

Mark Scheme (Results)

Summer 2014

Pearson Edexcel GCSE in
Geography A (5GA2F)

Unit 2: The Natural Environment
(Foundation)

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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.

Placing a mark within a level mark band

- The instructions below tell you how to reward responses within a level. Follow these unless there is an instruction given within a level. However, where a level has specific guidance about how to place an answer within a level, **always** follow that guidance.
- **2 mark bands**
Start with the presumption that the mark will be the higher of the two.
An answer which is poorly supported gets the lower mark.
- **3 mark bands**
Start with a presumption that the mark will be the middle of the three.
An answer which is poorly supported gets the lower mark.
An answer which is well supported gets the higher mark.
- **4 mark bands**
Start with a presumption that the mark will be the upper middle mark of the four.
An answer which is poorly supported gets a lower mark.
An answer which is well supported and shows depth or breadth of coverage gets the higher mark.

- 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.

Spelling, Punctuation and Grammar Marking Guidance

- The spelling, punctuation and grammar assessment criteria are common to GCSE English Literature, GCSE History, GCSE Geography and GCSE Religious Studies.
- All candidates, whichever subject they are being assessed on, must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Spelling, punctuation and grammar marking criteria should be applied positively. Candidates must be rewarded for what they have demonstrated rather than penalised for errors.
- Examiners should mark according to the marking criteria. All marks on the marking criteria should be used appropriately.
- All the marks on the marking criteria are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the marking criteria.
- Examiners should be prepared to award zero marks if the candidate's response is not worthy of credit according to the marking criteria.
- When examiners are in doubt regarding the application of the marking criteria 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.
- Handwriting may make it difficult to see if spelling, punctuation and grammar are correct. Examiners must make every effort to assess spelling, punctuation and grammar fairly and if they genuinely cannot make an assessment, the team leader must be consulted.
- Specialist terms do not always require the use of complex terminology but the vocabulary used should be appropriate to the subject and the question.
- Work by candidates with an amanuensis, scribe or typed script should be assessed for spelling, punctuation and grammar.
- Examiners are advised to consider the marking criteria in the following way:
 - How well does the response communicate the meaning?
 - What range of specialist terms is used?
 - How accurate is the spelling, punctuation and grammar?

Question Number	Answer	Mark
1(a) (i)	B – High Energy	1

Question Number	Answer	Mark
1(a) (ii)	D - Stack	1

Question Number	Answer	Mark
1(a) (iii)	C The scraping of sand and stones in the waves against the cliff face	1

Question Number	Answer	Mark
1(b)	<p>A spit is a ridge ofsediment..... which extends from the coastline. It is formed by the process oflongshore drift..... . Material istransported along the coastline.</p> <p>When the coastline changes direction this material is depositedoffshore..... .</p>	4

Question Number	Answer	Mark
1(c) (i)	<p>Sea wall (recurved)/ Rip-rap (rock armour)/ Revetments/ Groynes (wooden or stone) / Offshore Reefs / Gabions / Offshore breakwaters</p> <p>Allow any recognised method of hard engineering</p>	1

Question Number	Answer	Mark
1(c) (ii)	<p>Answer will depend on response to (c)(i)</p> <p>Advantages (may include characteristics) of hard engineering:</p> <ul style="list-style-type: none"> • Durability • Protecting the coast • Prevents flooding • Effectiveness (against coastal processes) • Lack of need for other methods • Extent of protection offered to human land-use <p>Must develop at least one advantage for maximum.</p> <p>e.g. Sea wall is a long-term protection (over 20 years)(1) against erosion and flooding (1). It can reflect the waves energy (1) thereby reducing the impact of erosional processes (1).</p>	<p>3</p> <p>(1+1)+1</p>

Question Number	Answer	Mark
1(d)	<p>Impacts of coastal recession on human environment:</p> <ul style="list-style-type: none"> • Increased need for coastal protection • Potential loss of land to erosion • Need for evacuation • Higher insurance claims • Need to change the land-use of the coast. <p>Credit other sensible suggestions.</p> <p>e.g. Loss of agricultural land (1) Loss of housing on the coastline (1) Increased need for sea defences (1) Cost of home insurance is higher (1) and some houses e.g. Happisburgh have become too expensive to insure (1).</p> <p>Max of 3 without reference to example (which could be impacts or more likely located places).</p> <p>Max 3 without a clearly attempted explanation.</p>	<p>4</p> <p>(1+1) + (1+1)</p> <p>or</p> <p>(1+1) + 1+1</p>

Question Number	Answer	Mark
2(a) (i)	A – Discharge	1

Question Number	Answer	Mark
2(a) (ii)	D - As discharge increases gradient decreases	1

Question Number	Answer	Mark
2(a) (iii)	C - Greater amount of water entering the river	1

Question Number	Answer	Mark
2(b)	<p>A river starts at itssource.....</p> <p>Further down the river’s course the</p> <p>.....channel or valley..... shape becomes flatter and wider. One reason for this change ismore..... erosion.</p> <p>When a river reaches its mouth the cross-sectional area is usually at its</p> <p>.....largest.....</p>	4

Question Number	Answer	Mark
2(c)	<p>Landform formation should include:</p> <ul style="list-style-type: none"> • A sequence of formation from meander to complete ox-bow • Reference to a named process • Evidence of explanation • Credit labels and annotations from diagram (do not double credit) • Can score full marks from diagram and labelling/annotations • Maximum 2 for just diagram without any labels / annotation <p>Ox bow formation could include:</p> <ul style="list-style-type: none"> • Increased erosion on the outside of the meander leading to elongation of meander neck • Thinning of meander neck caused by erosion on outside bend. • Increased discharge event leading to breach of meander neck • Deposition in the old meander to separate the new channel and old meander • Meander scar develops as the water drains over time. <p>e.g. Meander eroded on outside bends (1), causing a thinning of meander neck (1). Flood event breaches meander neck (1), creating new channel and creating an oxbow (1). Deposition will close the meander (1). Ox bow will dry up over time (1).</p> <p>Max 3 without a clearly attempted explanation (this could be through annotation of the diagram).</p> <p>Note do not double credit the same point between diagram and text.</p>	<p>4</p> <p>2+2</p>

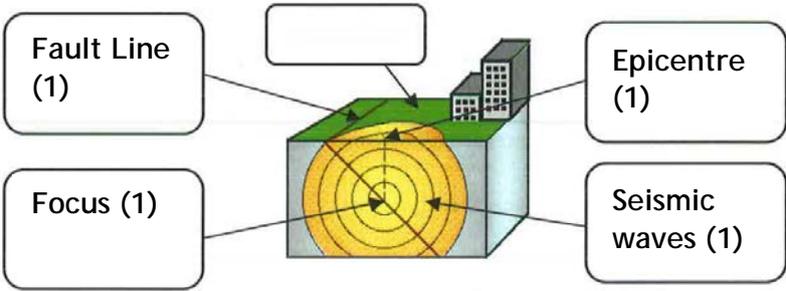
Question Number	Answer	Mark
2(d)	<p>River management is a measure taken by humans to control river processes.</p> <p>Different types of methods to include:</p> <ul style="list-style-type: none"> • Hard Engineering – embankments, channelisation, flood relief channels, dams • Soft engineering – flood plain zoning, washlands, flood warning systems, afforestation • Do nothing <p>Credit other sensible suggestions, which may include reference to water supply which may be taken as a component of water management.</p> <p>No mark for a named method.</p> <p>e.g. Embankments raise the channel height (1), therefore allowing extra discharge (1). Floodplain zoning leads to the planning of buildings away from flood zones (1). Therefore less chance of homes being in the flood zone (1).</p> <p>Maximum of 3 without reference to named example.</p> <p>Max 3 without a clearly attempted explanation.</p>	<p>4</p> <p>(1+1) + (1+1)</p> <p>or</p> <p>(1+1) + 1+1</p>

Question Number	Answer	Mark
3(a) (i)	D - Volcanoes	1

Question Number	Answer	Mark
3(a) (ii)	C – Jobs at Canefield airport	1

Question Number	Answer	Mark
3(a) (iii)	C - Mid-plate	1

Question Number	Answer	Mark
3(b)	<p>At a convergent plate boundary two plate move together.</p> <p>At the point of subduction a trench is formed.</p> <p>In the subduction zone pressure builds up to form earthquakes.</p> <p>Molten material called magma rises through the crust.</p>	4

Question Number	Answer	Mark
3(c)	<p>One mark per correct label.</p>  <p>The diagram shows a 3D block representing the Earth's crust. A fault line is shown as a diagonal crack. A focus is marked at the point where the fault lines meet underground. An epicentre is marked on the surface directly above the focus. Concentric circles represent seismic waves radiating from the focus. A building is shown on the surface near the epicentre.</p> <p>Labels with arrows pointing to the diagram:</p> <ul style="list-style-type: none"> Fault Line (1) Focus (1) Epicentre (1) Seismic waves (1) 	<p>4</p> <p>1+1+1+1</p>

Question Number	Answer	Mark
3(d)	<p>This question requires candidates to explain how building design reduces the impacts of earthquakes.</p> <p>Building design, e.g.</p> <ul style="list-style-type: none"> • Use of cross bracing to counteract sideways and vertical movements • Use of counterweights to prevent tops of buildings swaying • Shock absorbers to dull the seismic waves as they pass onto the building • Land use planning around buildings to allow space for escape from falling objects • Shatter-proof glass to prevent injury on the street from falling glass • Allow one mark for named example of a known building design e.g. San Francisco Airport <p>e.g. Counterweights stop the building swaying (1) therefore this reduces the impact of shaking (1) and may stop building collapse (1). Shatterproof glass stops glass falling on street (1) therefore preventing injury to passers-by (1).</p> <p>Max 3 without a clearly attempted explanation.</p> <p>Examples can be examples of design or located examples including named buildings, e.g. Taipei 101, Trans-America Building, LA Airport.</p>	<p>4</p> <p>(1+1) + (1+1)</p> <p>or</p> <p>(1+1) + 1+1</p>

Question Number	Answer	Mark
4(a) (i)	North America – 8% Africa - 5%	2 1+1

Question Number	Answer	Mark
4(a) (ii)	<p>Candidates may choose to include:</p> <ul style="list-style-type: none"> - overall pattern - comparative statements <ul style="list-style-type: none"> • Both Europe and Middle East have greatest amount of fossil fuels • Middle east only has 1% of renewables and nuclear • Europe has 10% nuclear and 9% renewables • Europe uses less % fossil fuels than the middle east <p>1 mark for use of specific data.</p> <p>Do not credit explanations.</p> <p>Must use a comparison for max 4 (however this can be implied, e.g. by using data).</p>	4 1+1+1+1

Question Number	Answer	Mark
4(b) (i)	B - An energy source which will not run out	1

Question Number	Answer	Mark
4(b) (ii)	A - Coal	1

Question Number	Answer	Mark
4(c)	<ul style="list-style-type: none"> • Increased wealth = increased energy consumption (or mirror image statement) • Wealthy countries have more power stations • Wealthy countries have technology to tap energy. • Wealthy countries can import energy. <p>e.g. Countries with increased wealth use a greater amount of energy (1). This is because they have the technology to access the energy (1), or they can import energy if needed (1).</p>	2 1+1 (1+1)

Question Number	Answer	Mark
4(d)	<p>Advantages of landfill</p> <ul style="list-style-type: none"> • Can tap gases as part of energy creation (1) • An effective way to rid of large amounts of waste (1) • Effectively deals with biodegradable waste (1) • Does not burn materials which add CO₂ (1) • Once filled, creates open space in a potentially urban area. <p>Disadvantages</p> <ul style="list-style-type: none"> • Creation of greenhouse gases such as methane (1) – potential for explosions (1) • Inability to use land for other purposes in future (1) • NIMBYism from locals (1) • Attract unwanted vermin or scavengers (1) • Visual pollution of sites (1), which are often quite large (1) • Can contaminate groundwater <p>e.g. They are often capable of disposing of large amounts of waste (1), therefore reducing exporting cost (1). Locals would not be in favour of them (1) due to the potential smell (1).</p> <p>Do not credit generic statements such as "easy", "quick", "cheap" etc.</p>	<p>4 (1+1)+(1+1)</p>

Question Number	Indicative content	
<p>*4 (e) QWC i-ii-iii</p>	<p>Question is about solutions to energy waste – not solid waste. Answers must be involved in reducing waste rather than producing more energy.</p> <p>While this question is in the context of energy saving measures, it should focus on the viewpoints of individuals, organisations or government regarding the value or implementation of the solutions.</p> <p>Answers in the context of solid waste (e.g. recycling, incineration etc.) can only score in level 1 if they are linked to the views of organisations, individuals or government. If the candidate just gives a description of managing solutions to solid waste the score will be 0.</p> <p>Views of the following groups could apply:</p> <p>Individuals</p> <ul style="list-style-type: none"> • May not be able to afford cost of introducing new measures such as new boiler systems/double glazing. • Bad habits may mean that people do not want to change their ways! • May not be possible to fit measures (new boiler systems) to their property therefore an objection • May not see the value of such measures due to being content with the heating systems they have • Measures (such as CHP schemes) may not be available to individuals therefore not able to implement them. <p>Government</p> <ul style="list-style-type: none"> • Government may not be willing to implement large scale measures in their period of government. • Legislation of government may be at odds with demands of individuals or organisations • Local authority approaches may vary from those at national government. • Governments may be encouraged to implement measures to fit in with international agreements (Kyoto/Copenhagen) • Governments consider them important therefore give grants. • May offer companies tax exemptions to meet their energy targets • May offer individuals grants to implement schemes (e.g. new boilers). 	
Level	Mark	Descriptor
Level 0	0	No acceptable response

Level 1	1–2	One or two ideas partially related to energy and / waste sometimes in a meaningful way. Examples likely absent. Largely ignores views. Very basic use of geographical terminology – communication not always clear.
Level 2	3–4	A very basic description of solutions to energy and or waste. Examples may be included, but are of limited relevance to the answer. Views absent, not clear, very generic or described(i.e. not linked to a group). A view is given but not in the context of solutions o energy waste. Basic use of geographical terminology – communication not always clear.
Level 3	5–6	One partially explained link to views of either government or individuals (may be implicit or explicit). For top of level expect partial explanation of both government and individual views. Exemplification may be used, especially in the top of this band. Generally clearly communicated but with mixed use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	<i>Threshold performance</i> Candidate spells, punctuates and uses the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.
SPaG Level 2	2-3	<i>Intermediate performance</i> Candidate spells, punctuates and uses the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.
SPaG Level 3	4	<i>High performance</i> Candidate spells, punctuates and uses the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

Question Number	Answer	Mark
5(a) (i)	Sweden – 10% Agricultural water use Spain - 40% Agricultural water use	2 1+1

Question Number	Answer	Mark
5(a) (ii)	<p>Candidates may choose to include:</p> <ul style="list-style-type: none"> - overall pattern - comparisons between regions - use of data <ul style="list-style-type: none"> • UK has the highest values for Industry and Domestic use (1) • Turkey has a highest use is on agriculture (1) at 75% (1) • UK has a high energy use (1) • UK has a greater use on industry than Turkey (1) • Must use data for maximum marks <p>1 mark for use of specific data.</p> <p>Do not credit explanations.</p> <p>Must use a comparison for max 4 (however this can be implied, e.g. by using data).</p>	4 1+1+1+1

Question Number	Answer	Mark
5(b) (i)	C - Using water in the home	1

Question Number	Answer	Mark
5(b) (ii)	D - Farms	1

Question Number	Answer	Mark
5(c)	<ul style="list-style-type: none"> • Increased wealth = increased water consumption (or mirror image statement) • Wealthy countries have technology to tap energy. • Wealthy countries can import water. • Citizens in wealthy countries have a high demand (1) due to ownership of many water consuming devices (1) 	2 1+1 (1+1)

Question Number	Answer	Mark
5(d)	<p>Can be from a range of problems – some are outlined here;</p> <p>Lack of access</p> <ul style="list-style-type: none"> • Long walk to nearest water supply/hole could be used by animals who carry disease • No alternative but to drink parasitic / dirty water – not enough clean water <p>Pollution</p> <ul style="list-style-type: none"> • Use by heavy industry who dump polluted water back into local water courses which are used by people • Human use of rivers – faeces and urine in water course therefore increases chances of passing water borne illnesses. <p>Lack of medication</p> <ul style="list-style-type: none"> • Lack of access to available vaccinations • Lack of access to hospitals where vaccinations are available – in remote areas • Lack of medical expertise/understanding of how these diseases can impact upon lives. <p>Max 2 for description</p>	4 (1+1)+(1+1) (1+1+1)+1

Question Number	Indicative content	
<p>*5 (e) QWC i-ii-iii</p>	<p>Water management schemes are measures taken (usually larger scale) to control water use. This question looks at the viewpoints of different individuals and governments (national or local) to determine the value of the scheme.</p> <p>The scheme can be at a variety of scales, including international schemes e.g. dams and other national schemes or local schemes e.g. water management in factories or individual water meters.</p> <p>Depending on the case study the viewpoints could be from:</p> <p>Individuals</p> <ul style="list-style-type: none"> • May object to the measures being implemented nearby as it may affect their livelihood • People may lose their business e.g. farmland from a large scale scheme. • People may be concerned over action taken by government over the water management schemes (e.g. conflict) • People may be concerned over loss to biodiversity. <p>Government</p> <ul style="list-style-type: none"> • Change in government may lead to different policy approaches • Legislation of government in relation to the schemes may be at odds with demands of individuals or organisations • Government may object to costing of the scheme or may not be able to afford the scheme or may not feel the scheme was cost effective. • The scheme could have international implications therefore could lead to conflict. 	
Level	Mark	Descriptor
Level 0	0	No acceptable response
Level 1	1–2	<p>One or two ideas partially related to water management sometimes in a meaningful way. Named scheme likely absent / not appropriate. Likely ignores views. Developed viewpoints but not linked to scheme is top of level 2. Very basic use of geographical terminology – communication not always clear.</p>

Level 2	3–4	A very basic description of a water management scheme. Named scheme included, but is of limited relevance to the answer. A brief comment on view of an individual / government is required for the top of this band. Basic use of geographical terminology – communication not always clear.
Level 3	5–6	One partially explained link to views of either government or individuals (may be implicit or explicit). View point must be linked to a specific named water management scheme. For top of level expect partial explanation of government and individual views. Exemplification may be used, especially in the top of this band linked to the named scheme. Generally clearly communicated but with mixed use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidate does not spell, punctuate or use the rules of grammar within the context of the demands of the question.
SPaG Level 1	1	<i>Threshold performance</i> Candidate spells, punctuates and uses the rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.
SPaG Level 2	2-3	<i>Intermediate performance</i> Candidate spells, punctuates and uses the rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.
SPaG Level 3	4	<i>High performance</i> Candidate spells, punctuates and uses the rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

