

# Mark Scheme (Results) Summer 2010

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)	Stump		1

Question Number	Acceptable Answers	Reject	Mark
1 (a)(ii)	Headland Bay Beach Stack Cliff Labels must be in correct places for full marks. Reject words not on labelled onto diagram	Do not allow stump or reference to waves	2

Question Number	Acceptable Answers	Reject	Mark
1 (a)(iii)	As clip cannot be seen accept any landform for area likely to choose either Beach, Headlands and Bays, cave or Stack or Stump  Max 2 for descriptive points, explanations credited at 1 mark each, either for explanation of sequence or process. Max 3 marks without a process. Full sequence required for full marks.  Headlands and bays are formed in areas of hard and soft rock(1). Erosion is greater on the softer rocks (1) as these are less resistant to wave processes(1). Headlands are more resistant therefore erode more slowly resulting in them protruding into the sea (1).		4

Question Number	Acceptable Answers	Reject	Mark
1 (b)(i)	Slumping		1

Question Number	Acceptable Answers	Reject	Mark
1 (b)(ii)	Loss of property (1) Damage to farm buildings (1) Potential loss of earnings (1) Loss of land Allow inferred effects		3

Question Number	Acceptable Answers	Reject	Mark
1 (b)(iii)	<p>Can refer here to Geology/Fetch/Coastal Management, mass movement.</p> <p>Expect reference to softer geology increases rates of coastal recession (1) due to lower resistance to erosional impact of waves (1) or Increased fetch increases recession (1) due to more distance for greater build-up of wave energy (1).</p> <p>Mark on range and depth. If candidate only discuss erosion / weathering - Max 2 Does not have to be equal weighting. Can be 2-2 or 3-1. Max 2 marks for no explanation.</p>		4

Question Number	Acceptable Answers	Reject	Mark
1 (c)	<p>Planning: Not allowing homes to be built in potential flood-risk zones. Reference to government planning laws. DEFRA to decide which areas of coast need planning to prevent areas at most risk therefore reduce the impacts of flooding.</p> <p>Forecasting: Improved forecasting (to households through broadcasts) enables prediction of conditions at sea, therefore give warning of possibility of coastal flooding and allow measures to be taken to act against the risk of flooding. Expect ref to Met Office/Environmental Agency.</p> <p>1 mark for outline, 2 for explanation of how factor reduces coastal flooding. 1 point could be developed to full marks as long as planning and forecasting are present. Max 3 for either planning or forecasting</p>		4

Question Number	Indicative content	
1(d)	Expect reference to examples such as Walton on the Naze. Can be at any scale Management techniques include groynes; rip-rap; sea walls etc	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about how the coast has been managed. Could be about any coastal area.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the management or a specific point. The top of the level requires a range of specific points relating to how the coastal area has been managed or a number of explanations or a specific point and an explanation.
Level 3	5-6	An explicit answer with clear explanation of points. A range of specific facts and explained points about how the coast has been managed.

Question Number	Acceptable Answers	Reject	Mark
2 (a)(i)	Any characteristics to include: Fastest flow/Thalweg River Cliff Slip-off slope/river beach/point bar Area of Erosion Area of deposition Must be labelled in correct place for full marks Reject words not on labelled onto diagram		2

Question Number	Acceptable Answers	Reject	Mark
2 (a)(ii)	Accept explanation on why it is deeper on the outside and shallower on the inside. Channel flow is directed towards one side of the river and erosion occurs forming river cliff (1). Slower flowing water passes around the inside of the channel (1) and deposition occurs forming a slip-off slope(1). Meander migrates in direction of outside bend (1).  Accept reference to faster therefore more erosion. Max 2 for descriptive points, explanations credited at 1 mark each, either for explanation of sequence or process. Max 3 marks without a process. Full sequence required for full marks which in this case would be explanation for both sides of the river.		4

Question Number	Acceptable Answers	Reject	Mark
2 (a)(iii)	Ox-bow lakes/scars		1

Question Number	Acceptable Answers	Reject	Mark
2 (b)(i)	River/Stream/Tributary		1

Question Number	Acceptable Answers	Reject	Mark
2 (b)(ii)	Damage to property Loss of land Subsidence Breached levee Disruption to life Allow inferred effects Any 3 effects - must be outlined not listed. List = 1 mark		3

Question Number	Acceptable Answers	Reject	Mark
2 (b)(iii)	<p>Must have explanation for full marks</p> <p>Factors to include steep sided relief, impermeable surfaces, heavy/persistent rainfall, snowmelt, deforestation, antecedent conditions</p> <p>One mark for each factor stated and mark for explanation,</p> <p>e.g. Steep sided relief (1) causes increased run-off due to effects of gravity causing more water to get into channel (1). Increased intensity of storm leads to saturation (1) resulting in more run-off and therefore flooding (1)</p> <p>3:1 / 1:3 / 2:2.</p>	Reference to human causes	4

Question Number	Acceptable Answers	Reject	Mark
2 (c)	<p>Planning: Reference to local authority and planning permission - could refer also to floodplain zoning.</p> <p>Building Design: Buildings on stilts, moving electrical sockets up walls, concrete floors instead of wooden, MDF instead of wood in door frames, use of waterproof plaster and waterproof concrete floors</p> <p>1 mark for outline, 2 for explanation of how factor reduces river flooding. Should refer to planning and building design for full marks</p>	Reference to forecasting and education	4

Question Number	Indicative content	
2(d)	Expect reference to examples such as River Nene Management techniques include embankments; floodplain zoning; warning systems; flood walls etc	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about how the river has been managed. Could be about any river.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the management or a specific point about the affect related to the chosen example. The top of the level requires a range of specific points relating to how the river has been managed or a number of explanations or a specific point and an explanation.
Level 3	5-6	An explicit answer with clear explanation of points. A range of specific facts and explained points about how the river has been managed.



Question Number	Acceptable Answers	Reject	Mark
3 (a)(i)	Arrow drawn on diagram from left to right		1

Question Number	Acceptable Answers	Reject	Mark
3 (a)(ii)	Stoss end labelled onto steeper slope (left) Lee slope labelled onto more gentle slope (right)		2

Question Number	Acceptable Answers	Reject	Mark
3 (a)(iii)	Drumlin formed due to saturation of sediment within glacier (1). Resultant deposition occurred (1). As glacier passes over deposits material sculpted into characteristic shape (1). Can be reshaped by subsequent ice movements (1). (Could also refer to collection of sediments around obstacle) 1 mark for depositional feature 1 mark for shape or form 1 mark for where it forms 1 mark for process eg lodgement Do not credit multiple descriptive comments		4

Question Number	Acceptable Answers	Reject	Mark
3 (b)(i)	Arête		1

Question Number	Acceptable Answers	Reject	Mark
3 (b)(ii)	Formed by movement valley glacier (1) Glacier erodes valley floor/sides (1) Removal of rock outcrops (1) Reference to formation of truncated spurs (1) Leaves characteristic flat base and steep sides (1) May relate process to changing shape. Max 2 for descriptive points, explanations credited at 1 mark each, either for explanation of sequence or process. Max 3 marks without a process. Full sequence required for full marks.		4

Question Number	Acceptable Answers	Reject	Mark
3 (b)(iii)	Any relevant human activity Skiing Hiking Communication Farming (in valley) Must have more than one use outlined and show link (explicitly or implicitly) for full marks List max 2		3

Question Number	Acceptable Answers	Reject	Mark
3 (c)	<p>Planning: Creation of smaller controlled avalanches, testing of ski runs, warning signs, land-use zoning</p> <p>Defences: Afforestation (tree lines), Snow sheds, Avalanche netting/fences, dams/wedges,</p> <p>1 mark for factor, 2 for explanation of how factor reduces the effects of avalanches. Or 3/1.</p>		4

Question Number	Indicative content	
3(d)	<p>Effects are likely to refer to damage to settlement; loss of life/injury; evacuation; tree loss/damage; effect on economy etc Must refer to people and environment for maximum marks</p>	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	<p>A basic answer Simple descriptive statements about the effects of an avalanche on the people and their environment. Could be about any avalanche.</p>
Level 2	3-4	<p>A clear answer Level two is reached by there being an explanation of the affect or a specific point about the affect related to the chosen example. The top of the level requires a range of specific points relating to the effects of an avalanche on the people and their environment or a number of explanations or a specific point and an explanation.</p>
Level 3	5-6	<p>An explicit answer with clear explanation of points. A range of specific facts and explained points about how the avalanche has been managed.</p>

Question Number	Acceptable Answers	Reject	Mark
4 (a)(i)	Convergent (accept destructive)	Collision	1

Question Number	Acceptable Answers	Reject	Mark
4 (a)(ii)	Arrows should reflect plate movements towards each other Must show two arrows for mark		1

Question Number	Acceptable Answers	Reject	Mark
4 (a)(iii)	Continental		1

Question Number	Acceptable Answers	Reject	Mark
4 (a)(iv)	Melting of oceanic plate produces magma (1). Collection of magma in magma chamber This rises under pressure/less dense than surrounding rock (1) Through cracks and joints (1) Gas/Water Vapour is added to melt (1) Magma only erupts under great pressure therefore eruptions explosive (1)  Max 2 for descriptive points, explanations credited at 1 mark each. Full sequence required for full marks.		4

Question Number	Acceptable Answers	Reject	Mark
4 (b)(i)	Collapsed Highway/Bridge/Road		1

Question Number	Acceptable Answers	Reject	Mark
4 (b)(ii)	Some buildings are earthquake resistant (1) development of this theme - example of how buildings are earthquake resistant (1). The Japan is a HIC therefore can afford to protect (1) Country is aware of risks posed by earthquakes through scientific research (1) Modern buildings(1) Some explanation required for full marks		3

Question Number	Acceptable Answers	Reject	Mark
4 (b)(iii)	The point on the surface, above the focus where most damage occurs (1) Point where the earthquake first strikes the surface(1)		1

Question	Acceptable Answers	Reject	Mark
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Number			
4 (b)(iv)	Mercalli measures damage (1) Richter measures strength/magnitude (1) Main difference - one is descriptive the other is quantitative, difference in scales (1) One mark for each definition. Difference must be explicit for full marks.		3

Question Number	Acceptable Answers	Reject	Mark
4 (c)	Point mark Reasons to include: Fertile soils Extraction of minerals/metals/crystals Tourism Geothermal Energy Family Perceived risk = low  Explosive volcanic eruptions give large amounts of ash (1) this material weathers to form fertile soils (1). The increased fertility leads to high crop yields for local farmers (1) leading to increased incomes for local farmers (1).		4

Question Number	Indicative content	
4(d)	Either reference to earthquake event or a volcanic eruption Likely effects on population, settlement, infrastructure, economy, environment etc	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about the effects of the volcanic eruption on the people and their environment. Could be about any eruption.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the affect or a specific point about the affect related to the chosen example. The top of the level requires a range of specific points relating to the effects of the volcanic eruption on the people and their environment or a number of explanations or a specific point and an explanation.
Level 3	5-6	An explicit answer with clear explanation of points. A range of specific facts relating to the effects of the volcanic eruption on the people and their environment and explained points about how the volcanic eruption has been managed.

Question	Acceptable Answers	Reject	Mark
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Number			
5 (a)(i)	370 - graph should be accurately drawn		1

Question Number	Acceptable Answers	Reject	Mark
5 (a)(ii)	Increased awareness of 'green issues' /waste management More accessibility to local authority management schemes Recycling Re-using materials Less packaging on products Composting of food One idea should be developed for maximum		2

Question Number	Acceptable Answers	Reject	Mark
5 (a)(iii)	1 mark per type of waste e.g. e-waste (1), biodegradable (1), non-biodegradable (1) hazardous (1), solid (1), liquid (1) or examples such as garden (1), food(1) etc 1 mark for type eg white goods, 1 mark for exemplification - fridges Max 2 list		3

Question Number	Acceptable Answers	Reject	Mark
5 (b)(i)	Surplus		1

Question Number	Acceptable Answers	Reject	Mark
5 (b)(ii)	2		1

Question Number	Acceptable Answers	Reject	Mark
5 (b)(iii)	Uneven distribution (1) Most countries have an energy deficit (1) Except UK (1) or Norway (1) Use of evidence (1) Countries in the centre/south of Europe have deficit (1) Max 2 without evidence		3

Question Number	Acceptable Answers	Reject	Mark

5 (b)(iv)	<p>Non Renewable energy - Coal/Natural Gas/Oil/Nuclear</p> <p>Renewable - Solar/HEP/Wind/Wave</p> <p>One mark per explanation</p> <p>e.g. wind energy is noisy (1), wind energy is noisy and therefore is disrupts life for local settlements reducing quality of life (2)</p> <p>Do not credit they will run out for non-renewable. (2:2, 3:1, 1:3)</p> <p>If fuel incorrect credit disadvantage if correct for the type of fuel (renewable or non-renewable).</p> <p>Do not allow wood as renewable.</p>		4
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Question Number	Acceptable Answers	Reject	Mark
5 (c)	<p>Reducing energy waste on local scale:</p> <p>Community energy schemes e.g. Combined Heat and Power Scheme</p> <p>Energy efficiency measures by companies such as British Gas e.g. insulation = reduced council tax</p> <p>Local wind turbine schemes to power homes and businesses</p> <p>Allow transport - car sharing</p> <p>Local can mean business, homes, local council.</p> <p>One idea outlined = 1, development of idea = 2</p> <p>Max 2 marks without a specific explanation. (2 x 2) or (3:1, 1:3)</p> <p>Max 2 for general points or a list</p>	Reject answers which relate to national scale projects	4

Question Number	Indicative content	
5(d)	Reference to different types of waste including nuclear, domestic industrial and toxic - should refer to a range for maximum marks Disposal methods could include incineration, recycling, landfill and government schemes	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about how waste is disposed of.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of waste disposal or a specific point about waste disposal. The top of the level requires a range of specific points relating to projects designed to dispose of waste or a number of explanations or a specific point and an explanation.
Level 3	5-6	An explicit answer with clear explanation of points. A range of specific facts which relate to different types of waste.

Question Number	Acceptable Answers	Reject	Mark
6(a)(i)	25% - graph should be drawn accurately on 25% line		1

Question Number	Acceptable Answers	Reject	Mark
6(a)(ii)	High usage for non essential purposes(1) Use of appliances e.g. dishwashers not common in LICs (1) Appliances are luxury items which are beyond the means of many of the populations of LICs (1) Max 1 for list.		3

Question Number	Acceptable Answers	Reject	Mark
6(a)(iii)	Drinking Cooking Teeth cleaning Swimming pools Cleaning/Sanitation Washing/Feeding Pets (2 x 1)		2

Question Number	Acceptable Answers	Reject	Mark
6(b)(i)	South West		1

Question Number	Acceptable Answers	Reject	Mark
6(b)(ii)	3		1

Question Number	Acceptable Answers	Reject	Mark
6(b)(iii)	Higher than average values in west (1) Except in Midlands (1) Lower values in east (1) Use of data (1) E/W divide (1) Max 2 without data.		3

Question Number	Acceptable Answers	Reject	Mark
6(b)(iv)	Greater populations in south east (1) Therefore higher demand (1) Least populated areas are where highest amount of rain falls(1) Therefore lower demand and a water surplus (1) (2x2) or (3x1) Reserve 1 mark for explanation.		4

Question Number	Acceptable Answers	Reject	Mark
6(c)	Need to collect water several times per day (1) Water related diseases (1) Pollution of water courses/lack of clean water supply (1) 1 mark for statement of water supply problem, 2nd mark for development. 2 + 2		4

Question Number	Indicative content	
6(d)	Scheme should be a water management scheme on a large scale. Limit local initiative or organisation initiative to level 1. The response should answer the question which is about effects. Effects could be on environment, people, economy, energy supply, travel etc.	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements about a water management scheme. At lower level could be about any scheme.
Level 2	3-4	A clear answer Level two is reached by there being an explanation of the affect or a specific point about the affect related to the chosen example. The top of the level requires a range of specific points relating to the effects of the water management scheme or a number of explanations or a specific point and an explanation.
Level 3	5-6	An explicit answer with clear explanation of points. A range of specific facts relating to the effects of a water management scheme.



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