Pearson Edexcel

Mark Scheme (Results)

Summer 2025

Pearson Edexcel GCSE

In Geography A (1GA0) Paper 1

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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.

Question number	Indicative Content **Identify which region has the largest area of metamorphic rock.**	Mark
1 (a)	B – Scottish Highlands The other areas do not have large areas of metamorphic rocks.	(1)

Question number	Indicative Content **Name one type of igneous rock.**	Mark
1 (b)	Award 1 mark for the following, maximum of 1 mark. Basalt (1) Granite (1) Andesite (1) Obsidian (1) Gabbro (1) **Accept any other appropriate response**	(1)

Question number	Indicative Content **Identify the feature located at 882511.**	Mark
1(c) (i)	C – railway station This feature is located at the specified grid reference.	(1)

Question number	Indicative Content **Identify one feature of the relief (shape of the land) in grid square 8951.**	Mark
1 (c) (ii)	Award 1 mark for the following, maximum of 1 mark. Valley (1) Flat hill top(1) Hilly/hill (1) Steep (1) Sloped/ sloping (1) **Accept any other appropriate response** **Do not accept:** Mountainous/flat/highland/upland/references to height	(1)

Question number	Indicative Content **Explain one reason why lowland areas are often made of sedimentary rocks.**	Mark
1 (d)	Award 1 mark for a point about one of the characteristics of sedimentary rocks/comparison with igneous rocks and a further 1 mark for explanation, up to a maximum of 2 marks. They are less resistant/soft (1) which means they are easily eroded (1). Sedimentary rocks are eroded more rapidly (1) as they are less resistant/soft (1). Igneous rocks are more resistant/harder (1) and sedimentary rocks are eroded more rapidly (1). **Accept any other appropriate response**	(2)

Question number	Indicative Content **Define the term traction.**	Mark
2 (a)	Award 1 mark for the following, maximum of 1 mark. Sediment/material rolls along the sea/river bed (1). Sediment is dragged along the sea/river bed (1) Sediment slides along the sea/river bed (1) Note: The response must refer to the idea of 'rolling'/ 'dragging'/'sliding'– reference to moving on its own is insufficient. There also needs to be reference to the sea/river bed or floor. **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Study Figure 2a in the Resource Booklet** **Suggest one way mass movement has affected this cliff.** **You must use evidence from Figure 2a in your answer.**	Mark
2 (b)	Award 1 mark for a reference to a feature of the cliff linked to mass movement/ a mass movement process (1) and a further 1 mark for extension through explanation, up to a maximum of 2 marks. The cliff has slumped (1) which could be because of heavy rainfall (1). The cliff has become saturated (1) which has led to slumping (1). There has been some rotational sliding/sliding (1) due to the force of gravity (1). Sliding (1) has caused the cliff to move back (1). Material has collected at the base of the cliff (1) as a result of rock fall (1). **Accept any other appropriate response.**	(2)

Question number	Indicative Content **State one reason why rates of coastal erosion vary from place to place in the UK.**	Mark
2 (c)	Award 1 mark for one of the following, maximum of 1 mark. Geology/rock type (1) Fetch (1) Prevailing wind (1) Sea defences/protection (1) Wind speed (1) Wave type (1) Wave strength/wave direction (1) Winter storm frequency (1) **Accept any other appropriate response.**	(1)

Question number	Indicative Content Study Figures 2b and 2c in the Resource Booklet. Examine the role of physical processes in the formation of these beaches. You must use evidence from Figures 2b and 2c in your answer.
2 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** ● A beach is an area of land between the low tide and storm tide marks. ● They can be made up of sand, pebbles and, in some places, mud and silt. ● Beach material will have been transported along the coast by the process of longshore drift. ● Where it enters a lower energy environment (e.g. sheltered bay) the beach sediment may be deposited. ● Another source of beach material may have been the transportation of material from offshore as sea levels rose at the end of the last ice age. ● Sandy beaches are found in more sheltered parts of the coastline (e.g. behind a harbour wall or in a bay) where the waves have much less energy. ● It is only in these low energy environments where the very light sand particles are deposited. ● Constructive waves, with a stronger swash/weaker backwash, will build the beach up with a gentle gradient. ● Shingle beaches are found in more exposed areas of the coastline (e.g. where they are directly facing the prevailing wind with no protection) where there are mainly destructive waves. ● Destructive waves, with a stronger backwash/weaker swash, produce a steeper gradient as the waves percolate through the shingle. **AO4** ● Harbour beach is a sand beach while Monmouth beach is a shingle beach. ● There is evidence of higher energy waves on Monmouth beach with more turbulent water. ● The sea off Harbour beach looks flat and has little energy. ● Monmouth beach is located in grid square 3391. ● Harbour beach is located in grid squares 3391 and 3491. ● There is also a beach located in grid squares 3492 and 3592. ● Monmouth beach is narrower than the Harbour beach. Its width is around 50-75m while Harbour Beach is around 100-150m. ● The prevailing wind is from the south-west. ● Monmouth beach is not sheltered from the prevailing wind but Harbour beach is sheltered by the harbour walls. ● There appears to be a ridge on the shingle beach.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	• 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) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	• 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) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Indicative Content **Define the term suspension.**	Mark
3 (a)	Award 1 mark for the following, maximum of 1 mark. Sediment/ material are carried within the river/sea/wave/water (1). Note: The response must refer to the idea of 'within' – reference to moving on its own is insufficient. **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Study Figure 3a in the Resource Booklet.** **Suggest one way hard engineering is used to manage this river.** **You must use evidence from Figure 3a in your answer.**	Mark
3 (b)	Award 1 mark for a reference to the changes made to the river (1) and a further 1 mark for extension through explanation, up to a maximum of 2 marks. The river has been straightened (1) which allows the water to flow faster (1). The river flows faster (1) as the main channel has been cut off (1). The river has been channelised (1) to help the water flow faster (1). An overflow channel has been created (1) to divert water (1). The river banks have been raised/floodwalls built (1) which increases its capacity (1). The levees have been raised (1) so the river is less likely to burst its banks (1). **Accept any other appropriate response.** **Do not accept:** References to dredging/ deeper channel as this is not evident in the photograph	(2)

Question number	Indicative Content **State one reason why rivers usually become wider downstream.**	Mark
3 (c)	Award 1 mark for one of the following, maximum of 1 mark. More water/ greater volume of water (1) Higher discharge (1) More erosive power/velocity (1) More erosion/abrasion/hydraulic power/solution (1) More lateral erosion (1) Tributaries join (1) **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Study Figures 3b and 3c in the Resource Booklet.** **Examine the role of physical processes in the formation of the flood plain and meanders.** **You must use evidence from Figures 3b and 3c in your answer.**
3 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Meanders are formed by erosion and deposition. • The force of the faster flowing water erodes the outside bend, undercutting the bank and forming a steep river cliff. • The main processes of erosion are abrasion and hydraulic action. • The water is shallower and flows more slowly on the inside bend. • Sand and gravel are deposited on the inside bend to form a slip-off slope /point bar. • Deposition takes place here because the river has less energy. • As the meander erodes the outside bend the bend get wider. • This lateral (or sideways) erosion widens the valley floor. • Lateral erosion has largely replaced the vertical erosion found in the upper course. • Flood plains are formed by the migration of meanders as the outer bank is eroded and deposition takes place on the inside bend. • Repeated flooding takes place which also deposits sediment either side of the river. • As the water overflows the banks it spreads across the existing flood plain and sediment is deposited owing to the reduction in energy. **AO4** • There are several meanders on the river. • They are found in grid squares 6104 and 6204. • There are point bars/river beaches on the inside of the bends where material has been deposited. These are gently sloping banks of gravel. • There are also several areas of deposition within the river itself. • For example, at 620046. • There are several river cliffs on the river – for example at 623045. • There is a floodplain on either side of the river. This is evident on the map where the contour lines are far apart showing the land is flat. • The contour line near the river is at 40m. • The flood plain is approximately 600m wide. • There are steep hills on either side of the flood plain shown by the contours being close together.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	• 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) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	• 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) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Indicative Content **Define the term moraine.**	Mark
4 (a)	Award 1 mark for the following, maximum of 1 mark. Material/rock deposited/left by glaciers/ice (1). **Do not accept:** Sediment carried/transported by the glacier without any mention to it being deposited/ left by the glacier/ice. **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Study Figure 4a in the Resource Booklet.** **Suggest one way that a glacier has led to the formation of this truncated spur.** **You must use evidence from Figure 4a in your answer.**	Mark
4 (b)	Award 1 mark for a reference to a feature of the truncated spur linked to erosion / reference to erosion or a named erosional process (1) and a further 1 mark for extension through explanation, up to a maximum of 2 marks. The end of the spur was removed (1) by a glacier abrading the rock (1). Abrasion by a glacier (1) has created a steep cliff (1). Plucking (1) has caused the spur to be jagged (1). A steep cliff (1) has been created by erosion (1). The glacier bulldozed/eroded through the spur (1) leaving a steep cliff (1). Abrasion by the glacier (1) has smoothed/worn away the rock (1). Plucking (1) involved the glacier freezing to the rock and ripping it away (1). **Do not accept:** Any reference to weathering processes **Accept any other appropriate response.**	(2)

Question number	Indicative Content **State one reason why the freezing and thawing of water can cause weathering.**	Mark
4 (c)	Award 1 mark for one of the following, maximum of 1 mark. The water expands when it freezes (1). Frozen water exerts pressure on the surrounding rock (1). **Accept any other appropriate response.** **Do not accept:** Water can freeze leading to cracks	(1)

Question number	Indicative Content **Study Figures 4b and 4c in the Resource Booklet.** **Examine the role of physical processes in the formation of these drumlins.** **You must use evidence from Figures 4b and 4c in your answer.**
4 (d)	**AO3 (4 marks) / AO4 (4 marks)** **AO3** • Drumlins are oval-shaped hills largely composed of glacial drift (sediment). • They are aligned in the direction that the ice flowed. • The upstream (stoss) side of a drumlin normally has a blunt end while the downstream (lee) side normally has a streamlined, gentler slope. • Most theories about drumlin formation suggest that they are formed by deposition from a glacier. • Glaciers eroded material through the processes of abrasion and plucking which was then transported by the moving ice. • Transportation processes included the material being trapped within and on the ice as well as bulldozing in front of the glacier. • This material was deposited when the glacier was no longer able to carry it – either where the glacier had started to melt or where it came into contact with an obstacle (e.g. a large rock). • The velocity of the glacier may also have decreased due to extendingcompressing flow which would also have affected its ability to transport material. • This led to a successive build-up of sediment. • Once the material was deposited it may have been moulded and streamlined by later ice movement. • Another theory is that the material may have been deposited from subglacial waterways laden with till including gravel, clay and silt. • Further shaping of these materials would then have been completed by the moving ice. • There is also a theory that drumlins are formed when a glacier encounters a band of hard rock. • Material is deposited on the downstream (lee) side of the obstacle forming the drumlin. **AO4** • There is a swarm of drumlins shown on the map. • These are mainly in grid squares 5011, 5111 and 5211. • Examples of drumlins include those located at 506113 and 526116. • The drumlins are aligned generally in a south-west to north-east direction. • However, the collection of drumlins in grid square 5111 are aligned in a more northerly direction while those in grid squares 5111 and 5211 are aligned in a more north-easterly direction. • They are aligned in the direction that the glaciers/ ice flowed. • They are all pointing in the same direction within each swarm of drumlins and their wider ends are generally in the south-west end and their thinner ends in the north-east end.

	• The drumlins vary in size with lengths varying between approximately 150-300m and their widths varying between 40-80 metres. • The drumlins in the photo are close together and are aligned in the same direction. They all have a higher end and a tapering end.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	• 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) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	• 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) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Indicative Content **Identify the latitude where the Hadley and Ferrel cells meet in the Northern Hemisphere.**	Mark
5 (a) (i)	B – 30°N This is the latitude shown on the diagram where the Hadley and Ferrel cells meet in the Northern Hemisphere. The two cells do not meet at 10°N (A), 50°N (C) or 70°N (D).	(1)

Question number	Indicative Content **Explain one reason why less heat is received at the poles than at the equator.**	Mark
5 (a) (ii)	Award 1 mark for a reason why less energy is received at the poles and a further 1 mark for extension through explanation, up to a maximum of 2 marks. The sun's rays arrive at a shallower angle at the poles (1) and are spread out (1). The sun's rays are more concentrated at the equator (1) because they arrive at right angles (1). The sun's rays travel through a greater thickness of atmosphere at the poles (1) and there is greater dispersion (1). **Accept any other appropriate response.**	(2)

Question number	Indicative Content **Name one ocean current.**	Mark
5 (b)	Award 1 mark for any of the following, maximum 1 mark: Atlantic Arctic Indian Pacific Southern Gulf/Gulf Stream North Atlantic Drift Antarctic Californian Labrador North/ South Equatorial North/South Pacific West/ East Australian **Accept any other appropriate response.**	(1)

Question number	Indicative Content **The UK has a distinct climate.** **Explain one way the prevailing wind affects the climate of the UK.**	Mark
5 (c)	Award 1 mark for identifying a characteristic of how the prevailing wind affects the UK's climate and a further 2 marks for extension through explanation, up to a maximum of 3 marks. The rainfall is highest on the west coast (1) because the prevailing wind is from the south-west (1) which picks up moisture from over the ocean (1). The prevailing wind is usually from the south-west (1) which passes over mountains (1) and leads to relief rainfall (1). Locations in the east have higher temperatures in summer (1) as they do not face the prevailing wind (1) and their temperatures are not moderated by the oceans (1). The prevailing wind is sometimes from the east (1) which would bring colder weather in the winter (1) as the continental land mass is much colder (1). The prevailing wind is sometimes from the south (1) which will bring hotter weather in the summer (1) as the air is coming from Africa (1). **Accept any other appropriate response.**	(3)

Question number	Indicative Content **State two pieces of evidence for natural climate change.**	Mark
6 (a)	Award 1 mark for any of the following, maximum 2 marks: Ice cores (1) Pollen/pollen records (1) Tree rings/dendrochronology (1) Historical sources/paintings/diaries (1) Melting ice caps/retreating glaciers (1) Rising sea levels (1) Temperature/rainfall records (1) Increased extreme weather events/more drought more storms (1) **Accept any other appropriate response.**	(2)

Question number	Indicative Content **Calculate the range of solar energy shown in Figure 6a.** **Answer to one decimal place.** **You must show your working in the space below.**	Mark
6 (b) (i)	Working to show: Highest figure– lowest figure (1361.3-1360.1) Correct answer is 1.2= 2 marks If the correct answer has been given, award 2 marks even if no workings are included. If the answer is incorrect but the workings are correct, 1 mark should be awarded.	(2)

Question number	Indicative Content **Suggest one way the variation in solar energy might have affected global temperatures between 1620 and 1720.** **You must use evidence from Figure 6a in your answer.**	Mark
6 (b) (ii)	Award 1 mark for a link to the resource and a further 1 mark for extension through explanation, up to a maximum of 2 marks. The amount of incoming solar energy was lower between 1650-1700 (1) which may have reduced global temperatures (1). The amount of incoming solar energy fluctuated across the period (1) which may have caused global temperatures to fluctuate as well (1). Global temperatures were higher between 1630 and 1645 (1) when the amount of incoming solar radiation was higher (1). There were periods when the amount of solar radiation was higher/lower (1) which would have caused temperatures to be higher/lower (1). **Accept any other appropriate response.**	(2)

Question number	Indicative Content **Study Figure 6b in the Resource Booklet.** **Calculate the percentage increase in the amount of methane in the atmosphere between 2010 and 2022 shown in Figure 6b.**	Mark
6 (c) (i)	Working to show: $\frac{(1.91-1.80)}{1.80} \times 100$ Or 0.11/1.80 x 100 Correct answer is 6.1% If the correct answer has been given, award 2 marks even if no workings are included. If the answer is incorrect but the workings are correct, 1 mark should be awarded.	(2)

Question number	Indicative Content **State one reason for the increase in the amount of methane in the atmosphere.**	Mark
6 (c) (ii)	Award 1 mark for any of the following, maximum 1 mark: Cattle farming/farming cows (1) Landfill/decay of organic waste (1) Rice production/ farming (1) Fossil fuel use/production (1) **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Identify the latitudes where tropical cyclones form.**	Mark
6 (d) (i)	A - 10-15°N This is the range of latitudes where tropical storms form. They do not form in 40-45°N (B), 60-65°N (C) or 75-80°N (D).	(1)

Question number	Indicative Content **State one reason why some tropical cyclones lead to more deaths than others.**	Mark
6 (d) (ii)	Award 1 mark for any of the following, maximum 1 mark: Flood defences (1) Type of infrastructure (1) Building quality (1) Level of development (1) Planning/ preparedness/ protection (1) Population density (1) Storm surges (1) Wind speeds (1) **Accept any other appropriate response.**	(1)

Question number	Indicative Content **Study Figures 6c and 6d in the Resource Booklet.** **Explain two responses to tropical cyclones.** **You must use evidence from Figures 6c and 6d in your answer.**	Mark
6 (e)	Award 1 mark for a response from the resource and a further 1 mark for expansion through explanation, up to a maximum of 2 marks for each part. **Figure 6c** Overseas aid is being provided (1) which helps the country recover from the tropical cyclone (1). The military/soldiers are coming in (1) and providing food/water (1). Water/food is being provided (1) which ensures that people have enough to drink/eat (1). Diseases are less likely to spread (1) as clean drinking water is being provided (1). People are being evacuated (1) which may help keep them safe from the storm (1). **Figure 6d** The building has been built on stilts (1) which means that it will not be damaged by flooding (1). There are shutters on the windows (1) which will reduce the impact of flying debris (1). Less damage may happen in future (1) because stronger homes have been built (1). The windows on the buildings have shutters (1) which will prevent flying glass in future storms (1). The buildings look abandoned (1) as people may have been moved to another area (1). **Accept any other appropriate response.**	(4)

Question number	Indicative Content Assess the impacts of drought on people and ecosystems in a named developed country.
6 (f)	**AO2 (4 marks)/ AO3 (4 marks)** **AO2** Impacts of drought on people in developed countries may include: • - Increased abstraction from groundwater supplies may lead to a drop in the water table - This may lead to less water being available which may affect irrigation – and, ultimately, lead to crop failures - Jobs may be lost in farming - Food prices may increase reducing real incomes. - Redirecting water to drought areas (e.g. by pipeline) - Warm and windy weather may lead to wildfires which can lead to deaths - Having to control water supply (e.g. hosepipe bans) - Redirecting water to drought areas (e.g. by pipeline) - There are economic costs associated with these impacts (e.g. rebuilding damaged buildings; providing more irrigation systems) • Impacts of drought on ecosystems in developed countries may include: - The environment may be destroyed by drought - Soil may dry out and be exposed to erosion by wind - Top soil may be removed reducing the fertility of soils - Wildfires can also devastate animal and plants habitats - Streams and rivers may dry out devastating the ecosystem - Water supplies and food supplies may run out and animals may be forced to migrate **AO3** Assessment should include making comparisons between the relative scale and significance of the impacts of drought on people and ecosystems. These judgements may depend on the regional location and time scale selected. • The scale of the impacts may vary depending on variations in wealth between different parts of countries and between different groups of people in the same country. • Certain occupations (e.g. farmers) may be harder hit than others during a period of drought. • Measures may be in place in some parts of the country to help cope with the impact of drought. • The impact may also vary according to the population density within different parts of the country. • Variations in weather and climate within a country may lead to different impacts on both and ecosystems. • The impacts of global climate change may also vary significantly in large countries (e.g. USA).

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • 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)
Level 2	4–6	• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • 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)
Level 3	7–8	• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, welldeveloped argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question number	Indicative Content **Identify which one of the following continents has the largest area of desert.**	Mark
7 (a) (i)	A – Africa (1) Africa (A) has a larger area of desert shown than Europe (B), North America (C) or South America (D).	(1)

Question number	Indicative Content **Explain one way climate influences the location of deserts.** **You must use evidence from Figure 7a in your answer.**	Mark
7 (a) (ii)	Award 1 mark for identifying the location of deserts and a further 1 mark for extension through explanation, up to a maximum of 3 marks. They are found along the tropics (1) because there is very low rainfall (1) as this is an area of high pressure (1). Deserts are found mainly between 20°-30°N/S (1) because there is high pressure (1) due to sinking air (1). Deserts are often found in the interiors of continents (1) as they are a long way from the oceans (1) which restricts the amount of rainfall (1). There are some deserts along the equator (1) because of mountains (1) which lead to a rain shadow effect (1). Low pressure at the equator (1) leads to high rainfall (1) which means that there are few deserts found here (1). **Accept any other appropriate response.**	(3)

Question number	Indicative Content **Use the data in Figure 7b to calculate the area of moorland in the UK.** **Answer to one decimal place.** **You must show your working in the space below.**	Mark
7 (b) (i)	Working to show: (10.3/ 100) x 244,000 Or 0.103 x 244,000 Correct answer is 25,132.0 km^2 If the correct answer has been given, award 2 marks even if no workings are included. If the answer is incorrect but the workings are correct, 1 mark should be awarded.	(2)

Question number	Indicative Content **Name one other terrestrial ecosystem in the UK.**	Mark
7 (b) (ii)	Award 1 mark for any of the following, maximum 1 mark: Heaths/heathlands (1) Saltmarsh/marsh/marshlands(1) Wetlands (1) Woods/woodlands/forests (1) **Do not accept:** Tropical rainforests/boreal forests	(1)

Question number	Indicative Content **Explain one way plants have adapted to the environment in tropical rainforests.**	Mark
7 (c)	Award 1 mark for a way that plants have adapted to the environment in tropical rainforests and a further 1 mark for extension through explanation, up to a maximum of 2 marks. They have buttress roots (1) which help stabilise the tall trees (1). Drip tips (1) help leaves shed water so they do not break (1). In order to maximise access to sunlight (1) the plants are arranged in layers (1). Plants/trees are tall (1) so that they can reach the sunlight (1). Roots are shallow (1) to gain nutrients (1). The leaves have shiny surfaces (1) so they can shed water (1). **Accept any other appropriate response.**	(2)

Question number	Indicative Content **Explain one way climate change threatens the biodiversity of tropical rainforests.**	Mark
7 (d)	Award 1 mark for a way that climate change is threatening the biodiversity of plants in tropical rainforests and a further 2 marks for extension through explanation, up to a maximum of 3 marks. Climate change may lead to it becoming drier (1) but the plants may not be able to tolerate the drier conditions (1) leading them to die (1). If the climate becomes drier (1) and many of the plants die (1) animals may lose their habitats (1). Plants in rainforests may shed their leaves more often (1) if there is less rainfall (1) and they may die (1). If the climate becomes hotter (1) this may cause plants to die (1) leading to fewer habitats for animals (1). Plants may not be able to adapt quickly (1) to cooling temperatures (1) which may cause them to die (1). A drier climate (1) may lead to more wildfires (1) which could kill animals/plants (1). **Accept any other appropriate response.**	(3)

Question number	Indicative Content **Identify the year with the largest tropical rainforest loss in Brazil.**	Mark
7 (e) (i)	Award 1 mark for the following, maximum 1 mark: 2016	(1)

Question number	Indicative Content **Calculate the mean annual tropical rainforest loss between 2015 and 2022.** **Answer to one decimal place.** **You must show your working in the space below.**	Mark
7 (e) (ii)	Working to show: 135,190/8 (1) Or 8290+28300+21300+13500+13600+17000+15500+17700/8 Correct answer is 16,898.8 km^2 If the correct answer has been given, award 2 marks even if no workings are included. If the answer is incorrect but the workings are correct, 1 mark should be awarded.	(2)

Question number	Indicative Content **Explain one reason for deforestation in tropical rainforests.**	Mark
7 (f)	Award 1 mark for a reason for tropical rainforest deforestation and a further 2 marks for extension through explanation, up to a maximum of 3 marks. The land is converted to farming (1) with crops being planted (1) and sold for money (1). Resources are mined (1) and forest is cleared to allow roads to be built (1) which provides access to the mines (1). Houses are being built (1) in order to provide for the growing population (1) which is growing as people migrate to the rainforest areas (1). Trees are being cut down for logs (1) which are sold to other countries (1) in order to help their economy/exports grow (1). Increased demand for meat worldwide (1) as countries like China adopt a western diet (1) is leading to the expansion of cattle farming (1). **Accept any other appropriate response.**	(3)

Question number	Indicative Content **Identify the largest nutrient store.**	Mark
7 (g) (i)	Award 1 mark for the following, maximum 1 mark: Biomass (1)	(1)

Question number	Indicative Content **Explain one impact of deforestation on the nutrient cycle in deciduous woodlands.** **You must use evidence from Figure 7d in your answer.**	Mark
7 (g) (ii)	Award 1 mark for identifying the impact of an element of the nutrient cycle shown on the resource and a further 2 marks for extension through explanation, up to a maximum of 3 marks. The biomass store will be lost (1) which will mean that the transfer to the litter store will be removed (1) leading to a reduction in the size of the litter store (1). The biomass store will be lost (1) which means that there will be no uptake from the soil store (1) which means that the soil store will remain large for a time (1). If the trees are left on the ground the litter store may increase in size (1) but it may then be leached rapidly (1) and the nutrients may be lost from the cycle (1). Deforestation leads to more rainfall reaching the ground (1) because less interception (1) and therefore more leaching (1). **Accept any other appropriate response.**	(3)

Question number	Indicative Content **Assess the success of the different approaches to the sustainable management of deciduous woodlands in a named region.**
7 (h)	**AO2 (4 marks)/ AO3 (4 marks)** **AO2** • Areas of deciduous woodlands are subject to many threats. • The main reasons for clearing trees include population growth/ urbanisation, agricultural change and resource extraction (e.g. timber). • Attempts are being made to reduce and even reverse deforestation through more sustainable use and management of forests. • Government policies have included the creation of National Parks to try to protect areas of forest. • There have been recent attempts in the UK to reverse the deforestation process at a national scale with increased rates of tree planting in recent years. This will have impacted on some regions of deciduous woodland. • At a smaller scale, a wide range of strategies are used to try to manage areas of woodland in a sustainable fashion. • These include: - Woodland management - Wildlife management - Leisure and recreation management - Local conservation work

- Education

AO3

Assessment should include making comparisons between the relative successes of the different approaches. These judgements may depend on the regional location and time scale selected.

- Rates of deforestation have started to decline in some regions of deciduous woodlands and there has been some widespread tree planting in the UK.
- This is due to greater protection of woodlands as well as changes in government policy.
- There is also a growing awareness of the importance of protecting areas of woodland and the ecosystems which they contain.
- This is linked to the need to develop ways to use them in a sustainable manner – which supports economic activity while protecting them.
- However, the success of these measures does vary.
- This is linked to economic and social factors, including population growth and the growth of urban areas/ increased demand for housing in rural and semi-rural areas.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	● Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● 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)
Level 2	4–6	● Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● 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)
Level 3	7–8	● Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) ● Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, welldeveloped argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)

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