

Mark Scheme (Results) January 2011

GCSE

GCSE Geography (5GA2H) 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.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:
 - i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear*
 - ii) select and use a form and style of writing appropriate to purpose and to complex subject matter*
 - iii) organise information clearly and coherently, using specialist vocabulary when appropriate.*

Question Number	Acceptable Answers	Reject	Mark
1 (a)(i)	(Rotational) slumping, slide, land slide, land slip, slump. Not soil creep or land fall		1

Question Number	Acceptable Answers	Reject	Mark
1 (a)(ii)	Y - Headland, bay, beach, shingle ridge. Z - Cliff, headland		2

Question Number	Acceptable Answers	Reject	Mark
1 (a)(iii)	Destructive - high frequency 10-14 per minute, short wave length, plunging, high energy/above 1m/backwash>swash Backwash> swash (1) therefore beaches eroded (1) High energy waves (1) due to greater fetch (1) Credit labels on the diagram Max 2 for a list		4

Question Number	Acceptable Answers	Reject	Mark
1 (b)(i)	Hard engineering	Groynes	1

Question Number	Acceptable Answers	Reject	Mark
1 (b)(ii)	These groynes prevent LSD (1) therefore trapping sediment (1), thereby building a beach (1) This beach will absorb the wave energy and reduce erosion (1) Must have reference to erosion for 3rd mark		3

Question Number	Acceptable Answers	Reject	Mark
1 (b)(iii)	<p>Max 2 marks for descriptive points Credit explanations at 1 mark each Max of 3 marks without a mention of process. Full sequence needed for full marks Max of three without annotated diagram Cliff formation - sea erodes base of cliff via Hydraulic Action, Abrasion (1). Creation of a wave cut notch and overhang (1) Lack of support (gravity) of overhung cliff creates pressure/cracks and subsequent collapse (1) Action of sea compacting rock into platform which protects coast at low tide (1) Formation of steep cliff which over time recedes (1)</p>		4

Question Number	Acceptable Answers	Reject	Mark
1 (c)	<p>Max 2 without explanation Must refer to both geology and fetch, i.e. max 3 for either fetch or geology Fetch - Larger fetch results in larger waves (1), therefore the approaching waves have more energy to erode (1) thereby increasing coastal recession (1). Geology- Softer rock will provide less resistance (1), therefore increasing the impact of the wave energy (1) therefore increasing coastal recession (1).</p>		4

Question Number	Indicative content	
1(d)	Loss of land, cost of relocation.	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about how coastal recession can affect people or environment. Could be about any coastal area.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the effect or a specific point about the effect related to the chosen example. The top of the level requires a range of specific points relating to the effect on people or the environment a number of explanations. Or one of each.
Level 3	5-6	An explicit answer A range of specific facts relating to the effects on people and environment and explained points.

Question Number	Acceptable Answers	Reject	Mark
2 (a)(i)	X = Watershed Y = Mouth Z = Confluence / main channel / river channel		3

Question Number	Acceptable Answers	Reject	Mark
2 (a)(ii)	For characteristic features expect width, depth, velocity, discharge and gradient. Velocity - increases with distance downstream (1) due to reduced friction (1) as a result of reduced wetted perimeter relative to CSA (1) Depth - increases with distance downstream (1) as greater discharge has more erosive power (1) therefore eroding a deeper channel (1)		4

Question Number	Acceptable Answers	Reject	Mark
2 (b)(i)	Hard engineering		1

Question Number	Acceptable Answers	Reject	Mark
2 (b)(ii)	For final mark there must be a link to erosion. Concrete lining of banks provides a resistant surface (1) therefore rate of erosion is slower (1). Banks are smoother allowing faster velocity (1) which reduces erosion as there is less friction (1) Impermeable material / surface (1) for example concrete (1) Description of features is a max of 2		3

Question Number	Acceptable Answers	Reject	Mark
2 (b)(iii)	Max 2 marks for descriptive points Credit explanations at 1 mark each Max of 3 marks without a mention of process. Full sequence needed for full marks Max of three without annotated diagram A fault in the geology exposes layers of hard and soft rock (1). Water pouring over the drop causes erosion of the softer underlying rock (1) this leads to development of a plunge pool (1). Overhang of harder rock eventually collapses into plunge pool (1) overtime the waterfall retreats towards the source forming a gorge (1).		4

Question Number	Acceptable Answers	Reject	Mark
2 (c)	Does not have to be equal weighting. Can be 2-2 or 3-1 Examples Physical - impermeable rocks (granite) (1) encourages surface runoff (1), snow melt - during spring melt water (1) into rivers causes higher discharge therefore more potential for flooding (1) Human - deforestation (1) reduced interception and increased surface runoff encourages (1), urbanisation - increased impermeable surfaces (1) causes more water to enter drains therefore greater discharge (1). Except dams as a cause of human flooding Credit heavy or intense rainfall (1)		4

Question Number	Indicative content	
2(d)	Loss of land, damage to possessions, cost of defences, loss of life/injury Except reference to dams for flooding.	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about flooding. Could be about any river.
Level 2	3-4	A clear answer Level two is reached by there being an explanation about the effects of flooding management for a chosen example. The top of the level requires a range of specific facts relating to the flood or a number of explanations of effects. Or one of each.
Level 3	5-6	An explicit answer A range of specific facts relating to a flood event and with clear explanation of effects of flood.

Question Number	Acceptable Answers	Reject	Mark
3 (a)(i)	J = Corrie Lake / Tarn K = Arête / (knife edge) ridge L = Pyramidal Peak		3

Question Number	Acceptable Answers	Reject	Mark
3 (a)(ii)	One mark for freeze-thaw reference. Need to describe an act of abrasion for third mark. Freeze thaw causes rock to break off from cliffs due to repeated freezing and thawing (1). Such material then falls as scree (1). The glacier carries the material (1) This material can be used to scrape against the side of the valley (as abrasion) (1).		3

Question Number	Acceptable Answers	Reject	Mark
3 (b)(i)	Either medial or lateral moraine.		2

Question Number	Acceptable Answers	Reject	Mark
3 (b)(ii)	Can be any type of moraine must have reference to deposition for a max. Medial moraine - formed when two lateral moraines join (1) as two glaciers combine (1) thereby forming a medial moraine in centre of glacier (1) Lateral moraine - Build-up of scree/deposits (1) adjacent to the glacier flow (1). Or melting of glacier (1) leading to lateral deposition (1)		3

Question Number	Acceptable Answers	Reject	Mark
3 (b)(iii)	Question requires explanation and inclusion of a diagram. Max of three without annotated diagram Erratics - large boulders which have been transported by the glacier (1). They may not represent the surrounding rock type (1) as they may have been carried long distances (1). They may sit on a rock promontory as erratic shields it from erosion (1).		4

Question Number	Acceptable Answers	Reject	Mark
3 (c)	<p>Max 2 without explanation</p> <p>Forecasting - monitor condition of snow (1) achieved by digging pits to determine stability of snow (1). Careful meteorological forecasting (1) achieved through computer modelling (1)</p> <p>Planning and education - Land use mapping (1) to determine areas of 'risk' (1). Controlled explosions (1) to trigger smaller avalanches to prevent larger ones (1). Education of skiers and locals to teach people of how their actions can trigger avalanches (1) Achieved through signposting and messaging (1).</p> <p>Defences - barriers (1) limit down-slope movement of snow (1), afforestation (1) trees break forces of the avalanche as it passes (1)</p>		4

Question Number	Indicative content	
3D	Do not credit effects as question only concerns cause(s) Specific causes will be type and amount of snow, weather, lack of defences, Likely to refer to Galtur or Montroc	
Level 1	1-2	A basic answer Simple descriptive statements about the cause. Could be about any avalanche
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the cause or a specific point about the cause related to the chosen example. The top of the level requires a range of specific facts relating to the cause or a number of explanations. Or one of each.
Level 3	5-6	An explicit answer A range of specific facts relating to the cause and explained points.

Question Number	Acceptable Answers	Reject	Mark
4 (a)(i)	Alaska Accept North West North America	North America	1

Question Number	Acceptable Answers	Reject	Mark
4 (a)(ii)	Max 3 without evidence which can data, places eg west of USA, or size of earthquake. 1 mark for evidence or data Linear (1) Near coast (1) At the plate boundaries (1) Clustered (1) Mainly in western USA and Alaska (1)		4

Question Number	Acceptable Answers	Reject	Mark
4 (a)(iii)	Focus - origin of earthquake (1) Epicentre - point on surface directly above focus with greatest effects (1) Difference - position or action Difference can be implied with use of terms 'whereas' or 'however'.		2

Question Number	Acceptable Answers	Reject	Mark
4 (b)(i)	Any plausible human activity Tourism, trade, fishing, leisure activities. (1)		1

Question Number	Acceptable Answers	Reject	Mark
4 (b)(ii)	Descriptive points to a max. Credit explanation if given. Income/profitability from tourism (1) Attractive environment (near beach) (1) Inability to afford the move away from the island (1) Fertile soils allow good agricultural yields (1) Do not accept good soils. Mining of metals e.g. copper and tin which are common in igneous rocks		3

Question Number	Acceptable Answers	Reject	Mark
4 (b)(iii)	<p>Explanation of hotspots Max 2 marks for descriptive points Max of 3 marks without a mention of process. Max of three without annotated diagram Magma rises as mantle plumes towards the surface (1) At the surface the magma erupts through the crust.(1) This creates volcanoes(1) that often rise above the ocean surface to form islands.(1) The Canary Islands formed as the crustal plate moved over the stationary source hotspot. (1) Cannot achieve max without annotated diagram</p>		4

Question Number	Acceptable Answers	Reject	Mark
4 (c)	<p>Max 2 without explanation. Forecasting: strange animal behaviour (1), monitoring electrical discharge (1), minor tremors (1) earthquake clouds (1) Planning and education: How locals should react in an earthquake (1), preparation of emergency hazard kit (1), Building design e.g. flexible frames, shatterproof glass, rubberised foundations (1) planning regulations (1)</p>		4

Question Number	Indicative content	
4(d)	<p>Indicative content Accept LIC or HIC Do not credit effects as question only concerns cause(s) Specific causes will be named plates, direction of movement, type or size of faults, geology , rock type Allow hotspot volcanoes.</p>	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about the causes of volcanic eruptions or earthquakes. Could be about any volcanic eruption.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the cause or a specific point about the cause related to the chosen example. The top of the level requires a range of specific facts relating to the cause or a number of explanations. Or one of each.
Level 3	5-6	An explicit answer A range of specific facts relating to the cause and explained points.

Question Number	Acceptable Answers	Reject	Mark
5 (a)(i)	Bexley		1

Question Number	Acceptable Answers	Reject	Mark
5 (a)(ii)	<p>Point mark. 1 mark for evidence or data if given eg place name Mainly located around the centre of London (1) Clustered together (1) South west - north east trend (1) Located around the river Thames (1) There are 16 boroughs in this category (1)</p>		3

Question Number	Acceptable Answers	Reject	Mark
5 (a)(iii)	<p>First rule applies Any relevant material that can be locally recycled. Paper/ Plastic/ Tins/ Hardcore/ Garden waste/ Timber/ Batteries/Scrap metal Any two</p>		2

Question Number	Acceptable Answers	Reject	Mark
5 (a)(iv)	<p>Max 2 without explanation. Max two without specifics. Can be any type of waste, industrial, nuclear, plastics, or domestics. Must focus on the policy of the country even if this is at local scale. Likely to refer to landfill, incineration or recycling</p>		4

Question Number	Acceptable Answers	Reject	Mark
5 (b)(i)	Renewable Accept wind power		1

Question Number	Acceptable Answers	Reject	Mark
5 (b)(ii)	That renewable energy types can have a negative impact on the environment (1) Do not accept that it makes it colder. For example: Noisy wind turbines (1) Ugly turbines (1) Potential danger to wildlife (1) The face of the countryside has changed for the worse (1)		2

Question Number	Acceptable Answers	Reject	Mark
5 (b)(iii)	Renewable energy advantages: Green energy - does not exploit natural resources Does not release CO ₂ (1) Once set up is relatively cheap to run (1) It is safe (no negative impacts on locals (1) Construction of turbines provides employment (1)		3

Question Number	Acceptable Answers	Reject	Mark
5 (b)(iv)	Point mark Allow 1 mark for data such as depending on the text used! Walls - 35%, 40% Roof - 25%, 45% Floor - 10%, 15% Windows + doors - 35% 25% Leaving devices on with an example such as lights = 2 marks. Another way is required for the third mark such as heat energy is lost through the roof. Leave lights on all day (1) leads to excess energy waste (1) Houses without double glazing (1) allows heat loss (1)		3

Question Number	Indicative content	
5(c)	Energy saving light bulbs, Loft Insulation, Double glazing, CHP systems Must refer to more than one example for max.	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about solutions to energy waste
Level 2	3-4	A clear answer Level two is reached by there being some explanation about energy waste management or a specific point about solutions to energy waste in relation to the chosen example. The top of the level requires a range of specific facts or a number of explanations. Or one of each.
Level 3	5-6	An explicit answer A range of specific facts relating to how schools/homes manage energy waste with a range of explained points.

Question Number	Acceptable Answers	Reject	Mark
6 (a)(i)	Any correct continent either Africa or Asia		1

Question Number	Acceptable Answers	Reject	Mark
6 (a)(ii)	Point mark. Only in Asia and Africa (1) Found in Africa / Asia (1) Mainly LICs/MICs (1) Countries located near to equator (1) Any exceptions within either Africa/Asia (1) Unevenly distributed (1) Countries are mainly between the tropics (1) None in South America / Australasia / North America / Europe (1)		3

Question Number	Acceptable Answers	Reject	Mark
6 (a)(iii)	Point mark Problems of access to clean water developed as a reason or what makes the water dangerous with diseases in it. Forced to drink dirty water (1) can't afford to build pipes(1) increased contraction of cholera (1) a limited knowledge of water borne diseases (1)		3

Question Number	Acceptable Answers	Reject	Mark
6 (b)(i)	Answer to concentrate on original creation of the reservoir. Flooding of the surrounding environment (1) Destruction of habitats (1) Loss of land (1)		3

Question Number	Acceptable Answers	Reject	Mark
6 (b)(ii)	Aquifer/River		1

Question Number	Acceptable Answers	Reject	Mark
6 (b)(iii)	Point mark Allow 1 mark for a specific point.		4

	<p>In the summer months when they require the greatest amount of water for the influx of tourists (1)</p> <p>Examples of what tourists demand to 2 marks swimming pools, golf courses.</p> <p>They also need food which means crops need to be heavily irrigated.(1)</p> <p>Possible need to import water (1) into areas (e.g. Costas) where high annual temperatures and evaporation rates (1) to supply the tourists drinking needs.</p>		
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Question Number	Acceptable Answers	Reject	Mark
6 (c)	<p>Max 2 without explanation.</p> <p>Answers to focus on</p> <p>Use of boreholes (1)</p> <p>Recycled sewage water (1)</p> <p>Small scale dams (1)</p> <p>Does not have to relate to an example for full marks</p> <p>One mark for description of scheme one mark for development of it.</p>		4

Question Number	Indicative content	
6(d)	<p>Expect River Colorado/Tigris-Euphrates</p> <p>Dam building leading to reduced supply</p> <p>Conflicts based on resource/land access/politics</p> <p>Emphasis on conflict not scheme</p> <p>Max level 1 if not a water transfer scheme which causes conflict between areas</p>	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about water transfer disputes Could relate to any dispute
Level 2	3-4	A clear answer Level two is reached by there being an explanation about a dispute or a specific point about water transfer disputes related to the chosen example. The top of the level requires a range of specific facts relating to the named dispute or a number of explanations.
Level 3	5-6	An explicit answer A range of specific facts relating to the named dispute with explained points.

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