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GCSE Geography A 1GA0 01

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Introduction

This was the first assessment of the new specification for GCSE (9-1) Geography A, Paper 1 – The Physical Environment component. This paper consists of three 30-mark sections. Of the 94 marks, up to 4 marks are awarded for spelling, punctuation, grammar and use of specialist terminology. The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions. The exam command words which are used in this paper are defined on page 43 of the specification. Each of the questions is mapped to one or more of the Assessment Objectives (AOs).

In Section A (the changing landscapes of the UK), candidates are required to answer all the items in Question 1. They are also required to have studied two optional sub-topics from a choice of coastal landscapes and processes, river landscapes and processes and glacial upland landscapes and processes. In addition, candidates are required to answer two questions from Questions 2, 3 and 4. In Section B (weather hazards and climate change), candidates are required to answer all the questions. Section C (ecosystems, biodiversity and management), has a mark tariff of 34, including 4 marks for spelling, punctuation, grammar and use of specialist terminology. In this section, candidates are required to answer all the questions.

The new GCSE Geography A specification is designed for all levels of ability rather than being divided into Higher and Foundation tiers. In this first series, the greater emphasis on application and interpretation, as well as the introduction of new command words (e.g. 'assess'), appears to have proved challenging for some candidates. There also appears to have been some time management issues with some candidates not managing to complete all the questions on the paper.

The following report outlines candidates' performance on the paper, highlighting areas of strength and weakness across the different questions, offering examples of performance and suggestions for improvements in future series.

Question 1 (a) (ii)

Most candidates were able to identify a characteristic of an igneous rock. However, some candidates stated characteristics of sedimentary rocks (e.g. in layers) or metamorphic rocks (e.g. formed by pressure) and were not awarded a mark.

Question 1 (b)

Most candidates were able to state an example of another weathering process that affects the landscape. However, some candidates stated 'freeze thaw' as their answer which was not awarded a mark as the question required them to state 'one other' weathering process. Some candidates also became confused with erosional processes (e.g. abrasion or plucking), which were not awarded a mark. 'Acid rain' was not credited as a weathering process in the same way that simply stating 'plants' or 'carbonic acid' would also not be awarded a mark.

Question 1 (c) (i)

This question was poorly answered by most candidates. Although the specification does not explicitly state that candidates should have knowledge of scarp and vale topography, the detailed content on page 8 of the specification does require them to understand the role of geology in the development of lowland sedimentary landscapes.

Question 1 (c) (ii)

Candidates were divided on this question between those who had some knowledge and understanding of the characteristics of lowland sedimentary landscapes and geology and those who did not. A significant minority of candidates did not answer this question at all while many candidates did not show any understanding of why the stream was located at the bottom of the scarp slope. However, there were some very clear answers where candidates showed an understanding that water was emerging at the surface and linked this to the water passing through the permeable chalk, or being forced to the surface when it reached the impermeable clay. As a 2-mark 'explain' question, candidates need to give a relevant reason and then to develop it.

The response scored the full 2 marks.

(ii) Explain **one** reason why a stream is found at **Z**.

(2)

As the infiltration of water at the top of the slope, through the chalk which is permeable, the water then travels down the water table to the bottom of the slope; Chalk is permeable therefore water can pass into it, but clay is impermeable so the water will have to surface.

(Total for Question 1 = 6 marks)

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Examiner Comments

This response has clearly identified the water coming to the surface (1 mark) and has also explained that the water has flown through the permeable chalk (1 mark).

ResultsPlus
Examiner Tip

It is important to ensure that candidates are familiar with elements of geology, such as permeability and porosity, and how they affect landscape formation.

Question 2 (a)

This question required candidates to locate a landform using a 6-figure grid reference. While most candidates were able to do this, it was clear that some of them were not able to locate the correct location on the map. Also, some candidates appear to be unsure what is meant by a 'landform' as they provided answers such as 'farmland'.

Question 2 (b)

Most candidates were able to state a method of sediment transport along the UK coastline with 'longshore drift' being the most popular answer. A small minority of candidates were confused with erosional processes (e.g. abrasion or hydraulic action).

Question 2 (c)

This 'explain' question had a 2-mark tariff. Candidates were required to identify a characteristic of a destructive wave (e.g. stronger backwash, tall), and then to develop this by linking it to the increased rate of erosion. Simply stating that the identified characteristic would 'lead to more coastal erosion' would not gain the second mark. Suitable development included 'removing more beach material' or linking it to a specific erosional process (e.g. hydraulic action). Candidates who identified two or more characteristics were only awarded 1 mark unless there was a linked development point.

This response was awarded the full 2 marks.

(c) Wave action is important along this stretch of coastline.

Explain **one** way in which destructive waves can increase the rate of coastal erosion.

(2)

Destructive waves occur when the backwash is greater than the swash, and therefore takes sediment with it. This means that the waves will repeatedly remove sediment and ~~destr~~ increase erosion.

ResultsPlus
Examiner Comments

The candidate has identified a characteristic of destructive waves ('backwash is greater than swash') and has then linked this to 'takes sediment with it'.

Question 2 (d)

The command word in this 8-mark question is 'examine' which requires candidates to break something down into individual components/processes, say how they individually contribute to the question's theme/topic and how the components and processes interrelate.

While the mark scheme identifies the indicative content for this question, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' level to the response and then decide where, within the level, the response falls. The level descriptors are the same for all 'examine' questions within this paper (Q2d, Q3d and Q4d), and also across all the papers in both GCSE geography specifications. It is therefore important that teachers and candidates become familiar with them and how they are applied.

In the case of these questions, the Assessment Objectives (AOs) which are being examined are AO3 (4 marks) and AO4 (4 marks). In the case of the AO4 marks, the candidates are required to use geographical skills to extract information from the figure in the Resource Booklet which will help them answer the question. In the case of Question 2d, this could have included the direction of the prevailing wind (and longshore drift), the length and/or width of the bar and the characteristics of the coastline. This is not an exhaustive list and there is other information which they can extract. A sizeable proportion of candidates referred to a north-eastern prevailing wind when it should have been from the south-west. Those candidates who used the scale to measure elements of the bar or lagoon usually did so with a good degree of accuracy, which was pleasing to see.

However, it is not as simple as extracting the information and then writing it down as it should be woven through the candidate's response to help support their evidence. This was the area which many candidates found very challenging, either because they did not possess the skills to do to this or because they did not realise that this is what the command word 'examine' required of them. The Sample Assessment Materials (SAMs) and further assessment materials which have been provided since the launch of this specification were aimed at making this requirement clear to teachers and to candidates.

In relation to the AO3 marks, the candidates were required to explain how the bar had formed. However, this should not have been a simple repetition of the processes involved in the formation of a 'textbook bar'. While AO3 requires candidates to make logical connections between elements (in this case, processes and form), it also requires candidates to deconstruct information, in this case, information provided by the material in the Resource Booklet. A number of candidates got side-tracked into accounts of concordant and discordant coastlines which had little validity here, except if they related it to a change in the direction of the coast.

Overall, many candidates managed to produce low Level 2 responses by writing about the processes involved in the formation of a bar and making some basic references to the lagoon behind the bar or the direction of the prevailing wind. To move up higher within this Level or to move into Level 3, candidates really needed to extract a wider range of information from the resource material and use it to support their answer.

This reponse was awarded Level 2 and scored 6 marks.

(d) Study Figure 2b in the Resource Booklet.

Examine the role of different physical processes in the formation of the bar shown in Figure 2b.

(8)

The prevailing wind direction is blowing from NE, North East. This creates waves moving from west to east. Through the process of longshore drift sediment from the beach on the left side of the figure is moved at an angle (going North east) towards the beach and the backwash comes directly out to sea at a right angle. This moves from west to east until it gets to the end of the headland. The sediment gets deposited and a land form called a spit will start to block up the bay. There is no river or change in water movement so the sediment can keep building up creating a bigger spit and no recurve spit. Finally the sediment joins onto the next headland which creates a bar. The water behind the bar becomes stagnate as it is sheltered from the wind by the bar.

The candidate has extracted a reasonable range of information from the resource material and made some attempt to integrate this into their answer. Examples of this include, direction of prevailing wind, change in direction of the coastline and the absence of a river. There is a reasonably clear sequence of formation with some process understanding. To reach Level 3 the candidate would have needed to add 1 or 2 more pieces of information from the resource material and be a little bit more precise with their understanding of process.

Underlining or boxing the key words in the question will help focus on what the question is asking.

Question 3 (a)

This question required candidates to locate a landform using a 6-figure grid reference. While most candidates were able to do this, it was clear that some of them were not able to locate the correct location on the map. Also, some candidates appear to be unsure what is meant by a landform as they provided answers such as 'farmland'.

Question 3 (b)

Most candidates were able to state a type of erosion that takes place in a river. A small minority of candidates were confused with transportation processes (e.g. saltation or traction) or weathering processes (e.g. mechanical weathering).

Question 3 (c)

In this 2-mark 'explain' question, candidates were required to explain why the velocity of a river increases downstream. While there were many good answers which identified a clear reason (e.g. the channel becoming smoother), and providing additional development (e.g. which reduces the amount of friction), some candidates were less clear in their responses. A significant minority seem to think that the gradient of the long profile actually becomes steeper with distance downstream, and that this is the reason why river velocity increases. Many candidates were able to pick up 1 mark for identifying a relevant reason but were then unable to develop it effectively.

The concept of channel efficiency seemed little known although the idea of 'less friction' was quite frequently used with a varying degree of accuracy. Some candidates wrote very detailed answers with a number of linked development points. However, it is important for candidates to realise that 2-mark questions do not need more than one linked development point.

This is an example of a 2 mark response.

(c) The velocity of a river changes with distance downstream.

Explain **one** reason why river velocity usually increases with distance downstream.

(2)

More tributaries have fed into the river by the time it is downstream this means there the volume of water is greater so it goes faster.

ResultsPlus
Examiner Comments

This candidate has identified clearly that the volume of water increases with distance downstream and has also explained why (more tributaries have fed into the river).

ResultsPlus
Examiner Tip

Using links, such as 'this means that' or 'as a result of this', help to link the development to the reason.

Question 3 (d)

The command word in this 8-mark question is 'examine' which requires candidates to break something down into individual components/processes, say how they individually contribute to the question's theme/topic and how the components and processes interrelate.

While the mark scheme identifies the indicative content, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' level to the response and then decide where, within the level, the response falls. The level descriptors are the same for all 'examine' questions within this paper (Q2d, Q3d and Q4d), and also across all the papers in both GCSE geography specifications. It is therefore important that teachers and candidates become familiar with them and how they are applied.

In the case of these questions, the Assessment Objectives (AOs) which are being examined are AO3 (4 marks) and AO4 (4 marks). In the case of the AO4 marks, the candidates are required to use geographical skills to extract information from the material in the Resource Booklet which will help them answer their question. In the case of Q3d, this could have included the direction of the river, the location of the area of fastest flow and/or the width of the river. This is not an exhaustive list and there is other information which they can extract. However, it is not as simple as extracting the information and then writing it down as it should be woven through the candidate's response to help support their evidence. This was the area which many candidates found very challenging, either because they did not possess the skills to do to this or because they did not realise that this is what the command word 'examine' required of them. The Sample Assessment Materials (SAMs) and further assessment materials which have been provided since the launch of this specification were aimed at making this requirement clear to teachers and to candidates.

In relation to the AO3 marks, the candidates were required to explain how the meander had formed. However, this should not have been a simple repetition of the processes involved in the formation of a 'textbook meander'. While AO3 requires candidates to make logical connections between elements (in this case, processes and form), it also requires candidates to deconstruct information, in this case information provided by the material in the Resource Booklet.

Overall, many candidates managed to produce low Level 2 responses by writing about the processes involved in the formation of a meander and making some basic references to flow being fastest on the outside bend and slowest on the inside bend. To move up higher within this Level or to move into Level 3, candidates really needed to extract a wider range of information from the resource material and use it to support their answer. Overall, this question was answered slightly better than Q2d. River processes were correctly identified and there was some excellent use of geographical language which supported process explanation.

This response was awarded Level 2 and scored 6 marks.

(d) Study Figure 3b in the Resource Booklet.

Examine the role of different physical processes in the formation of the meander shown in Figure 3b.

(8)

A meander is formed on the lower sector of a river. It is the rivers quickest way of getting to the sea because soft rock/ less resistant rock erodes away. The meander flows from North to South. The energy of the meander is ~~creates~~ greatest on the outside banks. This where the most ~~abr~~ erosion occurs such as abrasion. Because erosion is greatest on the outside it creates a river cliff and the river is deeper on that side. From the river cliff to the point bar the river gets shallower. This is because the energy on the inside of the meander is the least. Therefore doesn't have the energy to carry sediment, and deposits the sediment on the inside of the meander forming a point bar. Physical processes such as abrasion, attrition and hydrochloric action all speed up/ cause erosion.

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Examiner Comments

This is typical of a Level 2 response with some effective process understanding and some linkage to both the outside and inside bend of the meander. The candidate has followed a logical sequence in their response and has made references to specific erosional processes. There is also some understanding of the role of energy. While the candidate has addressed some of the AO4 elements in the indicative content, this is the less well-developed aspect of the answer. There is some linkage between the location on the meander and processes and the candidate does state the direction of the river flow. However, to reach Level 3 the response would have needed to have included, and used, 1-2 more elements (e.g. width of river, location of area of fastest flow).

Question 4 (a)

This question required candidates to locate a landform using a 6-figure grid reference. While most candidates were able to do this, it was clear that some of them were not able to locate the correct location on the map. In a small number of cases, candidates identified very broad landforms such as 'mountain'.

Question 4 (b)

Most candidates were able to state a type of glacial erosion that operated in the UK during the last ice age. A small minority of candidates were confused with weathering processes (e.g. mechanical weathering).

Question 4 (c)

In this 2-mark 'explain' question, candidates were required to explain why glaciers may retreat. A significant proportion of candidates simply stated that this is because 'glaciers melt' without giving a reason for this and were not awarded a mark. In order to gain marks, candidates were required to identify a relevant reason (e.g. warmer temperatures), and to add a linked development point (e.g. which leads to melting of the glacier). Candidates who simply stated 'climate change' as their reason were not awarded a mark as this could possibly involve colder temperatures.

This is an example of a 2 mark response.

(c) Glaciers advance and retreat.

Explain **one** reason why a glacier may retreat.

(2)

The ~~earth~~ Earth warming up from global warming causing the glacier to melt because of the higher ~~tem~~ temprature

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Examiner Comments

This candidate has identified clearly that glaciers may retreat due to warmer temperatures (1 mark) which is leading to them melting (1 mark). The candidate would have got the 'reason mark' even if he/she had not added the comment about global warming as a cause of the warming.

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Examiner Tip

Candidates should use the number of marks as an indication of the number of links they need to make in the 'chain of explanation'.

Question 4 (d)

The command word in this 8-mark question is 'examine' which requires candidates to break something down into individual components/processes, say how they individually contribute to the question's theme/topic and how the components and processes interrelate.

While the mark scheme identifies the indicative content, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' level to the response and then decide where, within the level, the response falls. The level descriptors are the same for all 'examine' questions within this paper (Q2d, Q3d and Q4d), and also across all the papers in both GCSE geography specifications. It is therefore important that teachers and candidates become familiar with them and how they are applied.

In the case of these questions, the Assessment Objectives (AOs) which are being examined are AO3 (4 marks) and AO4 (4 marks). In the case of the AO4 marks, the candidates are required to use geographical skills to extract information from the material in the Resource Booklet which will help them answer the question. In the case of Q4d, this could have included the direction of ice flow, the height of the crag and length of the tail and the fact that the more resistant rock forms the protruding crag. This is not an exhaustive list and there is other information which candidates can extract. However, it is not as simple as extracting the information and then writing it down as it should be woven through the candidate's response to help support their evidence.

This was the area which many candidates found very challenging, either because they did not possess their skills to do to this and/or because they did not realise that this is what the command word 'examine' required of them. The Sample Assessment Materials (SAMs) and further assessment materials which have been provided since the launch of this specification were aimed at making this requirement clear to teachers and to candidates.

In relation to the AO3 marks, the candidates were required to explain how the bar had formed. However, this should not have been a simple repetition of the processes involved in the formation of a 'textbook crag and tail'. While AO3 requires candidates to make logical connections between elements (in this case, processes and form), it also requires candidates to deconstruct information, in this case, information provided by the material in the Resource Booklet.

Overall, many candidates managed to produce low Level 2 responses by writing about the processes involved in the formation of a crag and tail and making some basic references to the more resistant rock and the tapering tail. To move up higher within this Level or to move into Level 3, candidates really needed to extract a wider range of information from the resource material and use it to support their answer. However, it was clear that in many cases a 'crag and tail' was not that familiar to candidates, even though it is listed in the specification as a landform which needs to be studied.

Some of these candidates were able to gain credit by using information from the resource material, but their understanding of sequence and physical processes was often quite limited. Some candidates went on to discuss different types of moraine, which was not relevant to this question. It is important to ensure that all landforms are taught as it did appear that many candidates were unfamiliar with a crag and tail.

This response was awarded Level 3 and scored 8 marks.

(d) Study Figure 4b in the Resource Booklet.

Examine the role of different physical processes in the formation of the crag and tail shown in Figure 4b.

(8)

Both deposition and erosion occur in the formation of a crag and tail. As the glacier moves from North to South, which is indicated by the direction of ice flow on the diagram, it's immense power means that it can erode less resistant rock in front of it by erosional processes such as plucking and abrasion. After it has travelled the first 10 or so metres, as shown by the diagram, the glacier will then be confronted with an outcrop of more resistant rock, and it will not have enough power to erode it. Therefore, the glacier begins to move up/over this outcrop of more resistant rock, and as it does so it slows down. This resistant rock is left as the "crag" of the landform and can be seen prominently as a mound sticking out of the ground on the diagram. This change in speed of the glacier means that it has less energy and therefore must deposit some material it is carrying (transporting) on the lee side of the landform as ground moraine, which can be seen to be tapering away from the crag. As the glacier continues to move after it has passed the more resistant rock, it begins to regain speed and energy, and therefore it's erosive power. It increasingly erodes the less resistant rock as it gradually regains this power, and decreasingly deposits material, so a decreasing tapering tail of moraine (due to deposition) and less resistant rock

(due to erosion) can be observed on the diagram as a smooth lee slope tapering away from the crag

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Examiner Comments

This candidate has extracted a range of information from the resource and has used it to support their answer. Examples of this include, the glacier moving from north to south, the outcrop of resistant rock 'seen prominently as a mound sticking out of the ground', ground moraine deposited on the lee side and a tapering tail of moraine. It also has a clear explanation of the formation of the crag and tail which integrates the information from the resource.

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Examiner Tip

It is important to look at the resource and identify the information which it contains before starting to write the answer.

Question 5 (a) (ii)

In this question, candidates were required to state two greenhouse gases. Most candidates were able to do this, although some lost marks by stating gases such as 'oxygen' or ‘nitrogen', or more general ideas such as 'pollution'. Two greenhouse gases (carbon dioxide and methane) are listed on page 12 of the specification and these were the most common answers. Some candidates wrote the chemical formulae for the gases rather than their full name which is acceptable, as long as the formula is written correctly.

Question 5 (b) (i)

The new GCSE (9-1) Geography specification requires a wider range of mathematical and statistical skills to be taught than under previous specifications. The ones which need to be taught are listed on page 33 of the specification. It is important to note that some of these skills are specific to particular subject content, as indicated in the 'integrated skills' sections within the topics throughout the specification.

In this question, candidates were required to calculate the modal value of a set of monthly temperatures. This question did not require mathematical workings to be shown and 1 mark was given for the correct answer. Most candidates did give the correct answer which was pleasing to see. However, a small minority of candidates calculated the mean value rather than the modal value and were, therefore, not awarded a mark.

Question 5 (b) (ii)

In this 3-mark 'explain' question, candidates were required to identify a valid reason for why the UK's temperatures vary seasonally and to then develop their answer. Two further marks were available for their expansion of the reason.

This question was not answered very well by many candidates. In some cases, candidates seemed to have thought that the reason for warmer summers is that the northern hemisphere is 'closer to the sun' in the summer. Some candidates were able to give a valid reason (e.g. axial tilt), but were then unable to develop it any further. Some candidates discussed specific types of air masses or the role of the ocean currents but neither of these elements are clearly linked to the overall seasonal variation in temperatures.

This response was awarded the full 3 marks.

(ii) Explain **one** reason why temperature varies seasonally in the UK.

(3)

The UK is located between 50-60° N, therefore during the months of Summer (June) the earths axis is orientated towards the Sun producing higher temperatures. In December however the earths axis is tilted away from the sun producing less intense heating and cooler temperatures, giving the UK an average temperature of 4°C in winter compared to 17°C in Summer.

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The candidate has identified a valid reason (the earth's axis is tilted away from the sun in winter) and has then developed this through reference to 'less intense heating' (1 mark) and 'cooler temperatures' in December (1 mark).

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Examiner Tip

It is important to use the number of marks available as a guide to the number of 'links' in the explanatory chain.

Question 6 (a) (ii)

This is another example of a 3-mark 'explain' question. Candidates were required to explain one reason why tropical cyclones do not travel far inland. As with the other examples of this question type/mark tariff, candidates were required to give a valid reason for 1 mark and then develop it through expansion. Most candidates who gained at least 1 mark linked it to the fact that tropical cyclones need water. Once they had identified this, some were able to develop their answer further in terms of the role of water in providing energy to the tropical cyclone

This is an example of a response which was awarded the full 3 marks.

(ii) Explain **one** reason why tropical cyclones do not travel far inland.

(3)

Tropical cyclones gain energy from warm seas. Without this source of energy and moisture, they lose strength and fade away. Inland there are less sources of water, (so moisture and energy), so the Tropical cyclones quickly fade away, so they do not travel far inland.

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Examiner Comments

This candidate has identified a valid reason (requiring warm seas) and has then developed their answer in terms of this being the energy source (1 mark) and losing it (1 mark).

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Examiner Tip

This answer is relatively concise but packs a lot in. It is not always the case that writing more will gain more marks. The important thing is to ensure that the question is answered.

Question 6 (a) (iii)

The term 'with reference' in this question means that there is information within the figure which candidates should use. In this case, the term 'with reference' is followed by the command word 'suggest' which requires candidates to apply understanding to provide a reasoned explanation of how or why something may occur. The 'suggest' command word is always used in relation to a set of resource material and either requires candidates to explain elements of the resource material, or to explain links between two resources. These questions are linked to AO2 (2 marks) and AO3 (2 marks) with an element of interpretation of the resource and demonstration of understanding.

In this question, candidates were essentially being asked to identify two social impacts from the resource and then to develop each one to make it clear why it is a social impact/how it might affect people or society. While many candidates did gain at least two marks on this question by simply listing two social impacts (e.g. '42 people died', 'lack of water'), some found it harder to further develop these points. Some candidates did not gain any marks even though they had identified and developed social impacts, they were not drawn from the resource. Other candidates developed points in terms of economic or environmental elements (e.g. no electricity so businesses would close). In this case they would gain a mark for identifying a relevant piece of information from the resource but would not gain the development mark.

This response was awarded 3 marks.

(iii) Study Figure 6b below.

> Tropical cyclone Winston hit Fiji, a developing country.
>
> The United Nations International Children's Emergency Fund (UNICEF) reported that tens of thousands of people in Fiji are living in evacuation centres after Cyclone Winston tore across the South Pacific country last week.
>
> The total number of people forced from their homes in the nation of more than 300 islands is expected to be much higher as many fled to relatives and are not included in the available data.
>
> Winston was the worst storm recorded in the southern hemisphere, leaving 42 people dead. The category-five storm also left many without water and it could be weeks before electricity is restored in some areas.

Figure 6b

Extract from a newspaper article, 29th February 2016

With reference to Figure 6b, suggest **two** social impacts of Cyclone Winston.

(4)

1 Many people have been displaced and left homeless. They are living in evacuation shelters

2 42 people died

This candidate has given two relevant social impacts ('left homeless' and '42 people died'). However, while the first point is developed as, 'they are living in evacuation shelters', the second one has not been developed. The candidate has therefore been awarded 2 marks for the first point and 1 mark for the second.

Candidates should use the numbered points in the answer booklet to structure their response.

Question 6 (c)

Many candidates were able to score well on this response. Where candidates did not gain full marks, the common problems were: (i) they wrote a confused answer (e.g. lack of water leads to malnutrition), or (ii) their answer was too generalised and/or not linked to drought as a hazard.

As the command word in this question was 'state', candidates could achieve full marks simply by writing one or two-word answers (e.g. 'dehydration' or 'destroys crops'). This is an important point to note bearing in mind that there is evidence that some candidates ran out of time on this paper.

This response was awarded the full 2 marks.

(c) State **two** reasons why a drought may be hazardous to people.

(2)

1 because ~~crops~~ crops will fail not enough food for people.

2 Not enough drinking water people may become ill.

ResultsPlus
Examiner Comments

This candidate has stated two relevant hazards caused by drought. It should be noted that in both cases the candidate has developed their points (e.g. 'not enough for people' and 'people may become ill'). While these are relevant points the command word is 'state' and this additional development was not required.

ResultsPlus
Examiner Tip

It is important to become familiar with the command words and to use the number of marks as a guide to the level of development required in an answer.

Question 6 (d)

As with question 6a (iii), candidates were directed to information contained within a resource and the command word was 'suggest'. As this was also a four-mark question, there were two marks available for each developed reason; with one mark for identifying the reason using the information from the resource booklet (AO3), and a further mark for development through explanation (AO2). While many candidates were able to use the information provided in the resource booklet to identify a reason (e.g. 'rising CO_2 levels' or 'reduced transpiration'), some were unable to further develop their point to link to drought. While the link did not need to be complex, candidates were required to further develop their answer, for example, by adding, 'this leads to global warming' to a point about 'rising CO_2 levels.' As each point was worth 2 marks, a range of developed points was not required for each cause. It is important for candidates to realise that in these questions the information in the resource is being provided for a reason and should be interpreted and used.

This response was awarded the full 4 marks.

(d) Study Figure 6d in the Resource Booklet.

Suggest **two** reasons why deforestation in Queensland may cause drought.

(4)

1 Trees contribute a lot of water to the atmosphere through transpiration; a loss of trees will cause a decrease in precipitation.

2 CO_2 is a greenhouse gas, which traps heat in the Earth's atmosphere, warming the Earth. As CO_2 emissions increase due to deforestation, so will the temperature, decreasing precipitation.

ResultsPlus
Examiner Comments

This candidate has identified two clear causes (reduction in transpiration and increased CO2 emissions) and has then developed each point ('decrease in precipitation' and 'warming the Earth').

ResultsPlus
Examiner Tip

The term 'suggest' is really another way of asking the candidate to 'explain', but in unfamiliar circumstances. Therefore, ensure you link the cause and effect together rather than simply listing a range of points.

Question 6 (e)

The command word of this 8-mark question is 'assess'. This requires candidates to use evidence to determine the relative significance of something, giving consideration to all factors and identifying which are the most important.

While the mark scheme identifies the indicative content, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' to the response and then decide where the response falls within the level. The level descriptors are the same for all 'assess' questions within this paper and across all the papers in both GCSE Geography specifications. It is therefore important that teachers and candidates become familiar with them, and how they are applied.

In the case of 'assess' questions, the Assessment Objectives which are being examined are AO2 (4 marks) and AO3 (4 marks). In the case of the AO2 marks, in the context of this question, candidates are required to identify relevant strategies which emerging or developing countries have used in response to drought, and to explain how they have helped to alleviate the consequences of drought/prevent future droughts. The expectation is that these responses will be rooted in the country which the candidate is required to list at the top of their response. In cases where the candidate has identified a relevant emerging or developing country, but has then written a generic answer and not mentioned the country, this is likely to limit the mark at the bottom of Level 2. In some cases, candidates wrote about a developed country (e.g. USA). In such cases, these responses were placed in Level 1 with some credit being given if the responses were also relevant to emerging or developing countries (e.g. providing emergency water supplies).

In relation to the AO3 marks, the command word 'assess' requires candidates to write a balanced argument which addresses the question. It also requires candidates to write a logical answer where the argument presented makes sense and is supported by the evidence presented. Finally, while not requiring a final concluding paragraph, the response does require judgements to be made. In the context of this question, this could be in relation to which strategies the candidate believes were most effective and why. As mentioned, these judgements can be woven through the answer, and this is often a more effective approach than a 'bolt on' concluding paragraph at the end of the answer.

While there were examples of Level 3 responses, many candidates got 'stuck' in Level 2 because they did not make judgements, or they made judgements which were not supported by the evidence provided in the answer.

This response was awarded Level 3 and scored 7 marks.

(e) Assess the different responses to drought in a named emerging **or** developing country.

(8)

Named emerging or developing country ~~Nimidia~~ Nimidia

Nimidia, as ~~an~~ a developing country experienced drought few years ago. Since the major industry there is agriculture, water is very important. During the drought, farmers lack water to even hydrate themselves, so they don't even have enough water to hydrate their livestock nor crops. Crops start to die out. The government tried to purchase their livestock, however, this policy is not successful, ~~due~~ due that farmers think that the price is too low, although a minority was forced to sell, in order to survive by ~~relocating~~ moving to urban areas. Overall, this policy is not successful.

Another policy was that farmers could give their livestock to the government to ~~be~~ be placed in another place that has no drought. This was again unsuccessful since farmers were worried that they could not get their livestock back, or in an even worse state. Organisations, for example Red Cross, or international aid came into help. Countries from America and Europe gave ~~the~~ money to the Nimidian government money to help, and some gave out supplies for example food and water to help people out. This was partially successful as not all farmers are reached and people got ~~too~~ more ~~food~~ supplies than they actually need.

Individual tried to dig for wells to draw water. This was generally successful as some do get ~~one~~ wells to draw water, however the water that was extracted was usually dirty and can ~~or~~ transmit diseases.

Overall, the responses from individuals, government and orgcisations were a failure as the policies from the government did not work out, orgcisations could not reach all, and individuals could not do much.

ResultsPlus
Examiner Comments

This candidate has structured their response in a clear fashion, using a paragraph for each type of response. Each point is relevant to responding to drought, and attempts have been made to judge the success of each strategy at the end of each paragraph. To reach the top of Level 3, this candidate would have needed to provide a clearer structure, for example, distinguishing between small scale and larger scale solutions, and to explain why some of these, overall, work better than others.

ResultsPlus
Examiner Tip

Using paragraphs to organise a longer response is an effective way. It helps to organise candidates' thoughts and makes it clearer to the examiner.

Question 7 (a)

Most candidates were able to name one deciduous tree species. A small percentage of candidates simply wrote 'deciduous' while others either wrote 'coniferous' or named a coniferous tree species, none of which were awarded a mark.

Question 7 (b)

In Q7b(i), most candidates were able to read the correct percentage from the pie chart.

Question 7b(ii) required candidates to carry out a calculation based on the percentage stated in part (i). Candidates needed to recognise that they were being asked to calculate 15% of the total area of the UK. This question did require them to show their mathematical workings, as well as writing the final answer. If a candidate wrote the correct answer but did not show their workings, they were awarded 1 mark. If candidates had shown the correct workings but had then written an incorrect answer (e.g. due to an arithmetic mistake), they were awarded 1 mark for their workings. Where candidates had identified the wrong percentage in part (i) they could still get a mark for their workings in part (ii), but would not be awarded a mark for the final answer.

There is a space in the answer booklet for the final answer and it is very helpful if the final answer could be written on the answer line. However, if it is not written in this space but it is clear that the correct answer has been given, this was credited. Candidates showed a range of different ways of working out the final answer. These included calculating 0.15 x 23 500 000, calculating 1 % of 23 500 000 and then multiplying by 15 or calculating 10% and then 5 % of 23 500 000 and then adding the totals together.

This response was awarded the 1 mark for part (i) and the full 2 marks for part (ii).

(i) Identify the percentage of the UK's land use which is forestry.

(1)

80 - 65 =

15 %

(ii) The total area of the UK is 23 500 000 hectares (ha).

Calculate the area of forestry in the UK.

You must show your working in the space below.

(2)

$\frac{23\,500\,000}{100} = 235000$

235000 x 15 = 3525000

3525000 ha

ResultsPlus
Examiner Comments

This candidate has approached part (ii) by working out how much 1% is, and then multiplying by 15 to give the final answer. The final answer is clearly written in the space provided.

ResultsPlus
Examiner Tip

Show mathematical workings in a step-by-step fashion. This will help to ensure that mistakes are not made and makes things clearer for the examiner.

Question 7 (c) (ii)

This was a similar question type to Q6b (ii) with a basic climatic factor being developed through expansion up to a maximum of 3 marks. In terms of the climatic factor, the main characteristic of a desert is the extreme aridity. Therefore, if candidates identified the fact that deserts are arid environments ('dry' or 'very dry' were acceptable terms), they would be awarded the 'climatic factor' mark. They would then be awarded a further 2 marks if they were able to explain the reasons for the aridity.

This question was not answered very well with a relatively small percentage of candidates being able to explain why deserts are so dry. It should be noted that Q6b (ii) was also not answered well by most candidates. It would appear that process understanding is relatively weak in relation to the weather hazards and climate change section of the specification.

This response was awarded the full 3 marks.

(ii) Explain **one** way climate influences the distribution of deserts.

(3)

The climate has to be dry and arid, so nomally deserts occur when the majority of air is falling [redacted] with high pressure. means that ~~temp~~ the climate is stable with no rain. Deserts are nomally found ~~between~~ on the 30°C [redacted], 90°C on the polar and hadley cell as the extremely hot air / cold air falls over these areas, creating a desert

ResultsPlus
Examiner Comments

This candidate has identified a valid climatic factor linked to dryness/aridity (1 mark) and has then developed their answer in terms of 'falling' air (1 mark) and 'high pressure' (1 mark).

Question 7 (d) (i)

This question was generally answered well with most candidates able to plot the bars accurately. However, there were some candidates who lost marks because their plotting lacked accuracy and did not follow the grid lines. As they were required to plot a bar chart, marks were only awarded if bars, rather than lines, were plotted, although bars which were not the same thickness as the ones already on the graph were not penalised. This is a relatively low level graphical skill, but it is important that it is practised to ensure that candidates increase their level of accuracy. They were not required to shade their bars, but some candidates clearly wasted valuable time doing so.

Question 7 (d) (ii)

While many candidates were awarded 1 mark for their responses to this question for identifying a basic reason for the very high biodiversity in Tropical rainforests, they were often unable to develop their answers clearly enough to gain the second mark.

The most popular reason given related to 'high temperatures' or 'high rainfall' with many candidates writing both, but not then adding any further development. Such answers were awarded 1 mark. Similarly, if a candidate wrote that Tropical rainforests are 'very large biomes' and have 'very high temperatures' they would only be awarded 1 mark if neither of these two points were developed.

This response was awarded the full 2 marks.

(ii) Explain **one** reason why Tropical rainforests have a very high biodiversity.

(2)

- The conditions are Perfect for all Species, there is high temperature, lots of water. This causes humid air and good conditions for photosynthesis

ResultsPlus
Examiner Comments

This candidate has identified a basic cause for the very high diversity ('high temperature') and has then developed this point by adding that this provides 'good conditions for photosynthesis'.

ResultsPlus
Examiner Tip

It is very important that candidates understand all the key specification terms. In this case, candidates need to understand what is meant by 'biodiversity'.

Question 7 (e) (i)

This was the second of the 2-mark calculate questions in the paper. As with the first, candidates were required to show their mathematical workings. If they did not, or they showed incorrect workings, they would not be awarded the second mark, even if they had written the correct answer.

A small percentage of candidates were not awarded the mark for the correct answer because they did not give the answer to one decimal place, which was required by the question. This question proved more challenging than Q7b and reflects the fact that the level of demand does ramp up through each section and towards the end of the paper.

A significant percentage of candidates calculated 80% of the original total rather than realising that the total amount lost per year had fallen by 80%, and that they should, therefore, calculate 20% of the original total. Building more mathematical and statistical manipulation of data into 'normal' teaching is important, not just because it will help prepare candidates for their GCSE exams, but will also help to make lessons more challenging and interesting.

This response was awarded the full 2 marks.

(e) Tropical rainforests provide goods and services for people, but are also under threat.

Study Figure 7d below.

> The amount of land lost to deforestation in 1995 was 29 059 km².
>
> In 2015 the amount of land lost to deforestation had fallen by 80%.

Figure 7d

Information about deforestation in Brazil

(i) Calculate the amount of land lost to deforestation in 2015.

Answer to one decimal place.

You must show your working in the space below.

(2)

1 − 0·8 = 0·2

29059 × 0·2 = 5811·8

5811·8 km²

ResultsPlus
Examiner Comments

This candidate has written their answer clearly in the space provided. It has been given to one decimal place, as required by the question. The workings are shown clearly.

ResultsPlus
Examiner Tip

Candidates are encouraged to write the final answer in the space provided on the answer line.

Question 7 (e) (ii)

The structure of this question is similar to Q6d with the question requiring two separate causes to be identified and developed. A mark was awarded for each cause and a second mark for a linked development of each one. If a candidate identified 3 or 4 separate causes but did not develop them, they were awarded a maximum of 2 marks.

This response was awarded 2 marks.

(ii) Explain **two** causes of deforestation in tropical rainforests.

(4)

1 Goods such as goo timbs which is made
som wood is a causes g degorestation as
timbs is used to built homes and
furniture.

2 To expand cities on the edge g the
rainforest g because g increasing
population

ResultsPlus
Examiner Comments

This candidate has identified two clear causes of deforestation, timber and for urban growth. In both cases there is further development linking the use of timber to building houses and furniture and the expansion of cities to the growing population.

ResultsPlus
Examiner Tip

This candidate has made clear links between the basic cause (as timber is used) and the development (because of increasing population).

Question 7 (e) (iii)

This is a 4-mark 'suggest' question and, as with the other 'suggest' questions, directs the candidates to a resource. The Assessment Objectives being examined by this question are AO2 and AO3. In terms of AO3, the candidates were required to interpret the graph by identifying what had happened to the rate of deforestation since 2004. They were then required to explain this change (AO2).

As with Q6d, although the question does not explicitly state it is a requirement to use information from the resource, candidates are guided towards this in the question by the phrase 'study Figure 7e in the Resource Booklet'. Candidates need to be aware that in such questions where they are being directed towards a resource, they should use it to help answer the question. To gain the remaining three marks, candidates needed to identify a valid reason why the rate of deforestation had fallen (e.g. increased government protection), and then develop it to a maximum of 3 marks (e.g. how the governments actually ensures that the forests are being protected). They could still gain these three marks even if they did not state that the rate of deforestation had fallen.

This reponse was awarded the full 4 marks.

(iii) Study Figure 7e in the Resource Booklet.

Suggest **one** reason why the annual rate of deforestation has changed since 2004.

(4)

One reason why the annual rate of deforestation has decreased since 2004 is because of the new government legislations that were implemented. This would mean that logging is illegal and that anyone caught doing it would be fined or jailed. This resulted in a decrease of annual deforestation as less people are chopping down trees because of the government legislations.

This candidate has identified the decrease in the rate of deforestation in the first line (1 mark). The candidate has then identified 'new government legislation' as a valid reason (1 mark), and then further developed this with two linked points each worth 1 mark suggesting that, 'logging is illegal' and 'anyone caught doing it would be fined or jailed'.

It is important that the direction of change on a graph is stated (e.g. 'the rate of deforestation has decreased') rather than simply stating that 'it has changed'.

Question 7 (f)

This question proved challenging for many candidates. It should be remembered, however, that the level of demand does ramp up through the paper and this final question is designed to be the most challenging. This is, in part, reflected in the use of the command word 'assess' but also in the synoptic nature of this question. It is designed to link at least two parts of Topic C content. In this case, it links Topic 3.4a and Topic 3.5c. The synoptic nature of this final question, and the use of more challenging command words, was exemplified in the Sample Assessment Materials, and in other assessment material provided since the launch of this specification.

It was disappointing to see so many candidates did not attempt to answer this question. This may have been due to the more challenging nature of the question, but may also have been caused by time management issues across the paper.

In relation to the question itself, it is important to recognise that any key term from the specification (e.g. 'abiotic and biotic characteristics' or 'functioning') can appear in an exam question. It is therefore important that Centres are systematic in their teaching of the specification and make sure that sufficient emphasis is placed on the development of both knowledge and understanding of key terms.

In the case of 'functioning', where candidates recognised that this related to the elements of the ecosystem and the links between them, this helped guide them towards writing about the role of the nutrient cycle within the tropical rainforest. While simply writing about this would only get them so far, it did provide a starting point.

In relation to the AO2 marks, candidates were expected to identify elements of the tropical rainforest ecosystem, focusing particularly on the nutrient cycle. Examiners were then looking for an explanation of how abiotic characteristics (e.g. rainfall, temperature, nutrients) and biotic characteristics (e.g. human activity, decomposition of leaf litter releasing nutrients) affected the functioning of the ecosystem (e.g. direction and nature of links between the different elements). Bearing in mind that this is an 8-mark question, and there are only four AO2 marks available, this explanation did not have to be comprehensive but just needed to show an understanding of 2-3 characteristics and their impact to reach Level 3.

In relation to the AO3 marks, the command word 'assess' required candidates to write a balanced argument which addressed the question. It also required candidates to write a logical answer where the argument presented makes sense and is supported by the evidence presented.

Finally, while not requiring a final concluding paragraph, it did require judgements to be made. In the context of this question, this could be in relation to which of the characteristics the candidate believes has the most influence on the functioning of the ecosystem. There is no right or wrong answer to this question, but candidates should state clearly what they believe and why.

This question also has 4-marks allocated for the assessment of spelling, punctuation, grammar and use of specialist terminology. Obviously, candidates will not be awarded any of these marks if they do not answer the question. The use of paragraphs is one element which contributes to this mark and should be encouraged as it helps to structure candidates' responses.

This response was awarded Level 3 and scored 7 marks, of which, 3 marks were awarded for spelling, punctuation, grammar (SPAG) and use of specialist terminology.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(f) Assess the role of biotic and abiotic characteristics in the functioning of tropical rainforests.

(8)

In ~~the~~ Tropical Rainforests, biotic and abiotic factors work together to help the rainforest function. Biotic factors include the nutrient cycle (also known as Gershmel's model) which shows how biomass, litter and soil ~~work~~ interchange. Biomass is always the largest store because the ~~##~~ conditions of the tropical rainforest - warm and wet all year - make it ideal for biodiversity to live. When biomass dies it falls into the litter store but due to the large amount of rainfall the litter store is small because rain leaches it. Also the soil store is small due to leaching as well, except for a nutrient rich hummus layer at the top which helps the plants function. The trees are adapted to the small soil store as they have short roots. Stratification is a biotic factor that helps the tropical rainforest function. For example, the trees of emergent layer rises above the canopy in order to gain maximum sunlight, an abiotic factor that helps the plants grow via photosynthesis. ~~Also~~ Also, sub-canopy trees grow in spaces in the canopy layer. Rainfall is an important abiotic factor as plants need water to grow and many species of animals and birds need water too. Human activity can be considered as a biotic factor as it alters the functioning of the tropical rainforest. For example, human activity such

as deforestation destroys habitats for animals in the Tropical Rainforest and thus has ~~detrimental~~ impacts. Another abiotic factor is the ~~posit~~ location of Tropical Rainforests. They're found along the equator optimum, climatic ~~where~~ ~~sunlight~~ which is least affected by seasons. Thus conditions are ~~most~~ constant throughout the year resulting in high biodiversity.

ResultsPlus
Examiner Comments

This candidate has placed a clear emphasis on the elements of the nutrient cycle and the links between them. The candidate has explained how a range of abiotic and biotic characteristics have affected the functioning of these links. The candidate has constructed a balanced argument and there are some judgements, although this is an area which could be developed. In relation to the SPAG marks, the lack of paragraphs meant this was held back at 3 marks.

ResultsPlus
Examiner Tip

Using paragraphs to structure extended answers will really help. In the case of this question, paragraphs could be based around different abiotic and biotic characteristics.

Paper Summary

Outlined below are a few general suggestions which may further improve performance across the paper:

- Centres should prepare candidates for the exam using the wording of the specification and relate this to the content taught, so that candidates are familiar with question wording used in the examination.

- Centres should spend time reviewing the examples in this report, and other examples of candidate responses which will be published. This will help them become more familiar with the expectations of the command words.

- In questions where there is reference to a resource, it is important to ensure that evidence from the resource is used to answer the question. While in some questions it may be clear that the resource should be used or completed, in other questions, greater familiarity with the command words and style of questions will help candidates work out what they are required to do.

- In questions where they are asked to develop a single reason, it is important to ensure that the appropriate number of links in the explanatory chain are developed. The number of marks should be used as a guide to this.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

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