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**General Certificate of Education (A-level)**
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**Geography** **GEOG1**

**(Specification 2030)**

**Unit 1: Physical and Human Geography**

*Report on the Examination*

# General

Candidates do need to have a specific body of knowledge and this must be precise – especially on some of the physical geography questions. The long question on rivers last year was on flooding, whereas this year, it was on fluvial landforms – requiring information to be understood and learnt – perhaps more challenging than the flooding last year. Candidates must strive to understand the parts of the specification they perceive as more difficult – drumlins is a case in point here where the average mark for their explanation was 1.8. Yet explaining this landform requires the same principles to be applied as explaining an alternative landform – namely sequence and specific processes.

Resource material is supplied as some of the marks on this paper are skills related. These materials are intended to form the basis of an answer and not to be seen by the candidate as a hindrance. That some pay scant attention to them is clear when statements are very general and describe what cannot be seen in the photographs supplied. . Marks are available for describing what is visible on a photograph and using tabulated data in the human section to make points. 1 mark is usually available for data being manipulated from a table or reading off information accurately from a graph. Candidates should be encouraged to read the question stem with greater focus so that they are aware of what information is being displayed in the resources provided.

As ever, there is a need to restate the perennial comment regarding the command words and deconstructing the question. It is imperative that command words are not just known, but that their meaning is understood so that candidates know how to respond. A glossary of command words is as useful as a glossary of key concepts. Targeting the response to the command word is critical for achieving the highest marks. Thus, 'to what extent' should be responded to differently to 'discuss' and both of these should be addressed differently to 'assess'. There is still significant confusion between describe and explain. There is no credit for explanation in a describe question – as in the drumlin on cold environments and the vegetation in hot deserts and their margins. In such questions candidates should not use words like because as subsequent statements are going to be irrelevant.

The concept of sustainability is a recurring one across the specification, in the context of river and coastal flooding, the use of cold environments and hot desert environments and their margins as well as with regard to population change, food and energy supplies. Despite this, it is not well understood as a basic idea and candidates should seek a generic understanding and then perceive how it relates to specific contexts. Sustainable use does not equate with either conservation or preservation.

Case study material can enhance answers – even if it is not a stated requirement of the question. It can provide evidence for points made and allow significant elaboration and illustration. Candidates should be encouraged to use this as a matter of course. Case study knowledge should be precise – and certain misconceptions such as those regarding the Arctic and Antarctic (with oil exploitation and hotels being seen in the latter) represent clear errors.

## *Section A*

## Question 1 – Rivers, Floods and Management

Part (a) was disappointing with only 25% of the cohort obtaining 3 or 4 marks. The topic of type of load is fundamental to the rivers unit topic. Many candidates described how the load was carried, rather than considered what the load actually was. There was often credit in this context via solution and suspension load, but no marks were available for traction and saltation. The more able candidates noted these in a more purposeful context as well as bedload. Some referred to the size of load – with fewer offering numerical support.

Part (b)(i) saw most candidates recognising the speed at which the clay was eroded, but the response for the deposition was variable – with many not looking at the correct line. Only 50% got both marks on this question. Only 10% scored all 3 marks in (b)(ii) with almost 55% getting 1 mark. There was a limited knowledge of the Hjulstrom curve and a failure to focus on the transportation element specified in the question. Many drifted onto erosion (a previous question) or deposition and many believed that transportation did not occur in the erosion zone.

27.5% of candidates used the text then commented upon it with regard to the impacts of flooding indicated in Figure 3. Too many described only and failed to actually use the resource – preferring to lift relevant bits rather than putting together a coherent description of different impacts and then commenting on such features as the relative severity, the different categories, etc. Some disregarded the resource completely – despite the instruction in the question – and went onto Boscastle and Bangladesh. Some discussed the cause of floods, rather than the impacts – a reinforcement of the need to understand the key concepts.

The extended writing question, part (d), used triggers to aid progression though the mark scheme. This probably led to the mark being higher than they would otherwise be – as landforms could be somewhat individual but in a correct sequence and gain Level 2. Few really fully engaged with the question and could confidently address how river landforms change downstream and why. Only 8.5% reached Level 3 due to a need to have an overview of the changes and perceive for example, why lateral erosion occurs further downstream and how this affected the landforms – such as a change from waterfalls to meanders. A good strategy was to consider the upper, middle and lower courses and to focus on one, possibly two landforms from each. The weakest responses were random, with landforms in no order and often drifted to channel characteristics.

## Question 2 – Cold Environments

Approximately 11% of candidates achieved 4 marks on part (a) and 43% gained 3 marks. There was often a focus on location (for which there were 2 marks – 1 each for a named polar and alpine location). The more able candidates addressed distribution noting the areas above or below 60/70 degrees N and S and the presence of alpine environments in mountainous areas. The alpine environments were often better done than polar with vague statements about the Poles that were inaccurate and often incorrect. Sometimes candidates did not make it clear which cold environment they were describing.

Responses to part (b)(i) were good, with over a third of candidates getting maximum marks and about 55% getting between 3 and 4 marks. There was often limited specific use of the photograph – although the shape was recognised and a steeper versus a tapered end – very few used the buildings to give an idea of scale – the size element coming from what had been learnt. However, the answers to (b)(ii) were poor with an average of only 1.8/7. Fewer than 5% accessed Level 2 – on an explanation of a named glacial depositional landform from the specification. Candidates do have to learn all landforms prescribed, not just the ones they favour and perceive as easier. Many focussed on incorrect landforms – especially a roche moutonnée – or had a vague idea about deposition beneath a glacier but no progression from this.

There was significant confusion with Arctic here and an insecure knowledge of the difference between the Antarctic Treaty and the role of IAATO. Fragility and sustainable use were not well understood nor well linked. The question did no focus on protection only but rather that with care this area, susceptible to being damaged could perhaps be sustainably used. Arguments could be made against this – but there had to be a focus on use rather than preservation or conservation. There also needs to be a precision – there was limited specific knowledge on Antarctica from a substantial number of candidates – only 5% gained Level 3 whilst about a third of candidates remained in Level 1. There is a need to know the case study and to apply the knowledge to the question set, not just include what is known.

## Question 3 – Coastal Environments

Part (a) was well done with 63% of candidates obtaining 3 or 4 marks. Candidates obeyed the command to 'distinguish between' and drew out the contrasts between the two instead of writing separate accounts. Some confused the two, but many had a clear and purposeful understanding and could note contrasts in wave height, frequency, and dominant processes.

Responses to part (b)(i) were good with 44% gaining 3 or 4 marks. Here there was a precision in the description of evidence that was visible. Some candidates made it more complex than necessary rather than stating what was obvious from the photograph regarding the material at the base of the cliffs; the positioning of the buildings. Some drifted into processes and reasons which were not relevant. In contrast, responses to part (b)(ii) were relatively disappointing. Only 12% reached Level 2 due to a lack of specific case study knowledge and considering both social and economic effects of coastal erosion. There is a need to use the case study specifically, and place names, and some precise facts linked to these is a valid approach. Holderness featured strongly – but answers often lacked specific information. Candidates should consider the appropriate scale – identifying a part of the Holderness coast provide more successful than looking at all of it. Conversely, Holbeck Hall limited the options of some (although it did have potential) and some drifted into cause.

In part (c) there was some confusion as to what constituted soft engineering – with candidates wrongly including groynes, rip rap and gabions. The description of some methods was secure, although how they actually protected the coast was unclear. Beach nourishment and managed retreat needed linking to how they did not damage the environment but also could offer protection. The best candidates noted the need to sacrifice some areas in order to protect others but such statements were rare. Hard engineering could be included as part of a debate – but its inclusion had to be linked to the question being asked.

## Question 4 – Hot Desert Environments and their Margins

Approximately 15% of candidates obtained 3 marks in part (a) and a further 6% achieved 4 marks. Yet, the location of hot deserts is the basic starting point to the topic. Many did not actually address location. A significant proportion described characteristics and explained causes – neither of which had any relevance to the question asked. Where there was a focus, there was often imprecision with hot deserts seen to occur at 30 degrees N and S of the equator or on the Tropics rather than in a zone.

47% of the candidates obtained 3 or 4 marks in describing the vegetation. Such responses stated what was visible about the vegetation – the presence of a cactus, its relative height, the thick stem with four 'branches' and the lower lying shrubs. Observations equate with marks – yet many did not describe valid feature; a significant proportion described what could not be seen with regard to colours of leaves, flowers or noted information about roots. Some drifted onto explanation – pre-empting (b)(ii). Approximately 44% obtained Level 2 in (b)(ii) as they sought to link specific characteristics to the climate – such as stomata on the underside of leaves that remained closed in the day to reduce transpiration or the presence of long tap roots to reach groundwater supplies.

Only 5% of candidates reached Level 3 on part (c). Often, responses were descriptive of the Sahel and its characteristics and problems. This was not really the key element to the question. The focus should have been on how it is used – and how it can/could be sustainably used with management strategies in place. The better responses referred to limited numbers of livestock, the use of stone lines and other ways of improving water supply and solar cookers for example – strategies that were specific to the Sahel and sought to encourage a sustainable use of the region.

## *Section B*

## Question 5 – Population Change

Part (a) was well answered with about 21% of candidates being awarded maximum marks and a further 43% getting 2 marks. These candidates gave clear contrasts usually in the context of Kenya and India versus UK and Germany and those under 15 and over 65. There was a need to make clear the differences – a lack of clarity where candidates left the examiner to work it out, cost marks. Some described the individual countries whilst others identified similarities – neither of which were appropriate approaches for this question.

The sketch population pyramid was competently drawn with 28% obtaining all 3 marks and 41% gaining 2 marks. Most could identify the broad base and triangular shape and/or appropriate labels. Some were too concave or convex or too high and even 'top heavy'. There was no need to draw individual bars as a sketch pyramid was required. In contrast, only 23% obtained 2 or 3 marks in (b)(ii). Here, there was a need to focus on the lower part of the pyramid and its contracting shape in 2001 but its widening current base. Those who perceived this provided evidence. Some note the likelihood of stage 4 (or 5) in 2001 and offered evidence – but the need to provide evidence proved a sticking point for some – indicating limited overall understanding.

There were many general points in the response to part (c). Just under a quarter of candidates reached Level 2 as there was a need to obey the command word of 'describe' and to give some idea of specific impacts rather than just increasing costs of healthcare and pensions. Better responses noted the need for increased treatment of dementia, strokes and the burden that this placed on potentially shrinking independent population. This was then linked to the raising of the retirement age. Some discussed the positive and negative impacts that results from an ageing population.

Almost 9% reached Level 3 on the extended writing question. Whilst a lot of candidates got mid-Level 2 marks, too many were left within Level 1 – 30% on a question that was fundamental to this section. The best identified a limited number of measures and often questioned the usefulness of the death rate, birth rate, life expectancy and population density. There were some informed discussions that were supported with evidence. Here there was a precision – e.g. that low infant mortality indicated good ante natal medical care, vaccination programmes rather than just good healthcare. Often here, the validity of indicators was questioned, e.g. with regard to the impact of population policies on birth rate. At the other end of the spectrum, candidates perceived measures as population policies and wrote about China. There was significant drift into the demographic transition model and those who indicated how level of development affected the measures – the opposite way to what was required. Intermediate responses were descriptive but began to link to how they could be used to indicate relative levels of wealth via indicating certain things about healthcare for example.

## Question 6 – Food Supply Issues

Part (a) was a question that was competently answered; almost 50% of candidates scored 4 marks. Most identified the increases that were gaining momentum to different extents in Asia and South America, compared to the accelerating decrease in Africa. Not all realised the inclusive nature of the final column.

60% gained 2 or 3 marks in part (b)(i), indicating an ability to derive the characteristics from the information given. This usually meant the origin of the companies, the fact that they are TNC's and the large value of sales. Quoting figures without this context was not creditworthy.

Responses to part (b)(ii) were weaker overall with 36% gaining 2 or 3 marks. Some mistakenly looked at food only being available in richer countries of the world. The best responses referred to issues such as food miles, increasing carbon footprint, fair price for products, exploitation of workers and loss of own food supply. About a fifth of candidates entered Level 2 on part (b)(iii). These candidates realised the need to understand and then subsequently use the resource provided and not just select relevant bits and quote in their answers. Valid comments referred to the better living conditions for the animals and the sustainable sourcing so that supplies would not run out. The use of text remains an area to focus on to ensure that more progress to Level 2.

Only 4.5% accessed Level 3 in part (c) – this lower percentage common to all human option extended questions in contrast to the physical options. The most common marks here were 7, 8 and 9. Most candidates used the two strategies that were given – the Green Revolution and genetic modification. The former was better done – and there is still a significant amount of confusion between the two with GM crops seen as part of the Green Revolution rather than a more recent progression from it. The best candidates questioned levels of success and had a precise knowledge of crops involved and how they were designed to adapt. Some drifted onto intermediate technology or onto aspects – that were economic in terms of poorer farmers or social – in terms of out-migration – that were beyond the remit of this question that demanded a focus on food supply.

## Question 7 – Energy Issues

About 40% of candidates gained 3 or 4 marks on part (a)(i). This was lower than its counterpart in Question 6. Candidates had to address the contrasts element of the question and, therefore, had to look at two different countries. It was permissible to look at the relative importance of energy sources such as the role of nuclear in France in contrast to insignificance in China and Brazil. As in Question 5 (a), some noted similarities which were irrelevant here – a need to understand the concept of 'contrasts'. There is a need to manipulate tabulated data to gain credit – usually 1 mark is available for this. In part (a)(ii), many opted to consider China and outlined issues such as acid rain, global warming, air quality, the need to invest in renewable. Most referred to two issues rather than developed one more. Almost 75% scored 2 or 3 marks here in a well answered question.

Similarly, just over 70% gain 2 or 3 marks on part (b)(i). Most recognised the greatest heat loss from the windows and the least from the roof. Some wrongly stated there was no loss from the roof. Recognising intermediate levels of loss gained the 3$^{rd}$ mark – there had to be an establishment of pattern to be awarded the marks. A significant proportion went onto explain the greatest heat loss from the windows and gained only 1 mark as a result. There was a need to explain how homes may be designed/adapted to conserve energy in part (b)(ii). Here, a significant proportion identified/described the measures but did not explain how these measures conserved energy. Thus, only just over a quarter of candidates gained Level 2 here for noting how the presence of large windows could reduce the need for artificial light and electricity, and how double glazing minimised heat loss, meaning that heat could be on for less time.

Only 5.6% accessed Level 3 in part (c) – this lower percentage common to all human option extended questions in contrast to the physical options. The most common marks here were 7, 8 and 9. There was a requirement here to engage with the national scale – which some candidate did not do. Some focussed on the energy mix – how it was supplied – rather than on the demand thrust of the question. The best answers noted countries that had different strategies – often UK and a poorer area such as Chad or Mali or one that had a contrasting approach such as France with a greater reliance on nuclear. Comment noted environmental impacts, sustainability, costs and effectiveness in meeting demand. Too many were descriptive of the sources without engaging with the question or considered only one country.

## Question 8 – Health Issues

It was clear from the responses to part (a)(i) that many candidates cannot accurately understand and interpret a compound line graph. Many did gain marks despite this as there were aspects included that were correct – but this is a skill to re-visit. Almost a third did get maximum marks and a further 29% got 3 marks. Many noted the overall reduction (by about 1 million deaths). Those who understood the graph were aware of the increase in HIV/AIDS – evidence here could be calculated and/or read off from the axes. Others gained marks from looking at the other two categories. Some considered individual years – and so did not describe trends. There were varied reasons in part (a)(ii) where 66% scored 2 or 3 marks. There was a need to make clear whether looking at increase or decrease. Reasons related to increased vaccines, better sanitation for other infectious diseases and lack of a cure for HIB/AIDS, limited education, unwillingness to use condoms (not just contraception), There was no credit for suggesting reasons for the decline of this.

Most recognised the prevalence of richer countries/MEDCs in (b)(i). Some noted the cluster of high values in northern Europe. There were general and inaccurate statements that may have been creditworthy if better worded. Some just listed locations and some seemed unaware that the map only plotted the data for the 26 top-scoring countries as in the question stem. Thus, only 40% scored 2 or 3 marks with 45% gaining 1 mark and 14% zero. In part (b)(ii), most selected an appropriate example

of a non-communicable disease – usually coronary heart disease or type 2 diabetes.  However, only 17% accessed Level 2 here as many wrote generically about their selected disease and many did not address clearly and explicitly the economic development  focus. There was minimal reference to specific impacts on health provision and costs incurred, and for what and on days or work lost for sufferers and carers.

Only 5.1% accessed Level 3 in part (c) – this lower percentage common to all human option extended questions in contrast to the physical options.  The most common marks here were 7, 8 and 9.  Most candidates used tobacco TNCs – Philip Morris and BAT and pharmaceuticals – GSK.  Some – usually with limited success used food retailers.  Often, there was a significant body of knowledge – e.g. with regard to drugs and patents but this was not used to make a point with regard to the question as the 'role in world health' was neglected.  Candidates do need to develop exam technique and target their response to the question asked.  Similarly, indicating the role of tobacco companies and advertising colours on shops and selling single sticks is the start of an answer – but the point needs to be made regarding the negative impact on world health via the increased incidence of lung cancer, etc.