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GCSE Geography A 1GA0 01

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Introduction

This Examiner's report is intended to provide an insight into performance on Paper 1: The Physical Environment component – in particular, analysing the majority of questions in terms of what went well and where common mistakes and under-performance were evident. Exemplar responses from 'real' scripts have been used to demonstrate good practice and highlight common pitfalls encountered by candidates.

The structure of the paper remains the same and is outlined below; please note that this (and future) question papers are based upon Issue 3 of the specification.

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 response questions, 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 questions 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. 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 (Questions 5 and 6). The 4 marks for spelling, punctuation, grammar and use of specialist terminology were moved to the end of this section for this series. This will continue in future series.

In Section C (Ecosystems, Biodiversity and Management), candidates are required to answer all the questions (Question 7).

In general, the assessment of application and interpretation (AO3) and the addressing of the command words 'examine' and 'assess' once again appear to have proven challenging for some candidates. In relation to the 8-mark 'examine' questions in Section A, it was clear that some candidates are continuing to improve their ability to use evidence from the resources in their responses and therefore gaining more of the AO4 marks.

I hope that you find reading this document useful and that it helps you to improve the performance of your candidates in future examination series.

Question 1 (b)(i)

This question required candidates to measure the distance between two points on the map. They were then required to use the map scale to convert from cms to kms. This proved challenging for some candidates. In terms of workings, a mark was awarded if the candidate showed that they had divided the measured distance by the length of the scale bar.

A small minority of candidates lost a mark because they did not give their answer to one decimal place. Candidates should be encouraged by centres to write their answers on the answer line provided. However, if it is not written in this space but it is clear that the correct answer has been given, this will be credited.

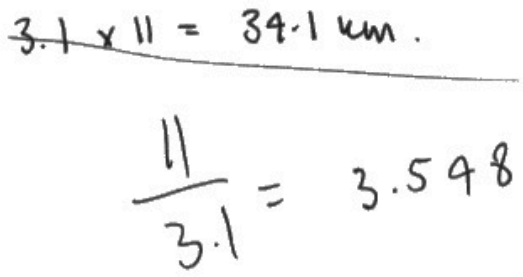
(b) Study Figure 1b in the Resource Booklet.

(i) Calculate the width of the valley between **X** and **Y**.

Answer to **one** decimal place.

You must show your working in the space below.

(2)



3.548

km

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Examiner Comments

This response was awarded 1 mark.

The candidate has shown correct working (1) but has not given their answer to one decimal place as required in the question.

ResultsPlus
Examiner Tip

You need to be able to use the scale on an OS map.

(b) Study Figure 1b in the Resource Booklet.

(i) Calculate the width of the valley between **X** and **Y**.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

$$\frac{10.8\text{cm}}{3.1} = 3.5\text{km}$$

3.5 km

ResultsPlus
Examiner Comments

This response was given 2 marks.

The correct answer was given (1) along with accurate workings (1).

Question 1 (c)

This question proved challenging for some candidates. Many candidates appeared confused between erosion and weathering and there was only limited reference to specific details of weathering processes. One mark was available for identifying the impact on the landscape and the second mark was for an explanation of this impact in terms of weathering processes. This mark was not awarded for simply naming a weathering process.

(c) Explain **one** way in which weathering affects landscapes.

(2)

Biological weathering affects the landscape as plants grow into cracks of the rocks, new life begins.

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate has identified that biological weathering involves plants growing in cracks in rocks (1) but has not then gone on to link this to the impact on the landscape.

(c) Explain **one** way in which weathering affects landscapes.

(2)

Biological weathering affects landscapes as the roots of trees grow into cracks in rocks, pushing them apart and causing them to break

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that biological weathering involves the roots of trees growing in cracks (1) and has then gone on to explain that this breaks the rocks apart (1).

Question 2 (b)

While a minority of candidates were able to define the term 'slumping' clearly, many candidates did not have accurate knowledge of this process. Some of them simply referred to a general definition of mass movement while others confused it with other mass movement processes such as rockfall. Centres should ensure that candidates are clear about all the key terms from the specification and make sure that they can recall definitions.

(b) Define the term **slumping**.

(1)

saturated soil descends in a rotational manner.

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate has provided a correct definition with the idea of downward movement in a rotational manner.

ResultsPlus
Examiner Tip

Ensure that you can define all the key terms in the specification.

Question 2 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a reason why there are seasonal changes in the rates of coastal erosion (eg there are more storms in winter) and then develop their answers through linking this to the rate of erosion. This could be by linking it to how it would affect the rate of erosion (eg more powerful storms in winter (1) so the rate of erosion is higher (1)) or by developing their initial point (eg storms are less powerful in summer (1) which means they have less energy (1)).

(c) Explain **one** way seasonal changes in the UK's weather can affect rates of coastal erosion.

(2)

One way is in winter as storms are more frequent. this means that there are more destructive waves which erode the coast so coastal erosion ~~[illegible]~~ increases

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that storms are more frequent in winter (1) and that this leads to more destructive waves/ increased erosion (1).

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 and how the components and processes interrelate.

The level descriptors are the same for all the 'examine' questions (Q02(d), Q03(d) and Q04(d)) within this paper and also across all the papers in both GCSE Geography specifications. In the case of these questions, the AOs which are being examined are AO3 (4 marks) and AO4 (4 marks). To secure the AO4 marks, candidates are required to use geographical skills to extract information from the figures in the resource booklet which will help them answer the question.

In the case of this particular question, relevant content relating to the AO4 marks could have included identifying and describing the landforms shown in the figures (eg bays, beaches, headlands, caves, arches and stacks); providing the location of the features using grid references; measuring the dimensions of the landforms; using distance and direction to compare their relative locations. Credit for the AO4 elements was also given where the candidate had used the information in the text boxes to support their answers and this had been developed further than simply copying the text. It was pleasing to see many candidates making use of evidence from the map and photo, but this is an area which still needs to be developed.

In relation to the AO3 marks, candidates were required to explain the processes involved in the formation of the landforms shown in the resources. This part was done well by many candidates with a good understanding shown of the erosional processes involved in their formation. Some candidates also extended their answers by considering the role of depositional and mass movement processes. Some candidates suggested that there was a spit shown on the figures – they appear to have got confused with the headland/features found at The Foreland. This was not credited.

(d) Study Figures 2b and 2c in the Resource Booklet.

2 caves erode from either side of headland

Examine the role of different physical processes in the formation of the coastal landforms shown in Figures 2b and 2c.

You must use evidence from Figures 2b and 2c in your answer.

(8)

From the figure, I can see that the landform is an example of a cave, arch, stack and stump. I can see that the cave is the section connected to the land. This is formed through hydraulic action and Abrasion. The continuous erosion gradually creates joins ~~to th~~ and faults in the rock, making it weaker. From the figure, I can see that there is an arch in the middle. This is formed when two caves erode from either side of a headland. From the figue I can see that the final landform is a stack as it is short and smaller. This is formed when the continuous erosion (hydraulic action and abrasion) ~~from~~ causes the arch to collapse. This is because of erosion at the foot and weathering (such as mechanical) at the top of the arch.

ResultsPlus
Examiner Comments

This response was awarded Level 2 – 5 marks.

The candidate has included a limited range of evidence from the figures. This includes identifying some landforms (eg cave, arch, stack and stump). They have attempted to integrate the evidence into the answer. They have also named some specific erosional processes, but their understanding of the sequence involved in the formation of the landforms is limited.

ResultsPlus
Examiner Tip

Make sure you use a range of evidence from the figures in both the 8-mark questions you answer. Where OS maps are provided, this could include using grid references; measuring distance and direction and using contours to interpret the relief.

(d) Study Figures 2b and 2c in the Resource Booklet.

Examine the role of different physical processes in the formation of the coastal landforms shown in Figures 2b and 2c.

You must use evidence from Figures 2b and 2c in your answer.

(8)

*at 117m

This landform is first caused due ~~to~~ to a discordant coastline where ~~the type~~ the types of rock are perpendicular to the Coastline. This leads to headlands and bays being formed. The headland ~~points~~ sticks out Eastwards about 1 km to The Foreland. This is because there is resistant rock ~~(Chalk)~~ which erodes slower. The rock to the North and South is weaker so erodes quicker (such as at Ballard Cliff) creating a bay. Evidence for this is the steep cliff~~s~~ (*) At ~~SZ~~ *042825 there is a ~~beach~~ beach. This is because the headland shelters the bay from the waves coming from the South East. This leads to the water depositing its material because there are no waves to carry the sediment so it loses energy.

~~At 055825 there is Old~~

At 052819 there is the pinnacles. This is an arch and is formed by waves ~~eroding~~ eroding the rock through hydraulic action in a notch, ~~to~~ to make larger cracks. These grow into caves and the rock broken off increases erosion due to abrasion. This continues to increase until it forms an arch. When this arch gets large enough it collapses to form a stack. When this stack erodes away it forms a stump. This is seen at Old Harry at 056826.

from the East

ResultsPlus
Examiner Comments

This response was awarded Level 3 – 8 marks.

The candidate has included a range of evidence from the figures (eg identifying a range of landforms; using grid references to locate them; using direction to provide their relative location). They have used this information well to support their explanation of the processes and the sequence involved in the formation of the landforms.

Question 3 (b)

As with Q02(b), only a minority of candidates were able to provide an accurate definition of the key term in the question. Many candidates confused saltation with other transportation processes while some candidates referred to a definition of an erosion process.

(b) Define the term **saltation**.

(1)

Saltation is the bouncing of small pebbles along the riverbed in a 'leap frog' formation - it is a form of transportation.

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate has provided a correct definition – identifying that sediment bounces along the river bed (1).

ResultsPlus
Examiner Tip

Ensure that you can define all the key terms in the specification.

Question 3 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a reason why sediment shape usually becomes more rounded downstream and then develop their answers. Many candidates were able to gain the initial mark by identifying a process (eg attrition or erosion). The development mark was in terms of explaining how this process could lead to a more rounded shape (eg the sediment collides with each other). They could also have gained the two marks by identifying a particular aspect of a process and then developing it further (eg sediment collides with each other (1) which knocks the corners off it (1)).

(c) Explain **one** reason why sediment shape usually becomes more rounded downstream.

(2)

Because as sediment is transported in the river flow, it is bashed or collides into other sediment or the river banks breaking off pieces making it rounde and often smaller also.

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that sediment collides with each other (1) which breaks bits off (1).

Question 3 (d)

Question 3(d) focused on the causes of the flooding shown in Figure 3b. In terms of the AO4 marks, candidates were able to obtain a range of evidence from the photograph, textboxes and OS map. Some candidates were able to gain a limited number of AO4 marks by mainly focusing on the information in the text boxes. This material was credited as long as it was further developed to support their answer. This could include making links between the evidence in the textbox and information from the map – eg naming towns and villages which the river flows through. The candidates who gained 3-4 of the AO4 marks were likely to have used evidence from both resources with map evidence being used (eg direction of river flow; using grid references to locate features such as the main settlements or areas of woodland; using contour evidence to identify the wide floodplain).

In terms of the AO3 marks, the candidates were required to explain why the flood had taken place. This was done best when the candidates divided their answers up into paragraphs focusing separately on different causes. In some answers there was some very good cause-effect explanation which developed a number of links in the 'chain of explanation'. These answers also integrated key processes and terms into their answers (eg infiltration, surface run-off).

(d) Study Figures 3b and 3c in the Resource Booklet.

Examine the causes of the river flooding shown in Figures 3b and 3c.

You must use evidence from Figures 3b and 3c in your answer.

(8)

The causes of river flooding on River Avon has many problems. First of all most of the vegetation such as coniferous wood is quite far away from the river so that when it floods or the water level gets higher the plants and trees are not there to absorb the water into the roots as well as the fact that there is a village nearby so that the floor is made for an impermeable surface (concrete) so the river flood is more likely to occur as there is nothing to stop the river. Another cause of flooding that there are few flood defences in the area so that once it does start to flood there is nothing there to prevent it from happening which would lead the several towns and villages that the river flows through to be flooded. Also a cause of river flooding is that on the 12th of January there had been a large storm and heavy rainfall for many weeks. This would cause flooding as it increases the water volume in the river with the heavy rain being added to it so that the water level would rise more rapidly causing the river to flood. The last cause is that again the

river is surrounded by another impermeable surface clay which is the main rock type surrounding the river so that the when the river floods the water cannot be absorbed or prevented.

ResultsPlus
Examiner Comments

This response was awarded Level 2 – 5 marks.

The candidate has included a limited range of evidence from the resources (mainly information from the text boxes which they have developed to some extent/ integrated into their answer). They have included some process explanation although this lacks depth. This response is stronger on the AO3 elements than AO4.

ResultsPlus
Examiner Tip

Make sure you use a range of evidence from the figures in both the 8-mark questions you answer. Where OS maps are provided, this could include using grid references; measuring distance and direction and using contours to interpret the relief.

(d) Study Figures 3b and 3c in the Resource Booklet.

Examine the causes of the river flooding shown in Figures 3b and 3c.

You must use evidence from Figures 3b and 3c in your answer.

(8)

In figure 3c we can see that ~~for~~ Fordingbridge is grid reference 1414 is approximately 1km wide using the scale. This means that there is lots of impermeable ground where water cannot be absorbed and stays on the surface leading to flooding. We also see in figure 3c that there is very little woodland along the river meaning that there are few trees which often would help to absorb and store water, preventing flooding. The only woodland nearby the town is in grid reference ~~1412~~ 1412 and 1614. However, it only covers a very small area of approximately 0.5km^2 meaning flooding is more likely. We also see in figure 3b that there are very few trees, reinforcing the fact that flooding is more likely due to a lack of trees. We are also told in figure 3b that the main rock type is clay which is impermeable. This leads to water remaining on the surface and flooding. It also states in figure 3b that there was heavy rainfall. This means that there will have been a very high river discharge and it was highly likely to flood. In figure 3b it also says that the river flows through many villages, yet more points where water will not be absorbed due to

impermeable ground. We can see in figure 3c that the ground is flat due to few contours. We can also see the flat area in figure 3b. This suggests that the area is a flood plain and is very likely to flood when river discharge is high. In figure 3b it states there are a few flood defenses but it is most likely not enough.

(Total for Question 3 = 12 marks)

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Examiner Comments

This response was awarded Level 3 – 8 marks.

The candidate has included a range of evidence from the figures (eg using grid references to locate features on the map; identifying areas of woodland and the approximate area it covers; using the contours to interpret the relief of the landscape). They have used this information well to support their explanation of their causes of flooding which is clearly explained with cause-effect linkages well developed.

Question 4 (b)

As with the other 1-mark 'definition' questions on the paper, this question was poorly answered by many candidates. Many candidates appeared to have no knowledge of the process whatsoever. Some of these may have been candidates who made a rubric error and answered questions in the Glaciation section even though they had not been taught this topic. Other candidates identified the role of moving ice but simply repeated that the glacier 'plucked' the rocks. This was not credited as it was largely a repeat of the question and alternative wording (eg 'pulls' or 'rips' out) was required for a mark to be awarded.

(b) Define the term **plucking**.

(1)

exposed rock being pulled out of it's origin by a glacier

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Examiner Comments

This response was awarded 1 mark.

The candidate has provided a correct definition – identifying that the glacier 'pulls out' the eroded rock (1).

ResultsPlus
Examiner Tip

Ensure that you can define all the key terms in the specification.

Question 4 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a reason why tourism can lead to changes in glaciated landscapes and then explain how this can lead to changes in the landscape. The scale of landscape could vary from glaciated upland landscapes as a whole (including the atmosphere) to the scale of individual rocks or landforms. This question was answered well by many candidates.

(c) Explain **one** way that tourism can lead to changes in glaciated upland landscapes.

(2)

It increases soil erosion due to more people hiking and walking on the landscape.

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Examiner Comments

This response was awarded 2 marks.

The candidate has identified hiking/ walking as an example of an activity carried out by tourists (1) and has linked this to soil erosion as the impact on the landscape (1).

Question 4 (d)

In Question 4(d), candidates could have included evidence extracted from the map (eg identifying examples of glacial landforms; locating landforms using grid references; describing the characteristics of these landforms using contour evidence; measuring the dimensions of the glacial trough) and from the photograph (eg describing the main features of the roche moutonée). The information in the textboxes provided a start for some candidates who otherwise struggled with this question. They would have been awarded at least a mark for the AO4 elements if they developed the information in the text boxes slightly.

In relation to the AO3 marks, the candidates were required to explain the role of both erosional and depositional processes in the formation of the glacial landforms shown. The majority of answers focused mainly on erosional processes and answers which did not consider the role of depositional processes could not get above the top of Level 2 – 6 marks. However, there were some outstanding answers which, although focusing mainly on erosional processes, also identified and explained depositional features such as ground and lateral moraines.

(d) Study Figures 4b and 4c in the Resource Booklet.

Examine the role of erosional and depositional processes in the formation of the glacial landforms shown in Figures 4b and 4c.

You must use evidence from Figures 4b and 4c in your answer.

(8)

A roche moutonnée is formed when there is a mound of very resistant rock. This causes the glacier to have to go over or around it, it causes erosion in surrounding areas at the base but leaves ~~a rocks~~ the rock. However there was some erosion leading to scratches from abrasion and crevasses.

~~Pinnacle~~ 638602 in figure 4C shows Pinnacle Crag. A crag is formed very similarly to a roche moutonnée. As resistant rock has low erosion rates as the glacier travels over. It leaves a steep side facing down the glacier and a shallow (lee) side facing up the glacier.

Nant Ffrancon is situated within a U-Shaped valley. This is formed due to glacial erosion, as the glacier proceeds it erodes the sides and ground

of the area. Then when it retreats it leaves a valley with the steep ridges.

Sand and shingle on the map is morraine, this is a result of

(Total for Question 4 = 12 marks)

TOTAL FOR SECTION A = 30 MARKS

glacial deposition and marks the points of advance and retreat.

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Examiner Comments

This response was awarded Level 2 – 5 marks.

The candidate has included a limited range of evidence from the figures. This includes identifying some landforms (roche moutonée, crag, U-shaped valley, moraine). They have also used a grid reference to locate one of the features. They have attempted to integrate the evidence into the answer. They have some idea of the characteristics of these landforms although this is not clearly developed. There are some processes identified although cause-effect linkages are relatively weak.

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Examiner Tip

Make sure you use a range of evidence from the figures in both the 8-mark questions you answer. Where OS maps are provided, this could include using grid references; measuring distance and direction and using contours to interpret the relief.

(d) Study Figures 4b and 4c in the Resource Booklet.

Examine the role of erosional and depositional processes in the formation of the glacial landforms shown in Figures 4b and 4c.

You must use evidence from Figures 4b and 4c in your answer.

(8)

Firstly, in figure 4b, there is a roche mutonée in the foreground. These are shaped by glaciers as when glaciers move over a rock, they smooth it with abraisment, causing the formation of a gradual and deposite piles of sediment lee side. On this, it is apparent from figure 4b, that striations form on the lee side from where the glacier has dragged rocks and sediment up it which then causes deep scratches on the roche mutonée. Afterwards, the glacier's melt water runs down the other side of the rock, seeps behind lose sections of the rock, freezes, and then causes the rocks to be plucked as the glacier moved over it, forming a steep and jagged stoss side.

In the background of figure 4b, and in the centre of figure 4c, going from 6263 to 6461, there is evidence of a glacial trough. This occurs as a glacier falls into a mountain's crevasse, and begins to erode the rock. It carves the interlocking spurs and eventually turns them into

truncated spurs by plucking and abrasion. It will deposit moraine along the sides of the glacier, called medial moraine, building up the sides of the crevasse. This is evident as they become very steep which we can see from the close contour lines on the OS map.

Once the glacier melts, all the sediment and moraine is left behind and deposited. As well as this, the melt water may go to form a outfit stream through the base of the valley which takes the path of least resistance that was carved out by the glacier, such as through striations.

(Total for Question 4 = 12 marks)

TOTAL FOR SECTION A = 30 MARKS

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Examiner Comments

This response was awarded Level 3 – 8 marks.

The candidate has included a range of evidence from the figures (eg identifying a range of landforms; using grid references to locate them; using contours to interpret the relief of the landscape and identifying features of the landforms from the photograph). They have used this information well to support their explanation of the processes and sequence involved in the formation of the landforms. They have included depositional landforms as well as erosional ones.

Question 5 (a)(i)

This question required candidates to identify the atmospheric circulation cell labelled in the figure. This was correctly answered by the majority of candidates although some confused it with the Ferrel or Hadley cells.

Question 5 (a)(ii)

This 2-mark 'explain' question required the candidates to explain why air is rising near the Equator. While many candidates were able to show that they knew that the air was warm and were awarded a mark, some struggled to develop this further. Examples of possible development points included that 'the warm air rises (1) because it is less dense' (1) or that 'the air is warm (1) because the sun's energy is concentrated at the Equator' (1).

(ii) Explain why air is rising in the area labelled **B**.

(2)

because it is hot and heat rises this is due to how close it is to the equator

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This response was awarded 1 mark.

The candidate has identified that the air rises because it is hot (1). Although they have mentioned that it is located along the Equator, they have not said why this leads to warmer air so the second, development mark was not awarded.

(ii) Explain why air is rising in the area labelled **B**.

(2)

The area labelled B is on the equator which recives the most concentrated rayes of sun light which heat up the air causing it to rise

ResultsPlus Examiner Comments

This response was awarded 2 marks.

The candidate has identified that the rising air has been heated up (1) due to the Equator receiving the most concentrated sunlight (1).

Question 5 (b)(ii)

This 3-mark 'explain' question required the candidates to use evidence from the figure to help explain why the rainfall totals vary across the UK. One mark was reserved for this AO3 element which could have included recognising an aspect of the rainfall pattern (eg higher rainfall on the west coast) or identifying the direction of the prevailing wind which was shown on the map. Many candidates gained this mark, which was pleasing, but some then struggled to actually explain the processes. There were some clear and relatively short answers which simply stated that 'there is more rainfall on the west coast (1) where there are more mountains (1) which leads to relief rainfall' (1). Although such an answer was very short, it would have picked up three marks and shows that candidates do not need to write lots to gain full marks.

(ii) Explain **one** reason why rainfall totals vary across the UK.

You must use evidence from Figure 5b in your answer.

(3)

up Figure 5b shows that up north in areas like Scotland there is more raingall. This is because it is at a higher ~~altitude~~ altitude with colder and wetter areas that are located further away from the equator and more towards the north.

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This response was awarded 2 marks.

The candidate has identified that there is more rainfall in areas like Scotland (1) and has linked this to it being higher altitude (1). However, they have not made the further link to relief rainfall and the third mark was not awarded.

(ii) Explain **one** reason why rainfall totals vary across the UK.

You must use evidence from Figure 5b in your answer.

(3)

In Scotland there are many mountains and so there is relief rainfall causing an overall ~~increase~~ higher ~~in the~~ amount of rainfall compared to other less mountainous regions such as the east of England.

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Examiner Comments

This response was awarded 3 marks.

The candidate has identified that rainfall levels are higher in Scotland (1) and so have gained the AO3 mark for interpreting the figure. They have then further developed their answer through reference to there being many mountains (1) leading to relief rainfall (1).

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Examiner Tip

Make sure that you make reference to evidence from the figure when you are asked to do so in the question.

Question 6 (a)

This question required the candidates to state one piece of evidence for natural climate change. As the command word is 'state' the candidates did not need to develop their point through explanation. Although 'temperature records' was awarded a mark, 'increasing temperatures' was not as the question was asking for details of the actual source of evidence.

6 The global climate was different in the past.

(a) State **one** piece of evidence for natural climate change.

(1)

ice cores.

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

A clear, short correct answer has been given so a mark was awarded.

ResultsPlus
Examiner Tip

Where the command word is 'state', a short answer should be provided and further explanation is not required.

Question 6 (b)

In this question, candidates were required to calculate the range of annual CO_2 emissions shown in the figure. This question required mathematical workings to be shown for one mark (the correct highest figure – the correct lowest figure) and the other mark was given for the correct answer.

(b) Study Figure 6a in the Resource Booklet.

Calculate the range of annual CO_2 emissions shown in Figure 6a.

You must show your working in the space below.

(2)

36 billion tonnes

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate was awarded a mark for the correct answer but did not provide any workings and so was not awarded the second mark.

(b) Study Figure 6a in the Resource Booklet.

Calculate the range of annual CO_2 emissions shown in Figure 6a.

You must show your working in the space below.

(2)

38 - 2 = 36

36 billion tonnes

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has provided the correct answer (1) and workings (1).

ResultsPlus
Examiner Tip

Make sure you write your final answer on the answer line when one is provided.

Question 6 (c)

This question required candidates to explain two impacts of climate change shown in the two photographs. The marks for this question were divided between two AO2 marks and two AO3 marks. The AO3 marks were reserved for the candidates being able to identify the impacts from the resource. The AO2 marks were awarded for further development through explanation. This could have involved them further developing the details of the consequences of the impact (eg flooding (1) leads to the destruction of property (1)) or by explaining the cause of the impact (eg global temperatures are rising (1) which has caused the glaciers to melt (1)).

(c) Study Figures 6b and 6c in the Resource Booklet.

Suggest **two** impacts of climate change.

You must use evidence from Figure 6b and Figure 6c in your answers.

(4)

Impact one (Figure 6b)

[illegible] One impact is increased flooding, as seen in figure 6b, this is because climate change causes more storms to occur leading to more flood

Impact two (Figure 6c)

The ice sheets located within cold climates are beginning to melt, as seen in figure 6c from 2009 – 2018, this is because of climate change meaning the higher temperatures melt the ice.

ResultsPlus
Examiner Comments

This response was awarded 4 marks.

For Impact one, the candidate has identified 'flooding' (1) and has developed this through the link to more storms caused by climate change (1).

For Impact two, the candidate has identified that the ice sheets have melted (1) due to higher temperatures caused by climate change (1).

(c) Study Figures 6b and 6c in the Resource Booklet.

Suggest **two** impacts of climate change.

You must use evidence from Figure 6b and Figure 6c in your answers.

(4)

Impact one (Figure 6b)

Laying concrete - increases surface run off meaning the water isn't absorbed back into the earth

Impact two (Figure 6c)

Global warming - Increase of Global temps (°C), increases the amount Glaciers melt

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

For Impact one, the candidate was not awarded a mark as they have not identified flooding and their explanation is not linked to climate change.

For Impact two, the candidate has been awarded 2 marks as they have identified melting glaciers (1) due to global warming (1). If they had stated that the glaciers had melted because of climate change, this would only have been awarded one mark.

Question 6 (d)

This 2-mark question required candidates to identify a human cause of drought for one mark with the second mark being awarded for the development of this cause through explanation. To be awarded the initial mark for a cause, it needed to be linked to a specific human activity (eg water used for irrigation or the construction of a dam) rather than simply stating 'over-use of water'.

(d) Explain **one** human cause of drought.

(2)

using too much water. like over watering your garden this can cause drought as there isn't enough water.

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate has identified watering the garden as an example of a human activity causing drought (1) but has not further developed this (eg in terms of depleting aquifers or reservoirs).

ResultsPlus
Examiner Tip

Where a question asks you to explain a way that human activity affects something, be as specific as you can in terms of the activity you are writing about.

(d) Explain **one** human cause of drought.

(2)

One human cause of drought is deforestation. This is because less trees means that less evapotranspiration occurs which leads to less moisture in the air therefore it rains less often.

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified deforestation as an example of a human activity causing drought (1) and has further developed this in terms of it leading to less evapo-transpiration/ rainfall (1).

Question 6 (e)

This 3-mark 'explain' question required the candidates to identify one reason why droughts are hazardous. Most candidates were able to gain at least one mark – for example by identifying that drought can lead to famine or death. Candidates who scored two or three marks were able to develop their 'chain of explanation' making links between their initial reason and the further development. For example, candidates were awarded three marks if they stated that 'drought can lead to crop failure (1) which reduces food for people to eat (1) which can lead to famine' (1). If a candidate identified two or more reasons, the section of their response with the most linked explanation points was the one which was credited.

(e) Explain **one** reason why droughts are hazardous.

(3)

farmers are unable to water crops which leads to harvest fail which then leaves their town/ village without much food to go around.

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that harvests will fail as farmers are unable to water their crops (1) and this means that there is a lack of food (1).

(e) Explain **one** reason why droughts are hazardous.

(3)

One reason is it can cause crops to dry up and die which means that people can't get the food that they need to survive which will cause a famine and people can die in famines.

ResultsPlus
Examiner Comments

This response was awarded 3 marks.

The candidate has identified that drought can cause crops to dry up and die (1) which leads to a lack of food (1) and as a result it may cause famine (1).

Question 6 (g)

This question required candidates to calculate the mean maximum wind speed for a number of tropical cyclones using the data set provided. They were therefore required to add up the total maximum wind speed figures and divide by the number of tropical cyclones. They were required to show their workings with one mark being awarded for the correct workings and one mark for the final answer. If they simply wrote the answer without showing any workings, they were awarded one mark.

Candidates should be encouraged by centres to write their answers on the answer line provided. However, if it is not written in this space but it is clear that the correct answer has been given, this will be credited. The question required candidates to give their answer to one decimal place and some candidates lost a mark because they did not follow this instruction.

(g) Study Figure 6e in the Resource Booklet.

Calculate the mean of the maximum wind speeds shown in Figure 6e.

Answer to **one** decimal place.

You must show your working in the space below.

$$\frac{(230 + 250 + 250 + 280 + 250 + 230 + 230)}{7}$$ (2)

245.71km/h

ResultsPlus
Examiner Comments

This response was awarded 1 mark.

The candidate was awarded the workings mark but gave their answer to two decimal places and so was not awarded the mark for their answer.

(g) Study Figure 6e in the Resource Booklet.

Calculate the mean of the maximum wind speeds shown in Figure 6e.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

$\frac{1720}{7} = 245.7$

245.7 km/h

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has given the correct answer (1) and workings (1). Note that they have not written out all the individual wind speeds and have simply written down what they put into their calculator as their workings.

ResultsPlus
Examiner Tip

If the calculation question is worth two marks, you will have to show your workings for the second mark.

Question 6 (h)

The command word for this 8-mark question is 'assess'. This requires candidates to determine the relative significance of something – giving consideration to all the elements being considered and to identify which are the most important. Unlike with the command word 'evaluate', 'assess' questions do not require candidates to write an overall conclusion. This question required candidates to identify the named emerging or developing country they were going to write about. They are required to have studied a named example as part of the specification. A small minority of candidates wrote about a developed country and these answers were awarded a maximum of Level 1 – 3 marks.

For the AO2 marks, the candidates were required to describe and explain the different impacts of tropical cyclones in their named emerging or developing country. The best answers were the ones which used a paragraph-based structure with each paragraph focusing on a different types of impact (eg economic, environmental and social). In the best answers, some detailed and accurate case-study knowledge was used to support their explanation.

As mentioned above, as this is an 'assess' question, candidates are not required to write an overall conclusion. However, if they write one and there is evidence of judgement within it, it is credited. A good approach to ensuring that candidates secure the higher levels for the AO3 elements is to add judgement comments at the end of each paragraph about the relative importance of the elements under consideration.

From this series onwards, the 4 marks allocated for the assessment of spelling, punctuation, grammar and use of specialist terminology (SPaG) have been moved to this question from the 8-mark question at the end of Section C. This decision, which was communicated to all centres, was taken because a significant minority of candidates had not been writing anything for the 8-mark question in Section C – and were therefore also not gaining any SPaG marks. This may have been because of time management issues but also because the paper is designed for the level of difficulty to ramp up through the sections and questions.

Candidates were not awarded any of the SPaG marks if they did not answer the question or if their response was not awarded any of the marks for the 8-mark part. It was pleasing to see a wide range of specialist terms being used by some candidates and these, combined with accurate spelling and punctuation, allowed many candidates to achieve 3 or 4 marks on this element.

~~Phillipens~~ ~~philipeans~~

In this question, four of the marks awarded will be for your spelling, punctuation, grammar and for your use of specialist terminology. ~~philepenes~~

(h) Assess the importance of the different impacts of tropical cyclones in a named emerging or developing country. (8)

Named emerging **or** developing country

~~[illegible]~~ ~~[illegible]~~ phillepenes

In the philepenes there was a tropical cyclone called taiphoon Haiyan. This taiphoon killed 6,300 people and caused 11 million people to be displaced. Killing 6,300 people is a serious consequence of the taiphoon so it would cause the philepenes to creare more defences and create new technology that is better at protecting ~~[illegible]~~ the people and predicting the taiphons. For future taiphoons this would reduce the numbers dying from taiphoons and would redue the amount of people that ~~need~~ are ~~to be reduced~~ displaced. Taiphoon Haiyan also costed $10billion dollars worth in repairs. For an emerging country this is a very significant amount because they won't be able to put the money towards other projects.

Overall I think the amount of deaths are the most important impacts because families and

friends will be angry and upset that they didn't have the protection they needed to survive. This would cause lots of disagreement in a country

ResultsPlus
Examiner Comments

This response was awarded Level 2 – 5 marks and 2 marks for SPaG.

The candidate has identified some relevant impacts and has included some located evidence as supporting material. They have made some attempts to explain the impacts although this is not in great depth. They have made some judgement statements but the AO3 elements are weaker than AO2.

In terms of SPaG, there are some spelling errors and punctuation is not consistently accurate. There is a reasonable range of specialist terminology included.

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

(h) Assess the importance of the different impacts of tropical cyclones in a named emerging or developing country.

(8)

Named emerging **or** developing country

The Phillipines

Typhoon Haiyan was a dangerous typhoon hitting the Philippines in 2013, having disastrous effects.

one social impact is that approximately 6300 people died, and many others were left injured due to the storm surge and debris from the destruction. Another impact is that businesses lost a lot of income, especially shops, as people began to loot shops for food and water out of desperation because they lost access to food and water. this is a social impact as people turned on each other out of hunger and desperation, and also an economic impact, as businesses lost an enormous amount of money due to damage to buildings, goods being stolen and not paid for and a loss of customers. An environmental impact was that the debris from destroyed buildings, vehicles and infrastructure polluted land and water, which was detrimental to wildlife as it killed many animals and destroyed the habitats of others, so this is an extremely important impact.

Another economic impact was the damage costs - although when compared to other storms such as Hurricane Sandy, the costs seem smaller, they still had a large impact on the Phillipines, as billions of dollars would be harder for the Philippines to pay for as it is a developing country with less money and also less access to the resources needed to rebuild.

Over 1 million people were made homeless by Typhoon Haiyan and had to live in

temporary accomodation which was harmful as it was very densely populated and very unsanitary (as access to sanitation was lost), so diseases spread extremely quickly, making many people very ill and even killing people. Overall, I think the deaths and impacts on the environment are the most important, as money can be regained and buildings can be rebuilt but lives cannot be gotten back, and many people and much wildlife died, so that is the most important impact.

ResultsPlus
Examiner Comments

This response was awarded Level 3 – 8 marks and 4 marks for SPaG.

The candidate has identified a number of impacts. They have used paragraphs to structure their answer which makes the different impacts clear. They have used specific details from their named example to support their answer. They have included judgements about the relative importance of the impacts at the end of each paragraph and have included further judgements in their final paragraph.

Their SPaG is consistently accurate and they have made good use of specialist terminology.

ResultsPlus
Examiner Tip

Use paragraphs to help structure your 8-mark responses.

Question 7 (a)(ii)

This 2-mark question was not answered well by many candidates. The specification requires candidates to have learnt about the characteristics of the world's large-scale ecosystems including temperate grasslands. While location is one of these characteristics, other characteristics include climate, soil and vegetation.

(ii) State **two** characteristics of temperate grassland.

(2)

1 long grasses and not many trees

2 Rain all year round

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified two correct characteristics of the temperate grassland ecosystem – long grasses (1) and rain all year (1).

Question 7 (b)(ii)

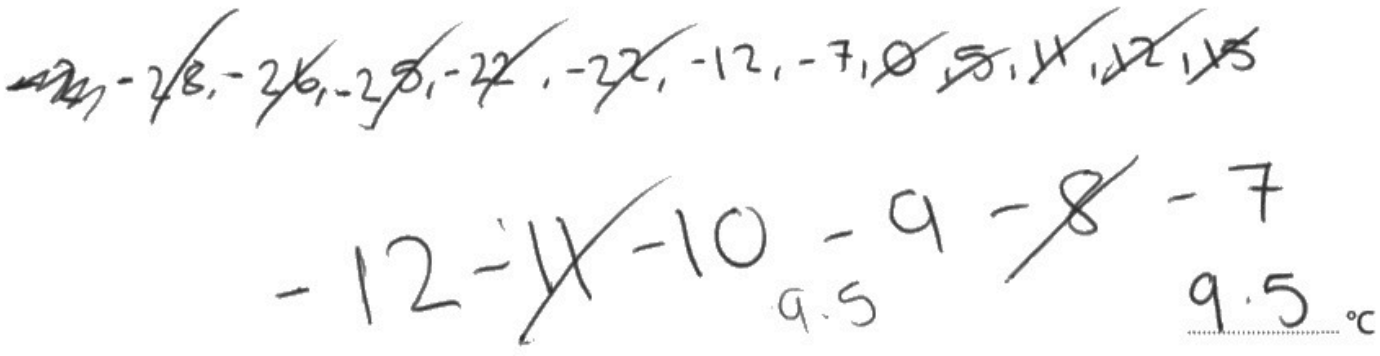
This question required candidates to calculate the median temperature using the data provided. While the majority of candidates were able to complete this calculation successfully, a significant minority were only awarded one mark as they did not show their working as requested. Some candidates were also unsure about how to deal with the fact that there was an even number of values and that the mean of the two middle numbers needed to be calculated as well.

(ii) Calculate the median temperature shown in Figure 7a.

Answer to **one** decimal place.

You must show your working in the space below.

(2)



ResultsPlus
Examiner Comments

This response was awarded 1 mark.

They were awarded a mark for their workings but have not written the '-' sign next to their answer and so were not awarded this mark.

(ii) Calculate the median temperature shown in Figure 7a.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

-28, -28, -28, -22, -22, -12, -7, 0, 8, 11, 12, 15

$$\frac{-7 + -12}{2} = \frac{-19}{2}$$

9.5

-9.5 °C

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate was awarded 1 mark for the correct answer and the second mark for their workings.

Question 7 (c)

This question required candidates to explain two ways that the biosphere provides resources for people. The specification lists food, medicine, building materials and fuel resources as examples. However, as the biosphere relates to the part of the Earth and its atmosphere in which living organisms exist and is capable of life, there was a very wide range of resources which candidates could have included in their answers.

life circle. /food. natural

(c) Explain **two** ways that the biosphere provides resources for people.

(4)

1 the biosphere provides wood which humans use as resources

2 the biosphere provdes medicine which humans can use.

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified two different resources but has not developed either.

(c) Explain **two** ways that the biosphere provides resources for people.

(4)

1 The biosphere provides plants which can be used for medicine such as aspirin which comes from the bark of willow trees. This is useful for ~~human disease and heat~~ healthcare.

2 ~~For~~ The biosphere can provide resources for construction e.g. timber from trees. This can be used to build houses for ~~support~~ human safety.

ResultsPlus
Examiner Comments

This response was awarded 4 marks.

The candidate has identified two resources (plants and timber) and has explained how each of these can provide resources to humans (plants provide medicines and timber can be used in construction).

Question 7 (d)

Most candidates gained the mark for this question with most responses focusing on over-fishing. However, as with Question 7(c) there were many possible answers and the mark scheme is not exhaustive. A small minority of candidates identified human activities (eg deforestation) which, while impacting on land-based ecosystems, were not directly linked to marine ecosystems and so were not awarded the mark.

(d) State **one** way that human activity is degrading the UK's marine ecosystems.

(1)

Overfishing.

ResultsPlus
Examiner Comments

This was awarded 1 mark.

The response given was correct. They do not need to write anything more as the command word is 'state'.

Question 7 (e)

This question required candidates to calculate the % of the UK's woodland found in Wales using the data provided. Most candidates were able to do this which was pleasing to see. However, some candidates did not multiply the first part of their answer by 100 and were therefore not awarded either the answer mark or the working mark. If the candidates did not give their answer to one decimal place, they were not awarded the answer mark.

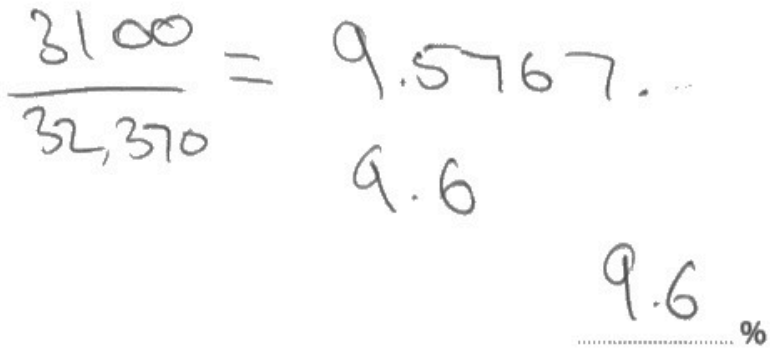
(e) Study Figure 7b in the Resource Booklet.

Calculate the percentage of the UK's woodland found in Wales.

Answer to **one** decimal place.

You must show your working in the space below.

(2)



ResultsPlus
Examiner Comments

This response was awarded 1 mark.

A mark has been awarded for the correct answer (1), but the workings are incorrect. The candidate has not shown that the answer from the division calculation needs to be multiplied by 100.

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

Calculate the percentage of the UK's woodland found in Wales.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

$$\frac{3,100}{32,370} \times 100 = 9.5767$$

9.6 %

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The answer (1) and workings (1) are both correct.

ResultsPlus
Examiner Tip

Make sure you bring a calculator to the exam.

Question 7 (f)

Many candidates gained two marks for this question. They were able to identify how the nutrients were transferred from the biomass to the surface (eg leaf-fall or death of an animal) and to explain how the nutrients then get into the litter store (eg by decomposition). However, only a very small minority of candidates were able to secure the third mark which required them to explain how the nutrients in the litter store were then transferred to the soil store (eg by being washed into the soil by rainfall or by the mixing action of worms). The questions are designed to ramp up in their level of difficulty through the paper and there will be more challenging questions towards the end of Section C.

(f) Explain **one** way nutrients are transferred from the biomass to the soil store in deciduous woodlands.

(3)

When plants or animals die, eg. leaves drop and decaying, decomposers transfer the nutrients from the biomass store of the plant or animal into the soil store of the ground

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that leaves drop to the forest floor when they die (1) where they decompose (1).

However, the third mark was not awarded as they have not explained how the nutrients released by decomposition are transferred from the litter store to the soil store.

(f) Explain **one** way nutrients are transferred from the biomass to the soil store in deciduous woodlands.

(3)

The leaves off the biomass fall to the floor where they decay by detrivores. The nutrients then filter into the soil when it rains. However, too much rain can wash it away (leeching)

ResultsPlus
Examiner Comments

This response was awarded 3 marks.

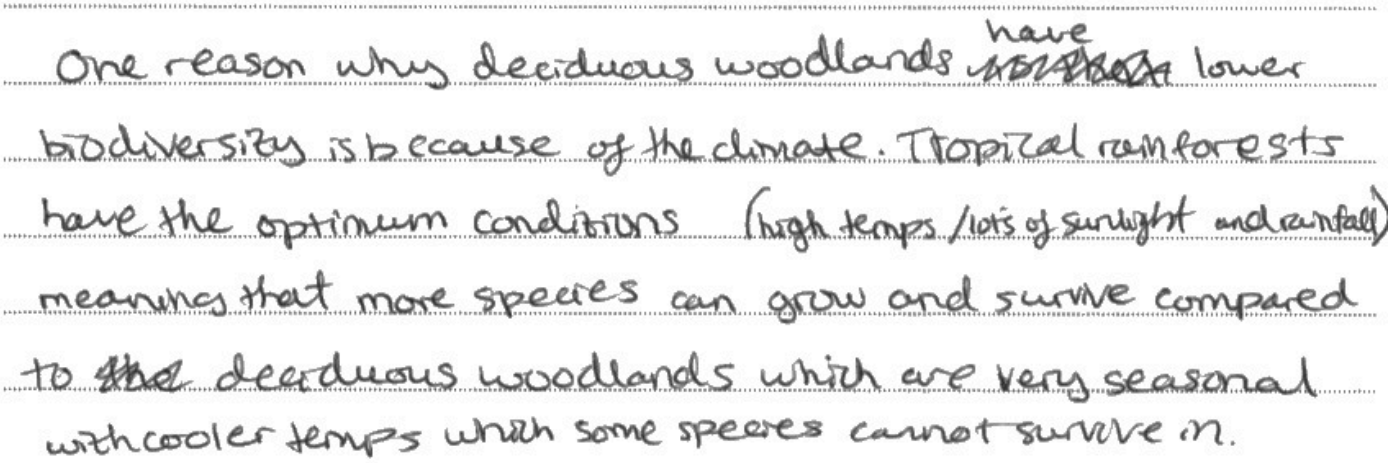
The candidate has identified that leaves fall onto the forest floor (1) where they decay (1). They have been awarded the third mark because there is a further link to the role of rainfall in transferring the nutrients into the soil store (1).

Question 7 (g)

This question required candidates to identify a reason why deciduous woodlands have a lower biodiversity than tropical rainforests and to develop their answer through explanation. It was pleasing to see that the majority of candidates showed that they understood that biodiversity relates to the variety of animal/ plant species in the large-scale ecosystem. This is a topic which candidates have found challenging in the past. They could approach their answer either by explaining why deciduous woodlands have a lower biodiversity or why tropical rainforests have a higher biodiversity.

(g) Explain **one** reason why deciduous woodlands have a lower biodiversity than tropical rainforests.

(3)



ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified that there are higher temperatures/ more sunlight and rainfall in tropical rainforests (1) as their initial reason. This was only awarded 1 mark as each of these is an initial reason. They have then made one development point, linking it to the fact that it means more species can grow (1).

(g) Explain **one** reason why deciduous woodlands have a lower biodiversity than tropical rainforests.

(3)

One reason is because deciduous woodlands aren't as old as tropical rainforests. This means that they have had less time for evolution than the tropical rainforest. Therefore, they have less biodiversity as they won't have as high of a variety of species.

ResultsPlus
Examiner Comments

This response was awarded 3 marks.

The candidate has identified that deciduous woodlands are not as old (1) which means that there has been less time for evolution (1) so there is a smaller variety of species (1).

ResultsPlus
Examiner Tip

A 'double' development is required when the command is 'explain/ suggest **one**...' and the tariff is 3 marks.

Question 7 (h)

Most candidates showed that they understood that this question required them to identify a way that tropical rainforests can be managed sustainably. A good variety of answers was seen and many of these were developed well. However, the question did require the candidates to name the region of tropical rainforest they were writing about. As part of the specification, they are required to study the sustainable management of a tropical rainforest in a named rainforest. They were therefore only awarded the third mark if they included some specific detail relating to this named region which was over and above simply naming the region. This could include a specific named area within the region where the scheme was being implemented (eg Monteverde Cloud Forest in Costa Rica) or some specific detail relating to the scheme (eg area of a protected reserve).

(h) Tropical rainforests are under threat.

Explain **one** way that a named region of tropical rainforest has been managed sustainably.

(3)

Named region

Costa Rica

Costa Rica has provided Ecotourism. This means only certain areas of the tropical rainforest are allowed to be built on and visited. The areas used for tourism usually are bare and limit damage to the rainforest and so it is sustainable. They only have a small area of land, it is closed certain times of the year and population is small. Any money for Ecotourism is used to manage rainforests.

ResultsPlus
Examiner Comments

This response was awarded 2 marks.

The candidate has identified ecotourism as their way that a named region of tropical rainforest has been sustainably managed (1). They have then developed this further with several linked points (eg only certain areas of the rainforest are cut down (1) which limits damage to the forest (1) as well as explaining that money from ecotourism is used to manage the forests (1)).

However, they have only been awarded 2 marks overall as they have not included any specific knowledge either about the location of the scheme within Costa Rica or details of the scheme.

(h) Tropical rainforests are under threat.

Explain **one** way that a named region of tropical rainforest has been managed sustainably.

(3)

Named region

Madagascar

Association Mitsinjo built a resort in ~~the~~ rain forest which promotes ecotourism. This ~~it~~ increases local employment meaning less people are logging for money.

ResultsPlus
Examiner Comments

This response was awarded 3 marks.

The candidate has identified ecotourism as the way that tropical rainforest can be sustainably managed (1). They have developed this point by linking it to employment for local people (1) which means that they will not be involved in logging (1).

The candidate has also identified a specific example of a scheme within the Madagascan rainforest and so were awarded the third mark.

Question 7 (i)

As with Question 6(h), the command word for this question was 'assess'. This requires candidates to determine the relative significance of something – giving consideration to all the elements being considered and to identify which are the most important. Unlike with the command word 'evaluate', 'assess' questions do not require candidates to write an overall conclusion.

For the AO2 marks, the candidates were required to describe and explain the causes of deforestation in tropical rainforests. While a range of causes was seen, most candidates focused on farming, housing and mining. While there was some located detail this was often lacking in many answers which were generalised to tropical rainforests as a whole. Using located examples would have allowed candidates to contrast the relative importance of the different causes in different regions which would have boosted their AO3 marks. The best answers were the ones which used a paragraph-based structure with each paragraph focusing on a different cause.

In relation to the AO3 elements, the best answers made use of judgement comments at the end of each paragraph where they qualified the importance and/ or scale of the causes. In terms of 'assess' we are really looking for them to rank the different causes to identify which is the most to least important and to be able to support this judgement with evidence. While an overall conclusion is not required with an 'assess' question it can be used to help rank the relative importance.

significance population growth

(i) Assess the importance of different causes of deforestation in tropical rainforests.

infrastructure (8)

The most ~~imp~~ significant cause of deforestation in tropical rainforests is population growth. This is because we are running out of rescources ~~for the~~ to keep up with the rapid population growth. For example, we have run out of land to build housing on so cut down trees in the rainforest to create space for housing to be built.

Another important reason is the building of infrastructure. This has caused us to cut down trees in the rainforests to make room for roads and paths ect. This is ~~to~~ to make things like transport easier to use for the public and travelling.

~~Another~~ The least significant reason would be clearing land to make room for agriculture. This is significant because large areas of land have to be cleared to make room for growing crops but a reason we have to grow more crops is ~~to~~ to keep up with the demand in supply caused by population growth.

Overall, the most significant cause of deforestation is population growth ~~is~~ due to its link with

most of the other causes ~~reasons~~ linked to city creation

ResultsPlus
Examiner Comments

This response was awarded Level 2 – 5 marks.

The response is structured using paragraphs and is focused on the question. The candidate has included three causes (population growth, building infrastructure and agriculture) and there is some description and explanation of both. However, the depth of explanation and the use of supporting evidence is quite limited – there are no located examples. The candidate has tried to assess the importance of the causes using phrases like 'most important' and 'least important'.

(i) Assess the importance of different causes of deforestation in tropical rainforests.

(8)

Logging (2) Slash + burn.
Cattle ranching (3)
Population pressure (1)
Timber extraction (2)

There have been many different causes of deforestation in TRFs such as in Amazon Rainforest such as illegal logging, cattle ranching (commercial farming), population pressures in regions such as Paraupetal, timber extraction, slash and burn farming etc. All have played significant factors in the deforestation of the tropical woodland.

Firstly the most important factor would be population pressure. Population pressures due to the increase demand of housing e.g. in Paraupetas in the Amazon Rainforest caused to the deforestation of the TRF to make way for shanty towns for living / accomodation. This has had a significant impact on deforestation of TRF as it accounts to 52% of deforestation and is increasing rapidly e.g. in Paraupetal population increased by 23% from 2010 to 2017 resulting in more demand for area for shanty towns for people of Paraupetal leading to the clearing of larger areas, leading to significant amounts of deforestation.

Secondly, the 2nd second most important factor would be for the extraction of timber, therefore illegal logging which has contributed to USA over 25% + of deforestation in the Amazon rain forest alone. The demand for expensive wood types e.g mahogany increase

(Total for Question 7 = 30 marks)

TOTAL FOR SECTION C = 30 MARKS
TOTAL FOR PAPER = 94 MARKS

the rate of deforestation for economic reasons and for selling these woods etc proving a significant factor in the deforestation of the TRF for economic purposes.

Thirdly, the third most important factor, least significant out of the 3 would be Cattle ranching which is the clearing out of large forest area for the use of agricultural purposes e.g cattle ranching which require large amount of areas and contributes to over 20+ % of deforestation in the Amazon TRF proving significant as local farmers - & require larger areas for cattle ranching / farming to provide money / food for their family and it proved significant in deforestation of TRF.

In conclusion / USA 3 factors all play a significant role in the deforestation of TRFs with population pressures proving most significant as it is rapidly increasing so is yet to increase rate & deforestation even now from current figures / data. Cattle ranching and illegal logging for timber exports prove very significant also.

ResultsPlus
Examiner Comments

This response was awarded Level 3 – 8 marks.

The response is clearly structured using paragraphs and is focused on the question. A range of causes is identified and these are well explained. There is good supporting evidence, including located detail, and a range of key terms is included. Judgements about the relative importance of the causes have also been included.

ResultsPlus
Examiner Tip

Including located information is useful to support your answer – moving away from a 'generic' response that could apply to any region of tropical rainforest.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- Ensure that you are familiar with the command words used in the specification. Candidates should be reminded that 'assess' questions require evidence to determine the relative importance of the reasons/ factors under consideration in the question. While they do not require an overall concluding paragraph, candidates do need to make judgements about the relative importance of the reasons/ factors through their response.
- In the 8-mark 'examine' questions in Section A, candidates must use evidence from the figures in their answers rather than simply repeating what they have learnt and revised. The information extracted from the figures should be used to support their answers.
- Developed points are needed on 3-mark 'explain' questions. This should include making an initial point in response to the question which should then be developed through the 'chain of explanation'. Only the most well-developed point and its links will be credited. If a candidate makes several points, each of which are not developed, this may limit the mark they are awarded.
- There will always be a few questions that require candidates to perform a calculation (AO4). It is essential that candidates have a calculator with them. It is also important to read the question carefully. For example, if the question states that they give the answer to one decimal place, it is important that they do so.
- Centres should ensure that candidates are taught all the key terms in the specification.
- Centres should ensure that their candidates are clear about the fact that they should only answer two out of the three optional questions in Section A. If they answer three questions, only the best scoring two will be credited.
- Candidates need to ensure that they learn specific details as part of their study of named examples. In the case of their study of features within particular countries they need to be clear about which category the country belongs to (developed, developing or emerging) and when they are asked to write about a specific category in their answer, they need to make sure that they have checked this carefully.

Grade boundaries

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

https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html

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