed to be focused on the challenges FOR economic development, whereas many responses tended to concentrate on the challenges FROM economic development. References to environmental damage caused by development could have been made more relevant with appropriate reference to the fragility of hot arid/semi-arid environment ecosystems. Challenges for development include social, economic and environmental. Most importantly, in having to overcome such challenges, additional effort, time and costs are typically incurred which reduces the benefits of development. Common examples seen included the Draa Valley, Arches NP and Australia's Olympic Dam mine.

Good answers had the correct focus, provided evidence from contrasting locations and explicitly commented on how and why there is such a range challenges in the body of the answer. This could be achieved by linking challenges together, such as climate and ground conditions. Good contrasts could be achieved by selecting examples with and without conflicts with indigenous populations, for instance.

# F762 Managing Change in Human Environments

#### **General Comments**

Virtually all candidates completed the paper, suggesting a high level of preparation in relation to the timing of the paper. There were very few rubric errors.

The use of the resources was not always consistent, errors in basic skills costing a significant number of candidates what might be considered fairly easy marks. The follow on question (part (ii)) was often answered effectively. This pattern suggests a basic lack of practice in relation to the use of resources while at the same time sound understanding of the key ideas being examined

Responses to the six mark questions generally showed a good level of basic understanding and in many cases some sound development. However, a number of candidates failed to respond to the command which asked for "two" factors and went on to mention three or four factors. This often resulted in rather superficial answers and was usually self-limiting since only the first two factors identified were creditworthy.

A significant number of candidates used appropriate and well developed examples in the nine mark questions, at times to great effect. However, on questions 3(c) and 4(c), which asked for a single example, a number of candidates used multiple examples which was usually self-limiting since only the first example identified was creditworthy.

Responses to the essay questions were generally sound. They showed a good level of understanding and in many cases considerable locational detail. It was evident that the majority of candidates had been well prepared for the essay and a significant proportion of candidates drew up a clear plan which was then used to produce an effectively structured essay, often with a sound conclusion.

Two general concerns were identified from a number of scripts. Firstly, it was evident that a number of candidates did not understand some of the basic specification generic terminology. This was particularly evident in relation to, "economic", "socio-economic" and "environmental" factors where a number of candidates drifted away from the key idea and began to introduce inappropriate observations. More specifically, terms such as "sustainable", "conflict", "ecotourism", "exploitation" (in relation to energy resources) and "dereliction" were not always clearly understood. Although not a significant issue it was also apparent that a small number of candidates did not fully grasp the meaning of "pattern" (Question 1) and "variations" (Question 4). A second concern was the use of examples which were somewhat generic or not entirely appropriate. While general examples (which give ideas about the topic rather than consider the specific aspect of the topic under discussion) can give some insight into the question they often lead to answers which are rather vague or superficial and can be rather descriptive. This can be a significant factor in showing depth of understanding. The choice of example(s) often dictates the overall quality of the response. This is very noticeable at the higher mark levels.

#### **Comments on Individual Questions**

#### Section A

# **Managing Urban Change**

#### Question 1

- (a)(i) The majority of candidates used Figure 1 effectively to describe the pattern of child poverty shown on the map. In most cases specific data was used effectively to identify particular levels of poverty or illustrate specific areas shown on the map. In most cases candidates identified a general trend of decreasing levels of child poverty with distance from the city centre. A number of candidates identified what they considered to be an anomaly in relation to the city centre and the nearby area of Tower Hamlets. A small number of candidates simply identified areas and quoted their child poverty rates with no reference to the overall pattern.
- (a)(ii) Answers to this question were variable. In a number of cases candidates simply made the point that those areas with higher levels of child poverty were areas which were poor. This was something of a self-evident observation which did not really address the question. Those candidates who considered the question in relation to why some areas are more affluent than others and showed an understanding of urban deprivation generally scored high marks. In those cases candidates often brought in observations about socio-economic inequalities and how they are reflected in rates of child poverty, particularly in relation to inner city areas and more affluent suburbs. A number of candidates drifted into a more historical dialogue, in a small number of cases referencing the development of slum areas related to post war industrial decline. While this may have some basis in relation to more recent areas of deprivation it was somewhat self-limiting. A very small number of candidates either made simplistic points about areas with a high level of child poverty being largely populated by immigrant families or drifted into observations which would be more appropriate in a developing world context.
- (b) The majority of candidates tended to completely ignore the idea of land use patterns and instead focus on specific land uses. Consequently, ideas about how rivers might encourage industrial development or how flood plains might discourage development and subsequently be used for recreational land uses were common. While this approach provided an opportunity to show an appreciation of the relationship between physical geography and land use it did not always fully address the question. A number of candidates used land use models as a basis for their answer. Where there were clear references to physical geography, responses often showed an impressive level of sophistication. Unfortunately this was quite rare and more often responses tended to be a largely descriptive analysis of a particular land use model where the discussion was more focused on economic factors. A small number of candidates used examples from developing countries, often very effectively. An example of this was how vulnerable slopes were used for poor quality housing or slum areas in Rio de Janeiro.
- (c) The majority of candidates successfully responded to the instruction "environmentally sustainable" expressed in the question, with only a small number drifting into ideas which were clearly more economic. Responses were often differentiated by the range of ideas expressed or the example(s) used to express an understanding of the question. In many cases ideas were focused on the management of transport, with the bus system in Curitiba and "Boris bikes" being popular examples. While this provided an opportunity to show some awareness of the question it tended to be a very narrow focus which at times drifted as much into economic factors as environmental considerations. Those candidates that took a broader view and also brought into the discussion ideas about resource management, urban greening, urban farming and pollution control gave themselves a much better opportunity to show an understanding of "environmental sustainability", which was a clear trigger towards a Level 3 answer.

# **Managing Rural Change**

#### Question 2

- (a)(i) The majority of candidates used Figure 2 effectively to describe the pattern of child poverty shown on the map. In most cases specific data was used effectively to identify particular levels of poverty or illustrate specific areas shown on the map. In most cases candidates identified a general trend of increasing levels of child poverty with distance from the coast. A small number of candidates simply identified areas and quoted their child poverty rates with no reference to the overall pattern.
- (a)(ii) A number of candidates found this question quite challenging, often drifting into ideas which might be more appropriate in relation to urban areas. The relationship between rural and urban areas was not always clearly expressed in relation to the question. Those candidates who did express this idea effectively, considering that access to urban areas might provide opportunities which in turn might reduce rates of rural poverty, often produced thoughtful responses. In general terms responses tended to focus on the idea of how any type of opportunity might reduce rural poverty, or how the lack of opportunity might create rural poverty. In this context, the more popular ideas expressed included points about business opportunities, access (or remoteness) and constraints related to the physical landscape or lack of government investment.
- (b) In general terms this question was not answered very effectively. The majority of candidates identified habitat loss as one of their answers but often failed to fully develop the idea. After that the second most popular idea was based around pollution linked to transport, either in relation to increasing vehicle numbers or in relation to the heavy goods vehicles related to development projects. In either case responses were generally quite vague and lacked any real detail in terms of why this might create "environmental issues". A small number of candidates moved into ideas about large scale deforestation and climate change; generally this was either self-limiting or inappropriate in relation to the topic as expressed in the question.
- (c) Very few candidates showed a detailed appreciation of the idea of economic sustainability. More often responses tended to focus on describing changes rather than expressing how the identified changes might make an area more economically secure in the longer term. While this approach clearly showed some awareness of the question it did not fully address the key idea and consequently failed to score at the highest level. A small number of candidates did use examples of rural development programmes to express the link between community development and economic sustainability, often very effectively. In some cases candidates virtually ignored the term "economic sustainability" and drifted more into ideas about environmental management or conservation. Where this had some link to the economic viability of an area it was creditworthy, where it did not the response was often somewhat marginal.

# The Energy Issue

### Question 3

(a)(i) The majority of candidates used Figure 3 effectively to identify the differences in energy supply between rural and urban areas in India. In most cases candidates used specific comparative data effectively and a number went on to categorise supplies in relation to renewables/non-renewables or fossil fuels.

- (a)(ii) In general terms candidates showed a sound awareness of the links between economic development and energy mix, many going on to express this in relation to how urban areas demand a greater amount of secondary energy in the form of electricity and gas. Points about the relative level of infrastructure in urban and rural areas were frequently made, and when effectively linked to energy supply these ideas produced excellent points. At the higher level candidates not only considered the individual energy sources but also brought in broader points about energy mix. At the lower level the focus was generally based around the availability of resources, often considering that rural areas had access to biomass while urban areas did not. While this approach offered some understanding it was often expressed in very simple terms and the points made were not fully developed.
- (b) The majority of candidates showed a sound understanding of this question, in most cases identifying the finite nature of some energy resources and the impact of burning fossil fuels on the environment as fundamentally significant points in relation to sustainability.
- (c) The major issue with this question was the extent to which candidates ignored the clear instruction "With reference to a located example". Those candidates who focused on one example often produced effective responses which showed a good general understanding of the question. Where candidates used more than one example (in some cases four or five) responses were often superficial and lacked any real development. In some cases the first example used was not the strongest and this was clearly self-limiting in the context of the question rubric. Those candidates who did focus on one example often produced effective responses which showed a good level of understanding in relation to the issues related to resource exploitation. More popular examples included the exploitation of oil in the Niger delta and Alaska and the development of the Three Gorges dam in China. A small number of candidates used more contemporary examples including oil tars, fracking and large scale wind farms, often very effectively. At the higher level differentiation was often related to the extent that candidates moved beyond identifying issues and considered "conflict" in a more detailed way.

#### The Growth of Tourism

#### Question 4

- (a)(i) The majority of candidates used Figure 4 effectively to identify the general trend in the number of international tourists and pick out particular years where there were significant short term changes or significant changes in relation to the general trend. Virtually all candidates used the data to express the descriptive points that they were making.
- (a)(ii) Those candidates who identified the idea of "global" expressed in the question generally produced sound responses. The most popular ideas related to decline were based around the impacts of global recession and international terrorism while a number of candidates suggested that international sporting events might produce a short term increase in tourist arrivals. A number of candidates focused on very generic ideas, including points about increasing wealth or holiday time, or the development of air travel.
- (b) It was encouraging to see that the majority of candidates had a clear understanding about the characteristics of ecotourism. A wide range of points were seen across the scripts, including observations about scale, conservation, education, use of local materials, the management of environmental issues and community involvement. Those candidates who selected two appropriate ideas and showed a clear awareness about how they encouraged sustainability generally scored very high marks.

(c) The major issue with this question was the extent to which candidates ignored the clear instruction "With reference to a located example". Those candidates who focused on one example often produced effective responses which showed a good general understanding of the question. Where candidates used more than one example (in some cases four or five) responses were often superficial and lacked any real development. In some cases the first example used was not the strongest and this was clearly self-limiting in the context of the question rubric. Those candidates who did focus on one example often produced effective responses which showed a good level of understanding in relation to the problems created by the growth of tourism. More popular examples included the development of tourism in Myanmar and Thailand and the Spanish coast or Spanish islands. These examples provided a useful vehicle to express an understanding of the question, although responses were often quite descriptive and lacked a detailed appreciation of "cause-effect" in relation to the question. Those candidates who used a more specific example, with particular reference to a relatively small area, often produced more detailed and analytical responses.

#### Section B

# **Managing Urban Change**

#### Question 5

A number of candidates found this question quite challenging, often confusing dereliction with deprivation and consequently using examples which were more focused on the development of poor quality housing areas in developed countries or slums in developing countries. While the distinction between dereliction and deprivation can, at times, be blurred, this approach did not always fully address the question and was consequently somewhat self-limiting. A small number of candidates took this approach one step further and based the whole of their essay on rural – urban migration and the consequent development of urban slums in developing countries, producing some excellent geographical analysis but unfortunately not effectively addressing the question. Those candidates who focused more precisely on dereliction often produced impressive responses. In most cases the key consideration was industrial decline and how this created areas of industrial and residential dereliction as factories and housing were left vacant and became increasingly the focus of vandalism. Two of the most effectively used examples were Detroit and east London (prior to regeneration). A number of candidates drifted into historical examples, most notably considering industrial decline in parts of the UK.

## **Managing Rural Change**

#### Question 6

Candidates generally produced thoughtful and well documented responses to this question. In most cases the focus was based around land degradation resulting from the intensification of agriculture, with the removal of hedgerows, soil erosion and the impact of agricultural chemicals on the land and water courses featuring in many essays. The use of examples was variable. Those candidates who developed their answer around a specific example generally offered more precision and in-depth analysis. A number of candidates took a broader view and considered the question in relation to both negative and positive influences on the environment, considering how stewardship and aspects of permaculture are creating a positive environmental feedback loop. Candidates who took this approach often produced thoughtful and evaluative responses.

# The Energy Issue

#### Question 7

It was clear that the majority of candidates had a sound understanding of the key idea expressed in this question, many using considerable locational detail to express their thoughts. It was encouraging to see that in most cases candidates responded to the instruction "socio-economic" expressed in the question rather than simply observing points about increases in revenue and employment. Candidates generally selected very good examples to express their ideas, among the more commonly used were Norway, Iceland, Alaska and the Three Gorges Dam in China. Of these examples Norway was perhaps used most effectively, with many candidates offering a detailed appreciation of how oil and gas revenues had been used to improve social and community facilities and also how Norway had developed the renewable energy sector to ensure the sustainability of energy supplies. A number of candidates developed this theme further by showing an awareness of the Norwegian energy fund and also linking this to socio-economic indicators such as HDI. A small number of candidates attempted a wider discussion by expressing how energy exploitation can bring both opportunities and problems, with Nigeria often being used as an example. This discussion produced interesting answers, but at times they tended to drift away from the key idea expressed in the question.

#### The Growth of Tourism

#### Question 8

It was clear that the majority of candidates had a sound understanding of the key idea expressed in this question, many using considerable locational detail to express their thoughts. It was encouraging to see that in most cases candidates responded effectively to the demand to show an understanding of "economic development" expressed in the question rather than simply observing points about bringing in money and creating employment. A wide range of examples from across the world were chosen, the more commonly used being Jamaica, Spain, China and the United Kingdom (frequently with a very specific locational focus such as Blackpool or The Lake District). In many cases candidates made effective links between increasing tourist revenue and the development of infrastructure and social facilities, showing a clear appreciation of key reference to "economic development" expressed in the question. The idea of the "significance" of tourism to the economic development of particular places was largely considered in relation to total revenues or visitor numbers and not always considered in relative terms.

# F763 Global Issues

#### **General Comments:**

As with previous sessions, there was a wide range in the quality of scripts submitted for this unit. Substantial knowledge and authoritative understanding of geography was clearly evident amongst the upper quartile candidates, with their prose fluent and focused on the question set. The lower quartile candidates tended to rely on pre-learned material, much of which was partial in its knowledge and understanding. Often they adopted a narrative style, especially when deploying a case study, which diverted them away from analysis and evaluation.

#### **Comments on Individual Questions:**

#### Section A

Examiners still read far too many scripts containing responses in this section that are either prelearned or rambling. Offering more than one issue is a too common approach and often accompanied by strategies which are neither related to a stated issue nor appropriate given the context. The wording of the question is clear, 'Outline <u>a</u> geographical issue indicated and suggest appropriate strategies for <u>its</u> management.' Those that obeyed the rubric were usually well rewarded for their ability to write in a precise and concise manner.

#### Question No. 1

The fact file on flooding in Pakistan was answered by the vast majority of candidates. Too many respondents simply selected one or more statements from the fact file and offered no more than repeating it almost verbatim. Much more convincing were those who took one of the statements and analysed its implications. For example, use was made of the fact about the quantity of farmland flooded in relation to the economic status of an LEDC, in this example Pakistan, and the issue this would create as regards food supplies for families who are largely subsistence farmers.

In regards to strategies, examiners reported reading far too many responses which seemingly ignored the geographical context and offered accounts of floods they had studied such as Boscastle or Cumbria. Far more convincing were those who acknowledged the concerns arising in an LEDC as regards flood management but nevertheless suggested suitable strategies, such as raising river banks, adopting a warning system similar to that deployed in Bangladesh or the use of international aid.

### Question No. 2

There were many effective responses focused on the map showing the global distribution of plant and animal species at risk of local extinction. Issues arising from the loss of biodiversity such as reduction in genetic pools and the potential loss of plants which might have a use for humans were often suggested. Strategies tended to be appropriate such as the creation of reserves or national parks, captive breeding and seed banks or debt for nature arrangements.

#### Question No. 3

Students answering this question using an extract from a text on climatic hazards tended to fall into one of two camps. There were those who focused on the issues of either acid rain or photochemical smog and those who took this as an opportunity to deal with the production of CO<sub>2</sub> and global warming. Issues arising from the former tended to be various health issues, the enhanced weathering effect on buildings or the acidification of lakes, rivers and soils. Suitable strategies included dealing with the causes, primarily fossil fuel combustion and the effects, liming of water and soils for example.

#### Question No. 4

The two graphs making up the resource in this question showed changes in population and wheat yields for Sub-Saharan Africa and the EU for the first fifteen years of the 21<sup>st</sup> century. Most candidates identified the issue of a growing population-resource imbalance in Sub-Saharan Africa as population growth far outstripped the increase in wheat yields. The most convincing responses made clear the implications of this imbalance such as increased probability of under- and malnutrition in countries such as Mali, Somalia or Malawi. Amongst the strategies mentioned by candidates, those referring to appropriate methods of increasing wheat yields, such as plant breeding to improve drought, pest or disease resistance or irrigation were the more convincing. Suggesting that the EU send its surplus grain was valid but only in the context of famine or severe food shortages as to do otherwise would negatively impact on local famers and markets. Comments about reducing population growth in Sub-Saharan Africa were appropriate and the more so when clearly linked with reducing demand and thereby altering the population-resource imbalance.

#### Question No. 5

The table showing changes in overseas development aid given to major world regions from MEDCs in the early years of the twenty-first century drew a wide range of responses. Candidates either picked up on changes to the absolute amount of aid in US\$ or aid as a % of Gross National Income; either approach was valid. Some decided to focus on a single region which was also acceptable. Whichever approach was adopted, many candidates were aware of the parlous state sub-Saharan Africa continues in as regards development and saw in the absolute increase in aid the region received in 2012, as a degree of recognition of this. Much reference was made to the role of Millennium Development Goals in stimulating aid from MEDCs which was encouraging. One concern examiners raised was that many candidates did not recognise the reduction in aid as a % of Gross National Income between 2005 and 2012 for all regions; perhaps an indication of the difficulty many seem to have with decimals.

#### Question No. 6

The choropleth map illustrating global patterns of female literacy was well answered by many candidates. Less successful were those who simply described the map and claimed this was '...an issue...' without highlighting the degree of inequality this indicated. The most convincing responses recognised such variation in female literacy and then linked this with lower levels of development and quality of life. A wide range of strategies were suggested as being appropriate to raising female literacy, especially in much of Africa. However, many of these were simply too generalised to be truly convincing. Stating that a government should spend more on education is fine but at this level, an answer needs to go further. For example, comments about the balance of government spending, military, prestige projects such as dams vis a vis education were relevant. The roles of MEDCs and NGOs was often quoted, in particular the latter and clearly many candidates had been enthused by the progress being made as regards the role and status of women in some parts of the world with the help of various NGOs.

#### Section B

This section, consisting of two full length A level essays, reflected the breadth in quality of response for the paper as a whole. At one end were those candidates who wrote with powerful fluency and a sharpness of focus that explicitly answered the question. All these questions demand a high degree of analysis and evaluation to offer convincing discussions. Those candidates who were content to regurgitate pre-learned material, often a narrative of a favourite case study, tended not to be successful at the higher Levels, especially in AO2 in which marks are awarded for 'Analysis, interpretation and evaluation.' Marks in this AO form the majority in this section and candidates should be reminded of this regularly and frequently during their preparation for this paper.

#### **Earth Hazards**

#### Q7.

Most candidates discussing the relative seriousness of primary rather than secondary effects arising from earthquakes did so quite convincingly. Frequent mention was made of earthquake events affecting locations at contrasting places along the development continuum. In this context responses offered interesting discussions about primary effects such as collapsed buildings in LEDCs such as Haiti as against the relative stability of aseismic architecture in MEDCs such as Japan and USA. Examiners were pleased to read comments about Chile, an example of a country that has been able to make significant progress in terms of reducing vulnerability to the primary impacts of earthquakes. The scale of any particular event was frequently used as an evaluative point, with the 2011 earthquake and its accompanying tsunami in Japan being quoted. The level of detail was very impressive from some candidates, such as the key factor of the relative subsidence of the coast thereby making the protective sea wall less effective against the tsunami, a secondary impact.

The contrasting abilities of countries at different places along the development continuum to recover from an earthquake was used well by many when assessing secondary impacts. Factors such as relief aid (food, bottled water and temporary shelter) and level of medical care were cited as being significant.

There was a tendency by some candidates to offer detailed accounts of case studies of particular earthquake events. This took a response so far but because it was not evaluative, marks in AO2 were not that high.

### Q8.

This question looked at the management of earth hazards, focusing on the role of technology. Most candidates drew on their knowledge and understanding of the roles technology can play across a variety of earth hazards. The technology involved in monitoring volcanic activity was well known by many with convincing exemplification from Japan and the USA. It was also encouraging to read comments about technology being deployed in non-MEDC countries, such as Cameroon, Indonesia and along the Andes. The technology involved in coping with earthquakes was also confidently handled. Candidates were aware of the difficulties in prediction and were comprehensive in their knowledge of aseismic building design. Fewer candidates included comments about flooding, both river and coastal, although the capital intensive technology protecting the low lying coastline of the Rhine Delta and the Thames barrier was made effective use of by some. Mass movements were included by a minority with sensible discussion of the ways in which technology can monitor and prevent such events becoming hazardous.

It was also encouraging to read comments covering the use of technology in search and rescue and recovery post event. Technology such as thermal imaging, heavy lifting gear and helicopters was a relevant area to include.

The key element of a successful response was that the technology was clearly linked with 'successful management'. Some candidates used the Aberfan tragedy to make the valid point that had technology been available and deployed, the dreadful event might have been avoided.

# **Ecosystems and environments under threat**

#### Q9

Candidates writing about the relative significance of the factors responsible for the distinctive characteristics of a local ecosystem or environment generally displayed good knowledge about their chosen location. They were aware of the influence of factors such as drainage and various human factors such as land-use. One noticeable absence was reference to geology linked to soil type and thereby to vegetation. The key discriminator was the degree to which responses assessed the '…relative significance…' of the chosen factors. Rather too many essays leaned heavily towards narrative description.

#### Q10

The more popular of the two questions in this Option was well answered by many and examiners were pleased to read balanced accounts of both negative and positive human impacts on physical environments. Effective use was made of case studies such as Yellowstone National Park, with the unforeseen effects of the elimination of the grey wolf throughout the area's ecosystem well known. The subsequent re-introduction followed by recovery of bio-diversity and general health of the ecosystem was convincingly used as an example of positive human impacts. Likewise, other examples of conservation management to the benefit of an ecosystem were included to balance the all too obvious negative impacts of activities such as deforestation and coral reef destruction.

#### **Climatic Hazards**

#### Q11

Examiners reported reading very few responses discussing the extent to which either acid rain or photochemical smog is caused by the interaction of physical and human factors. It is, therefore, not possible to draw much by way of generic conclusions. Suffice it to say that these responses tended to reflect either very well-known material or a very poor grasp of the topic.

#### Q12

Climatic hazards are among the most predictable of all hazards with the increasing use of technology playing the key role in the monitoring of the atmosphere. Candidates were mostly very secure in their evaluation of the role various technologies can play in managing climatic hazards. Most commonly, responses contained substantial and authoritative material about the monitoring, measuring and prediction of tropical storms. The various technologies that NOAA and NASA deploy were cited and evaluated, with candidates aware of the relative success in tracking the development and path of a tropical storm. It was good to read accounts of actual examples with Katrina, Mitch and Nargis being frequently discussed. The difficulties in predicting exactly where landfall might be made was a point candidates often made and linked with whether or not the impacts can be reduced. One element here that candidates could reflect on further is the practicality of evacuating large numbers of people with relatively little advance notice. Further evaluation came in the contrast between countries at different points along the development continuum as regards their abilities to deploy technology. It was encouraging to read that many candidates appreciated the sophistication which India, for example, has achieved through the use of satellite technology over the Bay of Bengal, in monitoring tropical storms.

Evaluation also came when candidates appreciated that the sheer magnitude of some climatic hazards made it difficult for societies to reduce their impacts. In this example, severe drought was well discussed as were various tropical storms. Some candidates displayed very effective knowledge and understanding about the issues surrounding the management of tornado hazards. In particular the recent advances in technology such as Doppler radar and the ability to use modern technology such as mobile phones was quoted as helping reduce the impacts but only to some extent.

## Population and resources

#### Q13

Many of the responses discussing the extent to which resource supply depends upon physical factors were sound but few were really convincing. Candidates generally appreciated the relationship between physical factors and resource supply, but most accounts would have more persuasive had their factual locational knowledge of mineral deposits or average wind speeds been stronger. It was good to read of the role technology is playing in extending the supply of oil and gas resources from fields where directional drilling is taking place for example. It was also encouraging to read analysis of the role political factors can have in resource supply. For example, in the debate about drilling in Alaska, about fracking in both the USA and the UK and in the location of wind farms. Helpful comments were made by some candidates regarding the change through time in the use or not of substances such as uranium.

Overall, the one factor given too little consideration was that of economics. Although examiners read plenty of essays which mentioned tin mining in Cornwall, the role of the world price for minerals was given too little attention.

#### Q14

Most of the candidates choosing this question, which asked them to discuss international migration in terms of its creation of opportunities or challenges, offered thoughtful discussions. Responses used examples such as Mexico to USA and Eastern Europe to UK to suggest that both opportunities and challenges were posed by people moving across borders. The more convincing discussions offered evaluation of the impacts on both source and destination locations and it was heartening to read responses which appreciated not just the social or economic impacts but also political. In this latter context, examiners were pleased to read comment about the role international migration played in the recent general election and how locally, it continues to exercise a significant influence.

# **Globalisation**

#### Q15

Assessments of the impacts globalisation has had on people living in MEDCs were generally well constructed. Candidates were well aware of advantages such as cheaper goods such as electrical appliances and clothes as well as opportunities for tourism that many in MEDCs enjoy. The more astute responses included comments about the way international power relationships tend to favour MEDCs such as through the World Trade Organisation or groups such as the G7 and the Security Council of the United Nations. But candidates were also conscious of negative impacts of globalisation. The impacts of de-industrialisation on local and regional communities were often quoted, such as the loss of heavy manufacturing in locations such as South Wales or North-East England with consequent high levels of unemployment. This was countered with the point that pollution has reduced significantly in these places and that new industries are developing, some of which are the result of inward Foreign Direct Investment (FDI).

#### Q16

Evaluations of the role specific trans-national corporations can have across the development continuum were encouraging in the detail many candidates had acquired regarding TNCs such as Apple, Toyota or Nike. The common internal structure of a Headquarters in the country of origin, usually a MEDC with manufacturing branch plants overseas in countries which might be identified as NICs or LEDCs was well known. The key aspect influencing the AO2 mark was how focused the response was on evaluation, for example of this type of structure. Many candidates made the case that MEDCs tend to benefit as HQ tend not to migrate but branch plants can and are opened and closed relatively frequently, depending on the economics of their productivity. There were also plenty of discussions making the point that much FDI was amongst MEDCs and in this context the car industry was often quoted. Thoughtful comments were also made about the advantages TNCs can bring to LEDCs such as training, improvements in infrastructure and a degree of wealth creation where they operate manufacturing plants.

# **Development and inequalities**

#### Q17

Discussions of the relationship between the level of economic development and quality of life tended to offer sensible comments but perhaps required more factual material in order to lend support to the argument. Candidates were clear in recognising a positive correlation between economic development and quality of life and many had been enthused in their consideration of this topic by the presentations of Hans Rosler. Evaluation came most convincingly when a response looked at a place where economic development was proceeding rapidly, but where environmental factors detracted from quality of life. In this context, Chinese metropolitan centres were often quoted as having very poor air and water quality and that many people lived at very high densities.

#### Q18

Assessments of the extent to which the Development Gap is decreasing tended to agree with the statement and put forward advances in economic levels as well as other measures of development such as Human Development Index as evidence. Some candidates seemed to have made detailed studies of particular countries at different places across the development continuum which served them well when answering this question. It also seemed to examiners that some candidates had made effective use of the Gapminder website when investigating this option which allows a student to chart development through time of a country. The unfortunate example of Zimbabwe was also quoted as an example of where the Development gap has increased due to political factors. Convincing arguments were also put forward suggesting the although national growth can lift the level of a country as a whole, significant regional inequalities can persist and that this increases the development gap for certain people. Here, the example of China was often quoted with the west-east contrast being identified.

# F764 Geographical Skills

#### **General Comments:**

The key factor in answering both sections is the ability to write in a well-structured and focused way that responded to the wording of the question. Those that did this achieved well.

Candidates generally performed well and demonstrated clear knowledge and understanding of their investigations which tended to lift responses in Section B.

Section A was more variable and candidates do need to read questions carefully and identify the key demands of the question. All too often one of these key terms was missed or misunderstood which reduced the effectiveness of answers.

The quality of handwriting remains an issue.

#### Comments on Individual Questions:

# 1 a) What would be the most appropriate strategy for their investigation? Justify your choice of strategy.

Most Candidates offered logical combinations from the resource. Most chose linear systematic but virtually any combination of units and sample type would have been possible as the assessment lay in their justification of their choice. Both unit and type had to be justified in the context of the investigation of vegetation changes on a beach. Effective answers resembled:

A linear unit was chosen as the sampling could be laid out using a tape measure from the high tide mark inland to measure changes up the beach.

A number of candidates still confuse systematic and stratified so gave incorrect answers.

# b) Evaluate the factors influencing the choice of techniques used to represent data collected in an investigation.

The key instruction here was to evaluate. Most candidates suggested a range of appropriate factors, such as type of data, often with examples but many did not go on to evaluate their relative importance. Some offered weak evaluation such as:

'The most important factor is ...' without saying why it was.

# c) Why is it important to identify anomalies in the data collected in an investigation?

This was generally well answered with a clear appreciation of the causes of anomalies and their impact on the analysis of an investigation, especially on statistical tests. It was a little alarming to see so many candidates dismissing anomalies out of hand rather than seeking to find their origin:

Anomalies should always be removed from data sets otherwise correlations will not be accurate.

# 2 ai) Using photograph A suggest the risks that the students should take into consideration when planning their investigation.

Many candidates ignored the need to use the photograph so offered generic risks. Compare: *There is a risk of being run over on the roads.* 

With

The blind hairpin bend in the middle of the photograph offers a real risk of an accident as students would struggle to see oncoming traffic.

Others decided to give risk reduction strategies rather than keep to the question set. The question asked for risks plural so the single risk posed by traffic would not suffice. Others correctly identified a hazard but not what the resulting risk might be. Typical of these was:

The boats high up on the beach show there is a great tidal range here.

# aii) How would you ensure the effectiveness of risk reduction strategies for this tourism survey?

The need to 'ensure' seemed to puzzle most candidates who largely ignored it so limiting their access to the top level. 'Ensure' is about making sure risk reduction strategies are followed. The most obvious way is to monitor the students as they apply their risk assessment. The use of a pilot or secondary data sources might also help 'ensure' by making sure the risks in the area have been appreciated.

The other limiting factor was the need to relate the risk reduction strategies to the tourism survey and area as set out in part ai). Too many gave rather generic answers:

I would make sure they all brought waterproofs in case it rained and wear stout shoes to prevent falls and sprained ankles.

# b) Give two reasons why it is important to base an investigation on a geographical concept or model.

Again this was well appreciated. It would help clarity if candidates numbered or bullet pointed their answers as it was often not easy to see where one reason ended and another began. Should candidates give three reasons the first two are always taken. In some cases the two reasons were in effect the same:

Models give us a focus for the investigation so we can design a suitable question. In addition they enable us to set out a suitable hypothesis to test.

# 3a) Evaluate the effectiveness of using such a scale to measure environmental quality.

'Evaluate' was the key instruction, so indication of both pros and cons of such a scale was required. Most appreciated the limitations of such a scale usually focusing on its subjectivity, poor use of a scale and the error over the noise scale. Few saw any advantages of converting qualitative data to a quantitative scale.

### b) Why is the use of questionnaires rarely effective in collecting primary data?

This was an invitation to look at the shortcomings of questionnaires – their format, content (types of question) and their delivery (sample size and structure). Few candidates considered more than two of these aspects. Some did pick up 'rarely effective' and quoted a case where they were, or had proved, effective. Many applied their own experiences in their investigations to answer this question.

# c) Evaluate the use of the Mann- Whitney test in the analysis of data.

This was answered surprisingly well, although a small minority saw it as another version of Spearman's Rank so focused on testing for correlations. It compares medians to test if two sets of data are significantly different. Again many candidates suggest its inability to explain the answer as a weakness. This demonstrates a very fundamental misunderstanding of statistical analysis.

#### Section B

Content was often excellent but was let down by an inability to focus material exactly on the question wording. Too often excessive detail of their investigation got in the way of answering the question. Candidates varied in their ability to organise their points into a coherent evaluation.

There remains an issue over titles. Many lack any location and too many, this round, were clearly not geographical. Centres must appreciate that a poorly worded title immediately puts their candidates at a disadvantage.

# 4) 'Primary data is always more useful in an investigation than secondary data.' Evaluate this statement for your investigation.

There was a wide range in the quality of answers for this question. Primary data has generally been evaluated well with candidates using their own field work to good effect. Some candidates have gone off the question and slipped into overly complex and detailed descriptions of their field work results, forgetting to then pull this back and relate the detail of their investigations to how useful it was. Others gave purely theoretical accounts comparing the pros and cons of secondary data.

The evaluation of secondary data was generally weaker with many candidates focusing only upon data from previous year's fieldwork that they have used for comparison. Some candidates are neglecting to include other secondary data they must have used such as maps, theoretical models etc. that they will have used when designing their hypothesis and method.

Some candidates are still unclear on what constitutes Secondary data. For example, a candidate claimed they had not used any but then talked about using statistical formulae to prove the Bradshaw river model. Also candidates should take care over the tense they use – to use 'could use' implies they did not actually use it making the point irrelevant to their investigation. Most ended up in Level 2 though because they gave unspecific answers about their data sources. Secondary sources were particularly vague, with dates missing for the census or scales for maps and so on.

The most effective answers were those that focused on the use of the two types of data at different stages of their investigation. Hence Secondary was seen as vital at the initial stages to locate the investigation, provide context and aid risk assessment and again towards the end to identify patterns, anomalies and outcomes.

### 5) To what extent was your investigation successful and how would you improve it?

Again a large range of quality. The best answers were well organised and some candidates had again gone through their fieldwork stage by stage highlighting varying degrees of success and improvements. This ensured a good range of success was discussed and that improvements suggested were specific to the limitations they experienced.

Often candidates did not offer a balanced answer with equal attention to evaluating their investigation and offering appropriate improvements. Too many gave long descriptions of their data collection rather than focus on the question. Some merely stated successful elements of their investigation without giving specific evidence to prove statements such as:

The investigation was a great success.

Improvements were often generic with only vague relationship to the relative success of their investigation. Typical of these answers is:

We could have taken more time so we could take more measurements so increasing our data set.

This needed explaining in the context of their investigation. Others showed they were unaware of what constituted an improvement:

As the tennis ball proved an ineffective float I would use a ping pong ball instead.

and

I would use a digital depth measurer.

When suggesting improvements the best answers were precise; e.g. naming equipment that could have been used instead or suggesting better named methods and sample sizes (in figures) linking these to limitations in their investigations. Some candidates then justified these improvements very effectively.

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