

Mark Scheme (Results)

June 2011

GCSE Geography A 5GA2F
Natural Environment

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GeographySubjectAdvisor@edexcelexperts.co.uk.

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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)	A – Ireland		1

Question Number	Acceptable Answers	Reject	Mark
1(a)(ii)	C – 80km		1

Question Number	Acceptable Answers	Reject	Mark
1(a)(iii)	Fetch is the distance over which waves can build up. If there is a greater fetch then the waves will have more energy. This can result in more erosion taking place. On Figure 1a the fetch from Sefton to Scotland is greater than the fetch from Sefton to Anglesey .		5

Question Number	Acceptable Answers	Reject	Mark
1(a)(iv)	Point mark. Must make difference clear for full marks therefore list max 2. e.g. Constructive waves have more energy (1), have a stronger swash (1) and weaker backwash (1), are less frequent (1), are smaller than 1m (1)		3

Question Number	Acceptable Answers	Reject	Mark
1(b)(i)	C – Soil Creep		1

Question Number	Acceptable Answers	Reject	Mark
1(b)(ii)	Loss of land (1) Destruction of property (1) Damage to sea defences (1) Loss of animal habitats (1) Death or injury (1)		1

Question Number	Acceptable Answers	Reject	Mark
1(c)(i)	B - When waves have lower energy causing material to be dropped		1

Question Number	Acceptable Answers	Reject	Mark
1(c)(ii)	A sequence required for maximum marks. Max 3 without a diagram. Allow max for just a diagram. Spits form due to LSD (1) Spits occur when there is a change in direction of coastline, (1) e.g. bay or estuary (1) Sand is deposited off coast (1), Sand builds up over time (1) Spits can become curved over time (1) Formation of marsh land (1)		4

Question Number	Acceptable Answers	Reject	Mark
1(d)(i)	A – Rock Groyne		1

Question Number	Acceptable Answers	Reject	Mark
1(d)(ii)	Point mark. Protects the coast (1) stops longshore drift (1) strong (1) Build beaches (1) last long time/resistant to erosion (1) not broken up by large storms (1)		3

Question Number	Acceptable Answers	Reject	Mark
1(d)(iii)	Coastal flooding can be reduced e.g. through planning, building design or forecasting. Point mark. Max 3 without specific points/examples. Other schemes for example to do with cliff recession max 1. Max 1 for a list of methods 1 mark is available for a specific point. e.g. Flood warning systems (1) are employed on the coastline to warn the public of an ensuing flood (1). Land use planning is put into place (1) so that housing is outside of a designated danger zone (1) e.g. within 5 metres of sea level (1).		4

Question Number	Acceptable Answers	Reject	Mark
2(a)(i)	D – Waterfall		1

Question Number	Acceptable Answers	Reject	Mark
2(a)(ii)	C – 25m		1

Question Number	Acceptable Answers	Reject	Mark
2(a)(iii)	The softer rock, sandstone , is weaker than the harder rock. This means it is eroded faster , creating an overhang. Over time, the limestone will collapse, and fall into the plunge pool. Continued erosion will cause the retreat of the landform forming a gorge .		5

Question Number	Acceptable Answers	Reject	Mark
2(a)(iv)	Candidate could refer to differences in features or channel characteristics. Point mark. Must make difference clear for full marks therefore list max 2. e.g. In the upper stage the river starts at the source (1), however in the lower stage it meets the sea at the mouth (1). OR Near the start of the river the velocity is slower whereas in the lower stage it is faster (1)		3

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

Question Number	Acceptable Answers	Reject	Mark
2(b)(ii)	Loss land (1) Damage to buildings (1) Damage to river management schemes Destruction of infrastructure (1) Damage to animal habitats (1)		1

Question Number	Acceptable Answers	Reject	Mark
2(c)(i)	D – Sediment is dropped due to slower flow in the channel		1

Question Number	Acceptable Answers	Reject	Mark
2(c)(ii)	A sequence required for maximum marks. Max 3 without a diagram. Allow max for just a diagram. Levees – Reference to flooding (1) Deposition of material adjacent to river (1) Layers of sediment build up (1) Larger sediment built up closer to river (1)		4

Question Number	Acceptable Answers	Reject	Mark
2(d)(i)	B – loss of wildlife habitat		1

Question Number	Acceptable Answers	Reject	Mark
2(d)(ii)	Point mark. Roads submerged (1), cars stranded (1), homes flooded/damaged (1), roads/routes blocked due to flood waters (1). Any effect is acceptable if from photo. Allow comments on plausible long term consequences – expense.		3

Question Number	Acceptable Answers	Reject	Mark
2(d)(iii)	Flooding can be reduced e.g. through planning, building design or forecasting. Point mark. Max 3 without specific points/examples. Accept management schemes if related to flooding. Max 1 for a list of methods 1 mark is available for a specific point. e.g. Use of information on historical flooding(1) Use of hazard maps to determine areas at risk (1) Use of computer modelling (1)		4

Question Number	Acceptable Answers	Reject	Mark
3(a)(i)	C – 60m		1

Question Number	Acceptable Answers	Reject	Mark
3(a)(ii)	C – towards the south (SE)		1

Question Number	Acceptable Answers	Reject	Mark
3(a)(iii)	B – Medial		1

Question Number	Acceptable Answers	Reject	Mark
3(a)(iv)	Terminal moraine found at end of glacier (1) marks the maximum extent of the glacier (1).		1

Question Number	Acceptable Answers	Reject	Mark
3(a)(v)	Point mark. Steep sided (1) Flat bottomed (1) Truncated spurs (1) Smooth floor (1) Any evidence from diagram (1)		3

Question Number	Acceptable Answers	Reject	Mark
3(a)(vi)	Lodgement occurs when the glacier is advancing . As the glacier moves forwards rock carried at the base of the glacier is pressed into the valley floor. Ablation occurs when a glacier is retreating. Increased temperatures cause the glacier to melt. The material carried is then dropped .		5

Question Number	Acceptable Answers	Reject	Mark
3(b)(i)	B – Freeze thaw		1

Question Number	Acceptable Answers	Reject	Mark
3(b)(ii)	Creation of sediment for transportation (Scree) (1) Destruction of mountain (1)	Erosion	1

Question Number	Acceptable Answers	Reject	Mark
3(c)(i)	B – Abrasion		1

Question Number	Acceptable Answers	Reject	Mark
3(c)(ii)	A sequence and process required for maximum marks. Max 3 without a diagram. Allow max for just a diagram. e.g. Arêtes – Ice build up in upland areas (1) Glacial ice erodes (plucking and abrasion) (1) to form a corrie (1) Erosion of two back to back corries to form ridge (1)		4

Question Number	Acceptable Answers	Reject	Mark
3(d)(i)	Point mark. Skiers disturbing snow due to skiing (1) Noise made disturbs snow leading to avalanche (1)		2

Question Number	Acceptable Answers	Reject	Mark
3(d)(ii)	Avalanches can be reduced e.g. through planning, building design or forecasting. Point mark. Max 3 without specific points/examples. 1 mark is available for a specific point. E.g. Use of computer modelling (1) to understand the type of likely avalanche and where it may cause damage (1). This allows the production of hazard maps (1) to show areas that will be affected (1), it also allows warnings to be given (1) due to sensors on the mountain (1) Credit reference to examples (1)		4

Question Number	Acceptable Answers	Reject	Mark
4(a)(i)	D - Y		1

Question Number	Acceptable Answers	Reject	Mark
4(a)(ii)	Point mark. Plates are moving apart (1) Use of data (1) Different rates of movement (1) Fastest at Y (1)		3

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

Question Number	Acceptable Answers	Reject	Mark
4(a)(iv)	Stated answers are suitable – no description required Convergent fold mountains (1) Deep sea trench (1) Magma Chamber (1) Volcanoes Conservative Faults (1) Rifts (valleys) (1) Earthquake (1) Lateral movement of ground (1)	Do not allow same generic features for each, e.g. earthquakes.	4

Question Number	Acceptable Answers	Reject	Mark
4(a)(v)	At divergent plate boundaries convection causes magma to rise to the surface. This causes the plate to dome and crack. When the magma reaches the surface an eruption occurs from a volcano.		5

Question Number	Acceptable Answers	Reject	Mark
4(b)(i)	B – complete devastation, all buildings destroyed, ground moves in waves		1

Question Number	Acceptable Answers	Reject	Mark
4(b)(ii)	<p>This question requires an outline. Credit explanations to 1 mark.</p> <p>People in HICs choose to work in areas for economic reasons such as employment (1). Highly paid jobs result in high income (1) which outweighs the risk of the earthquake (1). People in LICs live in areas as they have cultural ties to the area (1) or are reluctant to leave for personal reasons (1).</p>		3

Question Number	Acceptable Answers	Reject	Mark
4(c)(i)	B - Thousands of people had nowhere to live		1

Question Number	Acceptable Answers	Reject	Mark
4(c)(ii)	<p>The effects of earthquakes can be reduced e.g. through planning, building design or education. Point mark.</p> <p>e.g. designing new buildings to be EQ proof (1). Land-use planning in building design (1) to allow space so swaying buildings do not collide (1). Education of people (1) to look for signs and know how to react (1). Training for emergency services (1). Practise drills for public/emergency services (1)</p>		2

Question Number	Acceptable Answers	Reject	Mark
4(c)(iii)	<p>Point marked.</p> <p>1 mark is available for a specific point about an example Max 2 for a list of simple statements with no development.</p> <p>e.g. ground movement (1), buildings collapsing (1) death (1) injury (1).</p>		4

Question Number	Acceptable Answers	Reject	Mark
5(a)(i)	Accurately completed graphs – 1 mark per correct section of pie chart. 1 mark for correct labelling		2

Question Number	Acceptable Answers	Reject	Mark
5(a)(ii)	People in HICs have more money. This means that they are able to buy more products which come with lots of packaging . This can lead to plastic and paper waste People can also easily buy food in HICs from supermarkets. Often people buy too much leading to waste .		5

Question Number	Acceptable Answers	Reject	Mark
5(a)(iii)	Point mark Max 2 for a list or a statement about different types of waste with no development. Such as recycling, incineration, landfill. Candidates can also develop one of these points.		3

Question Number	Acceptable Answers	Reject	Mark
5(b)(i)	B – Torness		1

Question Number	Acceptable Answers	Reject	Mark
5(b)(ii)	Point mark Mainly by the coast (1) One in Wales (1) There are six at 1001 – 1250 mw (1) must have units Max 2 without evidence.		3

Question Number	Acceptable Answers	Reject	Mark
5(c)(i)	C - It produces little Carbon Dioxide		1

Question Number	Acceptable Answers	Reject	Mark
5(c)(ii)	B – is cheaper to produce		1

Question Number	Acceptable Answers	Reject	Mark
5(c)(iii)	Any 2 relevant disadvantages: Visual pollution (1) Inability to mass produce certain types (1) Accept answers in any order.		2

Question Number	Acceptable Answers	Reject	Mark
5(d)(i)	B – the amount of greenhouse gases produced per household		1

Question Number	Indicative content	
5(d)(ii)	Can focus on local, regional or national scale Local - domestic – e.g. loft insulation, condensing boiler Regional – Council run schemes – e.g. Eastcroft District Heating Scheme National – government policy/NGO – Carbon Trust/Energy Savings Trust	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements.
Level 2	3-4	A clear answer Level two is reached by there being a clear link to managing energy waste in the UK. The points will still be descriptive in nature. The top of the level is reached by there being a number of clear statements about energy waste management in the UK. There will be no specific points.
Level 3	5-6	An explicit answer For level 3 there will be a specific point about energy wastage and other descriptive points. Or a good explanation and a number of descriptive points. For the top of the level three, there should be good explanation and a specific point.

Question Number	Acceptable Answers	Reject	Mark
6(a)(i)	One mark for each correct section of pie chart and one mark for correct labelling		2

Question Number	Acceptable Answers	Reject	Mark
6(a)(ii)	Household water usage is very high in HICs . In HICs more water is available and people often use machines, such as dishwashers . In LICs many homes do not have piped water. Therefore they may have to walk several kilometres to collect clean water from boreholes .		5

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

Question Number	Acceptable Answers	Reject	Mark
6(b)(ii)	Point mark. Max 2 without evidence. South and South east of England only areas with serious water problems(1) As move north = lower water supply problems (1), exception is the South West (1).		3

Question Number	Acceptable Answers	Reject	Mark
6(b)(iii)	Point mark Answer should relate to Figure 6b. Low annual rainfall (1) Major cities located here therefore higher demand (1) Most arable agriculture here therefore high demand on water (1) High consumer uses e.g. showering (1) Could also focus on why other areas have not got water stress		3

Question Number	Acceptable Answers	Reject	Mark
6(c)(i)	C - Drip irrigation to plant roots which waters plants when needed.		1

Question Number	Acceptable Answers	Reject	Mark
6(c)(ii)	D - Short flush toilet		1

Question Number	Acceptable Answers	Reject	Mark
6(c)(iii)	Must have two methods for max. Tap restrictors (1) Push taps (1) Toilet flush controls (1) Water recycling (1) Education of workers (1)		2

Question Number	Acceptable Answers	Reject	Mark
6(d)(i)	B – Small scale schemes set up by the local community		1

Question Number	Indicative content	
6(d)(ii)	Any relevant scheme in HIC or LIC The reasons for the scheme E.g. Sydney Olympic Park	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-2	A basic answer Simple descriptive statements.
Level 2	3-4	A clear answer Level two is reached by there being a clear link to a water management scheme. The points will still be descriptive in nature. The top of the level is reached by there being a number of clear statements about the reasons for a water management scheme. There will be no specific points.
Level 3	5-6	An explicit answer For level 3 there will be a specific point about a water management scheme and other descriptive points. Or a good explanation and a number of descriptive points. For the top of the level three, there should be good explanation and a specific point.

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Fax 01623 450481

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