



## Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE  
In Geography Spec A (1GA0) Paper 01

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## **General Marking Guidance**

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

## GCSE Geography A - Paper 1 Mark scheme

Question number	Answer	Mark
1 (a)	<p>B - Granite (1)</p> <p>The areas shown are formed from granite rather than any of the other rock types listed.</p>	(1)

Question number	Answer	Mark
1 (b)	<p>Award 1 mark for one of the following, maximum 1 mark</p> <p>Layers (1)</p> <p>Compaction/cementation (1)</p> <p>Oldest rocks are at the bottom/youngest at the top (1)</p> <p>May contain fossils (1)</p> <p>Variety of colour (1)</p> <p>Permeable/impermeable (1)</p> <p>Comment about resistance (1)</p> <p>Hard/soft (1)</p> <p><b>Do not accept statements about location</b></p> <p><b>Accept any other appropriate response</b></p>	(1)

Question number	Answer	Mark
1 (c)	<p>Award 1 mark for a point about one of the characteristics of igneous rocks and a further 1 mark for explanation, up to a maximum of 2 marks.</p> <p>Igneous rocks are more resistant rocks (1) which means that they are less easily eroded (1).</p> <p>Igneous rocks are hard (1) which means that they are less easily eroded (1).</p> <p>Igneous rocks are formed by volcanoes (1) which erode very slowly (1)</p> <p><b>Accept any other appropriate response.</b></p>	(2)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
1(d) (i)	Award 1 mark for one of the following, maximum 1 mark:  Non coniferous (1)  Deciduous (1)	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
1 (d) (ii)	B – 904485	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
2 (a)	<p>Award 1 mark for any of the following, maximum 1 mark:</p> <p>The downhill movement of material (1)</p> <p>The movement of material due to gravity (1)</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
2 (b)	<p>Award 1 mark for one of the following, maximum 1 mark.</p> <p>Bar (1)</p> <p>Beach / beach features e.g. berms (1)</p> <p>Spit (1)</p> <p>Tombolo (1)</p> <p>Cuspate foreland (1)</p> <p>Salt marsh (1)</p> <p>Sand dune (1)</p> <p><b>Accept any other appropriate response.</b></p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
2 (c)	<p>Award 1 mark for a point about rock type (1) and a further development point linked to the formation of headlands (1), up to a maximum of 2 marks.</p> <p>More resistant rock type (1) will erode more slowly (1)</p> <p>Less resistant rocks (1) will erode more rapidly forming bays (in between headlands) (1)</p> <p>Less heavily jointed/ faulted rocks (1) will erode less rapidly (1)</p> <p>More heavily jointed/ faulted rocks (1) will erode more rapidly forming bays (with headlands on either side) (1)</p> <p><b>Accept any other appropriate response.</b></p>	(2)

Question number	Answer
2 (d)	<p style="text-align: center;"><b>AO3 (4 marks)/ AO4 (4 marks)</b></p> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• The coastline has been eroded by waves. Erosional processes at work have included abrasion and hydraulic action.</li> <li>• This will have led to the destruction of habitats for animals and plants.</li> <li>• The beach has been eroded and/ or removed by the process of longshore drift. This will have led to more erosion of the cliffs as the beach helped to protect them.</li> <li>• This has resulted in the erosion of the beach and the cliffs behind it. This has led to the erosion of farmland.</li> <li>• As the beach has been eroded this has reduced the attraction to tourists. This may have led to a reduction in tourist income.</li> <li>• Buildings have disappeared which may have been due to cliff collapse. This will have impacted on people and led to loss of money.</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• The beach to the south/ south-east has become narrower.</li> <li>• Its width has decreased from approximately 80-90 metres to 30 metres</li> <li>• The beach in the north/ north-west has almost disappeared.</li> <li>• Its width has reduced from 30 metres to less than 10 metres.</li> <li>• The groynes in the north have disappeared.</li> <li>• The cliffs have retreated inland in the southern/ south-western part.</li> <li>• They have retreated by around 30 metres.</li> <li>• The coastline which was quite straight now has a sharp change in direction at 90 metres from the bottom of the photo.</li> <li>• A line of houses parallel to the coastline has been lost in the central section of the coastline (around 130-150 metres from the bottom of the photo).</li> <li>• A line of houses stretching inland in an east-to west direction has been lost (around 120 metres from the base of the photo).</li> <li>• Some caravans have also been lost in a line 200-230 metres from the bottom of the photo.</li> <li>• Less erosion where groynes were located in the north of the photos.</li> </ul>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	No rewardable material.
<b>Level 1</b>	1–3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
<b>Level 2</b>	4–6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
<b>Level 3</b>	7–8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
3 (a)	<p>Award 1 mark for the following, maximum 1 mark.</p> <p>The quantity/volume/amount of water passing a point in the river over time / in a given time (1)</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
3 (b)	<p>Award 1 mark for one of the following, maximum 1 mark.</p> <p>Saltation (1)</p> <p>Solution (1)</p> <p>Traction (1)</p> <p>Suspension (1)</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
3 (c)	<p>Award 1 mark for a valid reason (1) and 1 mark for development of this point (1), up to a maximum of 2 marks.</p> <p>Levees are formed when a river is in flood (1) and the load is deposited along the river bank as the river slows down (1).</p> <p>Levees are formed when a river bursts its banks (1) and deposits sediment along the banks (1).</p> <p>Layers of deposited sediment builds up on the river banks (1) due to repeated flooding (1).</p> <p><b>Accept any other appropriate response</b></p>	(2)

Question number	Answer
3 (d)	<p style="text-align: center;"><b>AO3 (4 marks)/ AO4 (4 marks)</b></p> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Following the storm event the flow in both rivers does increase.</li> <li>• The discharge of River A rises much more quickly than for River B.</li> <li>• This is due to a number of reasons: <ul style="list-style-type: none"> <li>- Urban areas have more impermeable surfaces (e.g. concrete and tarmac). These means that less rainwater infiltrates into the ground and there is more surface run-off.</li> <li>- Urban areas have gutters and drains which empty water more directly into the river which is much quicker</li> </ul> </li> <li>• The rainwater in urban areas therefore enters the river more quickly leading to a steep rising and falling limb – and shorter lag time.</li> <li>• The discharge of River B rises more slowly than for River A.</li> <li>• This is due to a number of reasons: <ul style="list-style-type: none"> <li>- It is a forested area. This means that there are fewer impermeable surfaces and greater infiltration of water into the ground (and less surface run off).</li> <li>- Some of the rain is intercepted by the leaves of the trees and stored there (either then being evaporated or slowly dripping to the ground).</li> <li>- The rain which has infiltrated into the ground will make its way slowly to the river as throughflow.</li> </ul> </li> <li>• River A has a secondary peak which might be due to slightly delayed runoff from drains.</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• The lag time for River A is shorter than for River B.</li> <li>• River A's lag time is 3 hours while River B's lag time is 6 hours.</li> <li>• The peak discharge for River A is much higher than for River B.</li> <li>• River A's peak discharge is 268 cumecs while River B's peak discharge is 70 cumecs.</li> <li>• River A's rising and falling limbs are much steeper than River B's.</li> <li>• River A's discharge peaks first at 5pm, then falls slightly before rising again to a secondary peak.</li> <li>• The normal (base) flow of River B is slightly higher than River A.</li> <li>• River A's discharge is much more flashy than River B.</li> <li>• River A has a secondary peak while River B has a single peak.</li> </ul>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	No rewardable material.
<b>Level 1</b>	1–3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
<b>Level 2</b>	4–6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
<b>Level 3</b>	7–8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
4 (a)	<p>Award 1 mark for the following, maximum 1 mark.</p> <p>A landscape which used to have (but no longer has) glacial processes /glaciers (1).</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
4 (b)	<p>Award 1 mark for one of the following, up to a maximum of 1 mark.</p> <p>Frost shattering (1)</p> <p>Freeze-thaw (1)</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
4 (c)	<p>Award 1 mark for a relevant impact (1) and a further 1 mark for a development of the impact, up to a maximum of 2 marks.</p> <p>Deforestation in some areas (1) because farmers are clearing the trees for growing crops/ farming animals (1)</p> <p>Natural vegetation in valley bottoms had been replaced (1) leading to a loss of natural habitats (1)</p> <p>Glaciers are melting (1) as a result of an increase in cattle farming (1)</p> <p>Increased soil erosion (1) due to ploughing of hillsides (1)</p> <p><b>Accept any other appropriate response.</b></p>	(2)

Question number	Answer
4 (d)	<p style="text-align: center;"><b>AO3 (4 marks)/ AO4 (4 marks)</b></p> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• A corrie is a deep arm-chair shaped hollow found on the flank of a mountainside.</li> <li>• They are formed where a glacier begins.</li> <li>• A snow patch collected in a hollow on the mountainside.</li> <li>• As the snow patch became deeper the snow became compressed into ice.</li> <li>• The ice started to flow and as it pulled away from the walls of the hollow, blocks of rock were plucked away.</li> <li>• These blocks of rock became embedded in the ice and abraded the hollow, making it wider, deeper and steeper.</li> <li>• Freeze-thaw weathering took place on the back (head) wall of the hollow which helped to steepen it and cause it to retreat backwards.</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• The corrie is bowl-shaped</li> <li>• There is a steep headwall behind the glacial lake.</li> <li>• The headwall of the corrie is approximately 400 metres high (500-893 metres high).</li> <li>• The height of the headwall varies from approximately 690 meters in the south to a peak of 893 metres.</li> <li>• The corrie is approximately 1 km wide and 1 km long.</li> <li>• The corrie is located in grid square 7112</li> <li>• A glacial lake/tarn has formed in the bottom of the corrie.</li> <li>• The glacial lake is approximately 700 metres long and 300 metres wide.</li> <li>• The ice moved from west to east towards the front of the photo.</li> <li>• The rocks on the headwall of the corrie are very steep and jagged.</li> <li>• Moraine was deposited at the edge (lip) of the corrie.</li> <li>• There is bare rock towards the summit with vegetation at the base of the back wall.</li> <li>• The vegetation at the base of the corrie may be covering scree material.</li> </ul>

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	No rewardable material.
<b>Level 1</b>	1–3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
<b>Level 2</b>	4–6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
<b>Level 3</b>	7–8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

Question number	Answer	Mark
5 (a)	<p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Cell A - Polar (1)</p> <p>Cell B - Hadley (1)</p>	(2)

Question number	Answer	Mark
5 (b) (i)	<p>D – June</p> <p>June (D) is the correct answer. The heat energy received in the other months stated are as follows: February- <math>125\text{W/m}^2</math>, March – <math>175\text{ W/m}^2</math> and April - <math>300\text{ W/m}^2</math>.</p>	(1)

Question number	Answer	Mark
5 (b) (ii)	<p>C- <math>430\text{ W/ m}^2</math></p> <p>C is the correct answer shown on the graph.</p>	(1)

Question number	Answer	Mark
5 (c)	<p>Award 1 mark for identifying a reason, and a further 2 marks for expansion, up to a maximum of 3 marks.</p> <p>The Earth's surface is curved (1) so heat/radiation from the sun hits the surface at different angles (1) and the equator receives more concentrated heat/radiation (1).</p> <p>Heat/radiation from the sun is more concentrated at the Equator (1) because the sun's rays are more direct here (1) due to the curved shapes of the Earth (1).</p> <p>The Sun's rays travel through less atmosphere to get to the Equator (1) because of the curved shape of the Earth (1) which means that less heat is lost before it reaches the surface (1).</p> <p><b>Accept any other appropriate response.</b></p>	(3)

Question number	Answer	Mark
6 (a) (i)	<p>Working to show:</p> <p>Difference between maximum and minimum = 1 mark</p> <p>Correct answer is 14 = 1 mark</p> <p>Max of 1 mark if no working shown (or incorrect working) but correct answer or correct workings and incorrect answer.</p>	(2)

Question number	Answer	Mark
6 (a) (ii)	<p>Award 1 mark for each of the following, up to a maximum of 2 marks.</p> <p>Tree rings (1)  Ice cores (1)  Proxy records (1)  Pollen records (1)  Diaries (1)  Paintings (1)  Glacial retreat (1)  Sea level (1)  Fossils (1)  Rock type (1)</p> <p><b>Accept any other appropriate response.</b></p>	(2)

Question number	Answer	Mark
6 (b)	<p>Award 1 mark for identifying a change suggested by Milankovitch, and a further 2 marks for expansion, up to a maximum of 3 marks.</p> <p>The (eccentricity of the) Earth's orbit changes (1) so the Earth's orbit becomes more/ less circular (1) which increases/ decreases seasonal differences in temperatures (1).</p> <p>The (eccentricity of the) Earth's orbit changes (1) so at some times in the year the Earth is closer to/ further away from the sun (1) which increases/ decreases temperatures (1)</p> <p>The tilt of the Earth's axis changes (1) so that sometimes the Earth is tilted further away from the sun (1) which makes the difference between the seasons greater (1).</p> <p>The tilt of the Earth's axis changes (1) so that sometimes the Earth is tilted closer to the sun (1) which makes the difference between the seasons smaller (1).</p> <p>The Earth 'wobbles' on its axis when it rotates (1) so the direction the axis is facing changes (1) which can lead to smaller (or greater) differences between summer and winter (1).</p> <p><b>Accept any other appropriate response.</b></p>	(3)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
6 (c) (i)	<p>Award 1 mark for any of the following, up to a maximum of 1 mark:</p> <p>Eye (1) Eye wall (1) Storm eye / eye of the storm (1)</p>	(1)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
6 (c) (ii)	<p>Working to show:</p> <p>Idea of scaling up by 100 times e.g. multiplication of measured distance by 100 = 1 mark</p> <p>Correct answer is 900 = 1 mark</p> <p>Max of 1 mark if no working shown (or incorrect working) but correct answer or correct workings and incorrect answer.</p>	(2)

<b>Question number</b>	<b>Answer</b>	<b>Mark</b>
6 (c) (iii)	<p>A - Indonesia (1)</p> <p>Indonesia is affected regularly by tropical cyclones but the other countries listed are not.</p>	(1)

Question number	Answer	Mark
6 (d)	<p>Award 1 mark for the identification of a difference between the two locations, and a further 1 mark for explanation of this difference, up to a maximum of 2 marks for each part.</p> <p>When the hurricane struck Haiti, it caused more deaths (1) because people were less well prepared (1)</p> <p>Hurricanes in developing countries cause more deaths (1) because there are fewer hurricane shelters (1).</p> <p>The hurricane in Haiti caused more buildings to be damaged (1) because in this country, people cannot afford to build hurricane proof buildings (1).</p> <p>There were fewer deaths in Florida (1) because there might have been better communication links available so people could evacuate sooner (1).</p> <p>Florida can afford better technology (1) therefore they were able to evacuate people prior to the hurricane (1).</p> <p><b>Do not accept 'mirrored' responses.</b></p> <p><b>Accept any other appropriate response.</b></p>	(4)

Question number	Answer	Mark
6 (e)	<p style="text-align: center;"><b>AO2 (4 marks)/ AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Drought is an acute water shortage associated with long periods of serious or severe rainfall deficiency.</li> <li>• It exists where there is far less water in a particular area over a period of time compared to what is normal for that same period of the year.</li> <li>• There are two main causes of drought: meteorological drought and hydrological drought.</li> <li>• Meteorological drought is the shortfall of precipitation over a period of time.</li> <li>• It can be caused by physical factors (e.g. natural variations in atmospheric conditions, El Nino events) and by human factors (e.g. deforestation and climate change).</li> <li>• Hydrological drought results from decreasing river and reservoir levels.</li> <li>• This can be linked to the causes of meteorological drought but can also be linked to other causes (e.g. dam building, poor farming practices, over-abstraction of water due to rising population)</li> </ul> <p><b>AO3</b></p> <p>Assessment may include:</p> <ul style="list-style-type: none"> <li>• Physical causes are a key cause of drought in many cases.</li> <li>• In some locations, rainfall is much more variable naturally than in others owing to natural processes.</li> <li>• This applies both at the global scale (e.g. Sahel region of Africa in comparison with regions of tropical rainforest) but also at more local scale (e.g. Scottish Highlands in comparison with East Anglia).</li> <li>• However, the role of human impact in causing drought appears to be increasing.</li> <li>• Human activity has an impact at scales.</li> <li>• At a global impact, there is evidence that global warming (linked to the enhanced greenhouse effect) is leading to more drought in some locations (e.g. Sahel).</li> <li>• At a more local scale, there is also evidence of growing human impact on rainfall reliability (e.g. deforestation in the Amazon).</li> <li>• Hydrological drought (linked to water abstraction and dam building) also appears to be on the rise.</li> </ul>	(8)

<b>Level</b>	<b>Mark</b>	<b>Descriptor</b>
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

Question number	Answer	Mark
7 (a) (i)	<p>Award 1 mark for each correct plot – with point marked in the middle of the month (2x1)</p> <p>Award 1 mark for joining all of the correct points up with a line (1)</p>	(3)

Question number	Answer	Mark
7 (a) (ii)	<p>Working to show:</p> <p>Addition of all monthly temperatures, divided by 12 = 1 mark</p> <p>Correct answer is 27.3 = 1 mark</p> <p>Max of 1 mark if no working shown (or incorrect working) but correct answer or correct workings and incorrect answer.</p>	(2)

Question number	Answer	Mark
7 (a) (iii)	<p>D - 28°C</p> <p>D is the correct answer. When put in rank order, the two middle numbers are both 28.</p>	(1)

Question number	Answer	Mark
7 (b)	<p>Award 1 mark for identifying the climate (temperature and/or precipitation) in a particular large-scale ecosystem (1) and a further 1 mark for a link to distribution, up to a maximum of 2 marks.</p> <p>Tropical rainforests are found where it is hot and wet (1) which means that they are located largely along the Equator / between the Tropics (1).</p> <p>Hot deserts are found where it is hot and dry (1) which means that they are usually located close to the Tropics (1).</p> <p>Temperate forests are found largely in the mid-latitudes (1) due to the mild temperatures which is found here (1).</p> <p>Temperate grasslands are found largely between 40-60°N of the equator (1) due to the mild temperatures and relatively low rainfall which is found here (1).</p> <p>Tundra regions are found largely along the Arctic Circle (1) due to the temperatures being below freezing most of the year (1).</p> <p>Boreal forests are found between 50-60°N (1) where winter temperatures are very cold (1).</p> <p><b>Accept any other appropriate response.</b></p>	(4)

Question number	Answer	Mark
7 (c)	<p>Award 1 mark for a human activity shown on Figure 7b, and a further 1 mark for expansion, through explanation, up to a maximum of 2 marks.</p> <p>There are people fishing in Figure 7b (1) which could lead to fish populations falling / idea of overfishing (1).</p> <p>Figure 7b shows a boat trawling the bottom of the sea (1) which can destroy damage / destroy marine organisms / habitats (1).</p> <p>Large fishing boats can lead to the water being polluted (1) which can kill marine organisms (1).</p> <p>Overfishing of one particular species in the sea (1) which upset food chains and/or food webs (1).</p> <p><b>Accept any other appropriate response.</b></p>	(2)

Question number	Answer	Mark
7 (d)	<p>Award 1 mark for a point about a basic reason and a further 2 marks for expansion, up to a maximum of 3 marks.</p> <p>The litter store is very small because of the rapid decomposition of fallen plant material (1) which is caused by the hot/damp conditions (1) which are perfect conditions for decomposers (1).</p> <p>Hot and wet / humid conditions (1) leads to rapid decomposition (1) which means that nutrients are absorbed rapidly by plants (1).</p> <p>In areas where there are few trees (1) the high levels of rainfall during the year (1) can lead to the litter store being washed away (1)</p> <p><b>Accept any other appropriate response.</b></p>	(3)

Question number	Answer	Mark
7 (e)	<p>Award 1 mark for an economic cause, a further 1 mark for a link to deforestation and a further 1 mark for development, (up to a maximum of 3 marks).</p> <p>Mineral extraction (1) is one cause of the deforestation of the rainforest (1) leaving ground exposed to soil erosion (1).</p> <p>Commercial farming (1) is one cause of the deforestation of the rainforest (1) as it results in the clear felling of large areas for large cattle ranches and/ or plantations (1).</p>	

	<p>Energy development (1) is one cause of the deforestation of the rainforest (1) leading to more rapid surface runoff (1).</p> <p>Road building (1) is one causes of the deforestation of the rainforest (1) as it allows roads to be built to access the resources of the rainforests (1).</p> <p><b>Do not accept 'social' causes (e.g. population pressure/urbanisation), unless clearly linked to economic reasons as well.</b></p> <p><b>Must identify an economic cause for credit.</b></p> <p><b>Accept any other appropriate response.</b></p>	(3)
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Question number	Answer	Mark
7 (f)	<p>Award 1 mark for each identified method, and a further 1 mark for explanation, up to a maximum of 2 marks for each way.</p> <p>Sustainable farming/agriculture is used to grow food (1) which means that less new land needs to be cleared (1).</p> <p>Environmental education is provided (1) which helps children learn about the importance of protecting the rainforest (1).</p> <p>Ecotourism schemes are being set up (1) which bring in money while protecting the rainforest (1).</p> <p>Rainforest restoration schemes have been set up (1) which involve re-planting areas of forest (1).</p> <p><b>Accept any other appropriate response.</b></p>	(4)

Question number	Answer
7 (g)	<p><b>AO2 (4 marks)/ A03 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Deciduous woodlands have only moderate biodiversity compared with tropical rainforests.</li> <li>• They are often dominated by 3 or 4 tree species (e.g. oak, beech, ash).</li> <li>• Other plant species in the sub-canopy and herb layer have adapted to the growing season of trees (e.g. bluebells).</li> <li>• A range of human and physical factors can affect the biodiversity of deciduous woodlands.</li> <li>• These can both reduce and increase biodiversity.</li> <li>• Historically, human factors have included:</li> </ul>

	<ul style="list-style-type: none"> <li>- Wood for fuel</li> <li>- Clearance for agriculture</li> <li>- Materials for building and use for fuel</li> </ul> <p>Modern day human factors include:</p> <ul style="list-style-type: none"> <li>- Recreation (e.g. walking, horse-riding, cycling)</li> <li>- Urbanisation/ house building</li> <li>- Removal of timber</li> <li>- Conservation</li> <li>- Climate change (which can lead to invasion by viruses and animal/ plant species)</li> </ul> <ul style="list-style-type: none"> <li>• Physical factors include:           <ul style="list-style-type: none"> <li>- Climate (cold winter months when trees/ plants become dormant and only limited food available for animals)</li> <li>- Past/future climate change due to natural causes</li> <li>- Weather (e.g. wind)</li> <li>- Relief (e.g. higher relief, steep slopes)</li> </ul> </li> <li>• These physical factors will all affect the range and type of trees, other vegetation and animals.</li> </ul>
	<p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Naturally, climate is a very significant factor.</li> <li>• This plays a key role in controlling the distribution of deciduous woodlands.</li> <li>• The low temperature conditions slow down the production of food in winter.</li> <li>• This affects both the amount and range of animal and plant species which can be supported.</li> <li>• The plants and animals which occur here naturally are adapted to the climate.</li> <li>• Human factors have played a key role in the past.</li> <li>• They are also having a significant affect in the present.</li> <li>• In many cases this has resulted in the destruction of deciduous woodland and a reduction in biodiversity.</li> <li>• However, in some examples conservation efforts have helped to restore/ maintain biodiversity.</li> </ul>

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An unbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>

Level 3	7–8	<ul style="list-style-type: none"> <li>Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>
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<b>Marks for SPGST</b>		
<b>Performance</b>	<b>Marks</b>	<b>Descriptor</b>
SPaG 0	0	<p><i>No marks awarded</i></p> <ul style="list-style-type: none"> <li>Learners write nothing.</li> <li>Learner's response does not relate to the question.</li> <li>Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>
SPaG 1	1	<p><i>Threshold performance</i></p> <ul style="list-style-type: none"> <li>Learners spell and punctuate with reasonable accuracy.</li> <li>Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>Learners use a limited range of specialist terms as appropriate.</li> </ul>
SPaG 2	2–3	<p><i>Intermediate performance</i></p> <ul style="list-style-type: none"> <li>Learners spell and punctuate with considerable accuracy.</li> <li>Learners use rules of grammar with general control of meaning overall.</li> <li>Learners use a good range of specialist terms as appropriate.</li> </ul>
SPaG 3	4	<p><i>High performance</i></p> <ul style="list-style-type: none"> <li>Learners spell and punctuate with consistent accuracy.</li> <li>Learners use rules of grammar with effective control of meaning overall.</li> <li>Learners use a wide range of specialist terms as appropriate.</li> </ul>

