Mark Scheme (Results)

Summer 2017

Pearson Edexcel GCSE in Geography A (5GA2F/01)
Unit 2: The Natural Environment

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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)	Coastline Y faces south east whereas coastline X faces the **north west**. Coastline **X** has a straighter shape. Dodman Point is an example of a **headland** The shape of both coastlines has been strongly influenced **geology**.	**4**

Question Number	Answer	Mark
1(a) (ii)	C - beach	**1**

Question Number	Answer	Mark
1(b) (i)	D - slumping	**1**

Question Number	Answer	Mark
1(b) (ii)	C - The breakdown of the cliff due to freezing and thawing of water	**1**

Question Number	Answer	Mark
1(c)	Question asks for description (however credit developed descriptions/ extended idea). **Max 3 if only one method named.** No mark for naming a coastline but max 3 marks for generic techniques without locational relevance / detail. Management methods may include: Sea wall Rip rap Revetments Groynes Managed retreat Beach nourishment **Allow one mark for a valid named method of a coastal management method.** **Allow one mark for a general comment about hard/ soft engineering if there are no named methods.** Candidates can describe the appearance and/or what they do. Example: Sea walls (1) stand at the back of the beach (1) and reflect the waves' energy (1). At Seaford the beaches are nourished every 6 months (1) to maintain the beach (1).	**4** **1+1+1+1** **or** **(1+1)+1+1** **or** **(1+1)+(1+1)** **or** **(1+1+1)+1**

Question Number	Answer	Mark
1(d)	The question requires an outline (a brief explanation or a development of an idea). The chalk is a harder rock (1) so erosion rates are lower (1)/ use of data (1) The boulder clay is a softer rock (1) so erosion rates are faster (1)/ data (1) Sea walls have been put in place at Seaford because softer rock has led to a higher erosion rate(2) **Allow references to coastal defences if linked to geology and erosion rate.**	**4** **(1+1)(1+1)** **(1+1+1) +1**

Question Number	Answer	Mark
2(a) (i)	In grid square 4357 there is a **meander** in the River Eden. Much of the area around the river is a flat **floodplain.** There is a **confluence** where a tributary joins the River Eden in grid square 4156 The site of Carlisle means that it is at risk from **flooding.**	**4**

Question Number	Answer	Mark
2(a) (ii)	A - an oxbow lake	**1**

Question Number	Answer	Mark
2(b) (i)	D – Flood plain zoning	**1**

Question Number	Answer	Mark
2(b) (ii)	A designated area of land (next to the river) onto which a river can flood (1) Allow for all acceptable responses in the spirit of the above definition e.g. deliberate flooding/ overflow from river.	**1**

Question Number	Answer	Mark
2(c)	This question requires candidates to explain with annotations therefore without this, max 3 marks. Allow 3 marks for diagram(s) with description. Max 2 for just a labelled diagram Max 3 for text which is not obviously linked to the diagram. Allow 1 for general descriptions about levees/ no diagram used. Max 1 if no diagram. There must be evidence of sequence and change over time for 4 marks (this may be shown in the diagram). **Sequence** River floods Deposition of larger particles Repetition of flooding to build size **Example** The river floods when there is excess discharge (1). Materials leave the channel in the floodwater (1). Larger material is deposited near the channel (1). There is a lack of energy to carry the material (1). The deposits build up the river bed and banks over successive floods (1). Levees increase the size of the channel (1). Over time the river is higher than the surrounding floodplain.	**4** **1+1+1+1**

Question Number	Answer	Mark
2(d)	Question requires a description of impact of flooding on people. Max 3 marks without reference to locational detail. Allow 2 marks for a list of impacts. Impacts on human environment to include: Death/Injury Illness/Disease Destruction of infrastructure Destruction to property Increased insurance claims **Example** The Cockermouth floods lead to the death of PC Barker (1). He was standing on a bridge which collapsed (1). The bridge collapse meant people had a 45 minute diversion (1). Many homes suffered damage (1).	**4** **(1+1)+1+1** **or** **1+1+1+1**

Question Number	Answer	Mark
3(a) (i)	A – The point under the surface where the crust breaks	**1**

Question Number	Answer	Mark
3(a) (ii)	C- Fires damage woodlands	**1**

Question Number	Answer	Mark
3(b)	Figure 3a shows that before the earthquake, Haiti was a **poor** country. The earthquake caused deaths and many buildings **collapsed.** After the earthquake, homes were **rebuilt** using similar construction materials. People continue to live in places such as Haiti because they don't have enough **money** to move to a safer area.	**4**

Question Number	Answer	Mark
3(c) (i)	B - Composite	**1**

Question Number	Answer	Mark
3(c) (ii)	The question requires an outline (a brief explanation or a detailed development) of two features at a convergent plate boundary. Max 2 marks for descriptions / named characteristic features. Both features need to be outlined for 4 marks. Allow descriptions of processes. **Do not credit references to volcano/ eruption type.** **Other characteristic features** Deep sea trench Subduction zone Fold mountains Large magnitude earthquakes Tsunami **Example** Deep sea trenches form where one plate meets another (1). At the point of subduction the plates fold downwards to form a trench (1). This occurs where an oceanic plate meets a continental (1). Fold mountains form due to the collision between the two plates (1). Continental crust buckles upwards to form the mountains (1). Plates moving towards each other/ interlocking (1) creating friction (1).	**4** **(1+1)+(1+1)**

Question Number	Answer	Mark
3(d)	The question requires an outline (a brief explanation or a detailed development) of the effects of an earthquake or a volcanic eruption. Max 3 for just descriptive statements. Must have an outline to get full marks. Max 3 marks if no locational detail. Max 2 for a list of effects. **Earthquake effects** Ground shaking Liquefaction Death / Injury Damage / Destruction of buildings /infrastructure Disruption to life… **Volcanic eruption effects** Burial by ash Death / Injury Pyroclastic flows/burns Destruction to property / infrastructure Disruption to life **Example** Montserrat Soufriere Hills volcano erupted in 1995-7. It caused pyroclastic flows which led to 19 people losing their lives(1). As a result of the eruption the south of the island was made into an exclusion zone(1) and the capital Plymouth was destroyed(1). Over 4000 people were evacuated from the island(1).	**4** **(1+1)+1+1**

Question Number	Answer	Mark
4(a) (i)	D – Oil	**1**

Question Number	Answer	Mark
4(a) (ii)	B - Decreased by 10.1%	**1**

Question Number	Answer	Mark
4(a) (iii)	One mark for a reason associated with reduced coal use and one mark for development. Allow one mark to suggest that coal use has decreased. **Coal decrease:** • To reduce air pollution (1) because of environmental concerns / change in government policy/ targets (1). • Dirty fuel (1) there are cleaner alternatives (1). • Running out of resource (1) therefore forced to find alternatives / cost of importing/extraction is too high (1). • Harder to exploit (1) as the country does not have the technology to access / extract (1) so mines have been shut (1).	**2** **(1+1)**

Question Number	Answer	Mark
4(b)	Candidates need two developed ideas in relation to income and wealth for full marks. Max 2 marks for description. Do not credit mirrored statements. **Allow references to transport and production of energy.** • Countries with greater wealth = greater consumption (1) because people can either produce or import greater amount of energy for use. • Wealthy people / countries are wasteful in energy use (1). • People with a greater income can afford greater number of electrical items (1) these have a large demand on the use of energy (1). • People on lower incomes / reduced wealth may be forced to seek cheap alternatives e.g. fuelwood (1) as they may not be able to access / afford more expensive alternatives e.g. coal (1), • Greater income may mean that people leave items on standby (1) because they can afford to pay the bills.	**4** **(1+1)+(1+1)**

Question Number	Answer	Mark
4(c) (i)	D Electrical waste	**1**

Question Number	Answer	Mark
4(c) (ii)	Benefits of recycling may include: Less need for landfill / pressure on land. Reduced use of raw materials. Reduction in carbon footprint / fossil fuel output. Ability to create alternate or new uses out of existing products. Do not credit just reuse. Accept any valid response.	**1**

Question Number	Answer	Mark
4(d)	Description of a recycling case study. Allow developed descriptions. Max 3 without any references to local example. Candidates can make reference to any part of the recycling process, from disposal through to processing. **Example** Bracknell have the R3 recycling scheme. They divide the waste into different coloured bins (1) for collection. The waste is collected on a weekly basis (1). Aim is to recycle 45% of household waste (1). Aim is to recover the value on 2/3rds of municipal waste (1).	**4** **(1+1)+1+1**

Question Number	Indicative content	
***4 (e) QWC**	An explanation of the exploitation of a non-renewable energy source. Focus should be on the attitudes of different groups towards such an exploitation. Allow answers which refer to advantages and disadvantages to score maximum Level 2. Non-renewable energy sources may include: Coal Oil Gas Shale gas Attitudes: Government: Pro development as they can meet their energy requirements May allow for increased financial gain May allow for economic development Environmental concerns of exploitation The impact on the land / atmosphere as a consequence of pollution and / or climate change. Local people: Benefit from employment Issue of environmental pollution NIMBYism Increased congestion near site. Candidates may also use attitudes from other groups such as environmentalists.	
Level	**Mark**	**Descriptor**
Level 0	0	No acceptable response.
Level 1	1–2	A general description(s) of a non-renewable energy source. Use of geographical terminology tends to be basic.
Level 2	3–4	A description of attitudes towards the exploitation of a non-renewable energy source. At the top of the level there should be a series of descriptions, focused on different attitudes. Descriptions / explanations of advantages and disadvantages linked to a non-renewable energy source. Generally clearly communicated but with limited use of geographical terminology.

Level 3	5–6	A partial explanation of one of the attitudes towards the exploitation of non-renewable energy. For the top of the level there should be a series of partial explanations linked to different attitudes. There is no need for specific case detail. Well communicated with good 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	*Threshold performance* 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	*Intermediate performance* 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	*High performance* 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)	C - India	**1**

Question Number	Answer	Mark
5(a) (ii)	B - China has a smaller percentage of industrial consumption than USA	**1**

Question Number	Answer	Mark
5(a) (iii)	1 mark for the reason stated and 1 mark for the development of that reason. Reasons for differences in water consumption by agriculture may include: Different amounts of rainfall/ available water (1) may determine how much water can be used or what can be grown (1). Drip irrigation methods (1) (or water conservation methods) used therefore only providing plants with the water that they need (1). Commercial agriculture (1) may use lots of water as they are producing large amounts of crop (1). Broken infrastructure (1) may mean that more water used than intended (1). Decreasing use of agriculture (1) due to increased importing and exporting from other industries (1). Reliance on the use of agriculture (1) therefore increasing exportation of food for income (1). Allow one mark for the idea that LICs use more water than HICs. Accept one mark for a point and one mark for basic development.	**2** **(1+1)**

Question Number	Answer	Mark
5(b)	Candidates require two developed points for four marks. Max 2 for descriptions. Do not credit any reference to human use. An increase in rainfall in a given area can mean that water supply is more abundant (1). This may be due to a change in climate causing more intense storms (1). It may be caused by living in a more mountainous area which gets greater amount of relief rainfall (1).Reduced rainfall leads to lower water supply (drought)(1). This may be due to water tables dropping making the access to the water more challenging (1)/ The amount of water may not be able to keep up with demand for it (large population) (1) which may result in need for supplementation (1).	**4** **(1+1)+(1+1)**

Question Number	Answer	Mark
5(c) (i)	C – Hand dug well	**1**

Question Number	Answer	Mark
5(c) (ii)	Credit any valid reason linked to appropriate technology, which may include: • Available water supply (1) • Able to access fresh water at depth (1) • Can be maintained by locals (1) • Low cost (1) • Meets the needs of locals (1) • Sustainable (1) • Technology suitable to locals (1) • More effective (1) • Clean water (1) • Easy to access (1)	**1**

Question Number	Answer	Mark
5(d)	Max 3 without reference to examples. Allow 1 mark for a named method. Do not credit descriptions of domestic water management (where the candidate explicitly mentions household/homes). Industry • Likely to focus on water savings • Staff training • Water efficiency in machinery **Example** Staff are trained on water use in the workplace (1). Walkers crisps factory are trained to save on 20-30% water use (1). Reuse of water in machinery (1) so that water is not wasted and grey water used for non-essential uses (1), Industry can build reservoirs or storage facilities which can manage supply and use (1) Industry can filter water by natural processes or filtration tanks (chemical processes) which can lead to a greater use of water. Industry can desalinise water (1) which means that there will be greater supply, available for use, in dry areas (1)	**4**

Question Number	Indicative content
***5 (e) QWC**	An explanation of the reasons for attitudes to a water-management scheme. Focus should be on the attitudes of different groups. Attitudes: Government: Generate electricity Improves trade Allows for economic development. Local people: Angry for being moved away from facility Angry because land is destroyed Some are pleased by employment Angry towards the impact on wildlife.

Level	**Mark**	**Descriptor**
Level 0	0	No acceptable response.
Level 1	1–2	A general description(s) of a water management scheme. Use of geographical terminology tends to be basic.
Level 2	3–4	A description of attitudes towards the water management scheme. At the top of the level there should be a series of descriptions, focused on different attitudes. Descriptions / explanations of advantages and disadvantages linked to a water management scheme. Generally clearly communicated but with limited use of geographical terminology.
Level 3	5–6	A partial explanation of one of the attitudes towards the water management scheme. For the top of the level there should be a series of partial explanations linked to different attitudes. To access top Level 3, there should be case study detail which is relevant to the water management scheme. Well communicated with good 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	*Threshold performance* 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	*Intermediate performance* 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	*High performance* 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.