

Mark Scheme (Results)

Summer 2015

Pearson Edexcel GCSE in Geography B
(5GB3H/01)

Unit 3: Making Geographical Decisions

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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	Correct Answer	Acceptable Answer	Marks
1(a)(i)	Rock formation (1) underground (1) that has/holds water (1) Or equivalents with idea that it is water and that it is beneath ground level	Accept 'groundwater' as synonymous with underground (1)	2 1+1

Question Number	Correct Answer	Reject	Marks
1(a)(ii)	Wetter in the past (1) during/after the Ice Age (1) Can refer to knowledge of general formation of groundwater. e.g. Aquifers are formed from precipitation/rainfall (1) into porous rocks (1) which absorb water (1) impermeable rock below aquifer (1)	All other answers.	2 1+1

Question Number	Correct Answer(s)	Reject	Marks
1(b)	Uneven (1) Mostly in the east (1) Mostly at lower altitude (1) Mostly in wetter areas (1) identifies areas with many settlements e.g. Nebraska (1) identifies areas with fewer settlements e.g. Wyoming (1) clustered (1) data to support e.g. heights and/or numbers of settlements (1) Mark for named place to illustrate rewardable point (1) Credit description that are 'buried' in explanation as in 'because the land is low'	Points unrelated to distribution Opposites as in don't allow 'fewer in west if already credited more in east'	3 1+1+1 OR (1+1+1) OR (1+1+1)

Question Number	Correct Answer(s)	Marks
1(c)	As altitude rises precipitation decreases (1) Relationship not perfect (1) Detail of same using data from resource to illustrate one or both of these points (1) Notes that this is unusual (1) Rain shadow effect is main reason (1) Proximity to (Rocky) mountains in controlling factor (1) Any other legitimate descriptive or explanatory point NB – Do NOT expect explanation for 4 marks	4 1+1+1+1

Question Number	Correct Answer(s)	Acceptable Answer	Marks
1 (d)	<p>Dependency is a function of water availability to include...</p> <ul style="list-style-type: none"> •Depth of aquifer (1) •Thickness of aquifer(1) •Alternative source available in rivers (1) •Alternative source available because of rainfall variations (1) <p>Dependency is a function of usage that might include...</p> <ul style="list-style-type: none"> •Population growth/distribution (1) •Farming demand (1) •Variations in usage leading to variations in concerns (1) •Detail and data to support any one point (1) 	<p>Types of crop grown in that some demand more water than others (1)</p> <p>Allow idea of alternatives to agriculture making an area less dependent (1) might extend from general 'knowledge', eg. Texas oil (1)</p>	<p>4 (1+1) + 1+1</p>

Question Number	Correct Answers	Acceptable Answers	Marks
1(e)	<p>Climate will become drier (1) so less water into the aquifer (1) so it will reduce in thickness (1) becoming harder to reach (1)</p> <p>Climate will become warmer (1) so more evaporation (1) and so less water entering the ground (1) reducing recharge (1)</p> <p>Demand will be higher if warmer (1)</p>	<p>Might become stormier (1) more intense rain that runs off and doesn't reach aquifer (1)</p> <p>Allow wetter (1) consequence of wetter climate (1)</p> <p>Allow colder (1) and consequence of colder climate (1)</p> <p>NB – Do NOT reward wetter (1) therefore more recharge to aquifer (1) if opposite already credited</p>	<p>4 (1+1) + (1+1)</p>

Question Number	Correct Answer	Marks
2 (a)	Recognisable impact e.g. better plant growth (1) clear link with centre-pivot irrigation 'because more water' (1) NB - Allow 1 mark for impact even if no link explained	2 (1+1)

Question Number	Correct Answer	Marks
2 (b)	At least two changes described (2x1) Comparison between relative importance of crops e.g. ethanol is now as important/more important than animal feed (1) Trends (fluctuations) identified as in 'rapid growth of ethanol after 2006' (1) Overall use of corn has increased because corn production has increased (1) Data to support any ONE point about individual and/or overall crop changes (1)	4 1+1+1 +1 OR (1+1)+ (1+1)

Question Number	Correct Answer	Marks
2 (c)	Irrigation has totally transformed the region – idea of considerable change (1) Increased production of key crops and/or beef (1) Examples of same e.g. cotton (1) 1.9 billion dependent on it and/or \$20 billion generated (1) Creates new industries e.g. ethanol manufacturing (1) Economy has grown /money made by farmers idea (1) Allow comments about multiplier and job creation (1) Allow comments about how money could be better spent or differently spent (1)	4 1+1+1 +1 OR (1+1)+ (1+1) OR (1+1)+ 1+1

Question Number	Indicative Content	
*2 (d)	<p>There is a decent case to be made for any one of the three.</p> <p>Non-renewable – it will run out even with very limited usage because it is a ‘fossil’ resource’ just as some fuels are fossil fuels.</p> <p>Renewable – water exists in an open system and if it isn’t used it will recharge in 600 years, thus it is renewable</p> <p>Sustainable - the best option is i.e. it is renewable but only if we intervene and manage it properly in an arid region although recharge is very slow.</p> <p>Explanation involves looking at the other definitions and rejecting them.</p>	
Level	Mark	Descriptor
0	0	No acceptable response. No category identified.
1	1-2	Names a category. Very limited reasons offered to support choice. Other choices not addressed. Limited structure and basic use of geographical terminology.
2	3-4	Names a category. At least one reason offered. A limited attempt to address the weaknesses of other categories. Some structure and clearly communicated but with limited use of geographical terminology.
3	5-6	Names a category and will qualify choice. At least two valid points used to explain the choice. Developed treatment of at least one other category to support choice. Clear structure and well communicated with mostly sound use of geographical terminology.

Question Number	Indicative Content	
*3	<p>Answer... Because they have different economic interests and social beliefs (to include levels of education) and live in different places with different levels of water stress they have contrasting views about the debate between economic 'progress' and the preservation of the environment.</p> <ul style="list-style-type: none"> • Clark appears to believe in '<i>que sera sera</i>' and/or 'techno-fix' and recognises the importance of the aquifer for the economy • Nancy prioritises the environment and has a negative view of the environmental changes • Wayne has a nuanced view but prefers traditional farming and regards out-migration as a consequence • Jolene places her faith in God who will 'look after us' and believes resources are there to be used 	
Level	Mark	Descriptor
0	0	No acceptable response. No category identified.
1	1-2	Attitudes are described using material from the voice bubbles. Very limited reasons offered to explain the opinion e.g 'he is a businessman'. Limited structure and basic use of geographical terminology.
2	3-4	At least two views alluded to/quoted and explored. Recognises at least one of economic, social or geographical reasons behind differences. Some structure and clearly communicated but with limited use of geographical terminology.
Level 3	5-6	At least three opinions are alluded to and explored with supportive quotes. Makes distinction between at least two motives and belief systems to explain differences. Clear structure and well communicated with mostly sound use of geographical terminology.

Question Number	Indicative content
*4 QWC i-ii-iii	<p>Candidates will use the RB and their K and U from Units 1 and 2.</p> <p>All three options offer plenty of room for discussion. Any of the options could be considered; there are no preferred/better options. Candidates are asked to focus on the people of USA (as a whole) and the environment; at the very top it might be seen that there will be 'winners' and losers' from all types of economic development and that there are different impacts of environmentalism for different groups of people.</p> <p>Broadly, decide levels as follows:</p> <ul style="list-style-type: none"> • Simple, undeveloped statements largely derived from the RB are limited to Level 1, e.g. '<i>Option 1 might increase production of ethanol</i>'. Level 1 also applies to a single developed point without further comment. • Developed statements start the road to Level 2/3. A single well-developed point can be Level 2 for 4 marks, e.g. '<i>Option 2 might decrease production of ethanol but that is positive for the environment in terms of CO2 emissions</i>'. • An answer can reach the top of Level 3 using three developed points (e.g. from the factors below). Look for answers that introduce complexity into the debate as in '<i>turning back history, as Option 3 is unlikely to have popular support because of its economic impact, except for those who do not believe in the benefits of economic growth</i>'
	<p>Justifications for Option 1 include the following.</p> <ul style="list-style-type: none"> • The US economy depends heavily on this region – data to support can be offered – the alternative options imply some contraction, which is politically unacceptable • It will help create jobs in the region – the other two options will not do this • It is important for exports, eg. cotton, and the US has a huge trade deficit • It helps with their trade balance because they import less oil as a result • It reduces dependence on imported fuels with the political implications involved • More corn produced could help feed the world – there are many areas not yet using center-pivot irrigation • Economic growth creates a multiplier effect, which will benefit many people • Wealth created may well lead to technical innovations which solve problems of future shortages (Boserup)

- Resource shortages might stimulate inventiveness (Boserup)
- Environment will 'look after itself' very resilient – historical argument that progress inevitably means that the environment is impacted
- What does 'best' mean for environment and people?

Justifications for Option 2 include the following.

- It is better in the long term for everyone and a little short-term conservation will offset any economic losses – then best of a difficult choice
- Option 1 is not sustainable and Option 3 is unrealistic
- Better to cut back on some consumption now than face a sudden downturn as the water runs out later in the century i.e. a gradualist approach
- Much of that consumption is quite unnecessary, eg. corn for meat which is actually not good for general health – the US has an obesity crisis
- So there are major externalities involved in Option 1 which are not 'counted' in the economic benefits it allegedly brings
- Growing corn for ethanol could be cut back and Americans could use smaller vehicles, ie. not 'Hummers'. This would have a very positive effect on the environment too in terms of CO2 emissions
- Some output could be switched to export corn hence addressing global food crisis
- If usage is not cut back there are costs to the local population as the area becomes unproductive and population has to migrate
- Environment has a better chance of recovery with Option 2 preserving some areas as 'natural', which could be argued to be best.

Justification of Option 3 include the following.

- The only sustainable solution in the long term for the preservation of the aquifer, which is a precious natural resource
- Places the environment at the top of the agenda where it should be
- Allows natural landscape to recover with recovery of the ecosystem
- Reduces the externalities of emissions both from producing and burning ethanol and methane from cows/cattle
- Allows original rangeland economy to re-establish itself producing better quality meat from a 'natural' environment.
- US population are over-consumers and it be very good for the health of the nation to cut back on consumption
- So might even be cost-effective if tastes changed
- Other options will not achieve these ends. Option 1 is a very short-term view and clearly not sustainable whilst Option 2 just slows down the inevitable
- This is the only option that prioritises the environment, which is essential if we are going to survive as a species

Level	Mark	Descriptor
0	0	No acceptable response

1	1-3	Chosen option is identifiable. States at least one simply expressed justification of either benefits to people or environment but these are described without detail e.g. <i>'It will bring more jobs'</i> . Points likely to be 'lifted' straight out of the Resource Booklet, without comment or qualification. Counter-argument about other options limited to simple statements of rejection. Limited structure to answer and basic use of geographical terminology.
2	4-6	Chosen option clearly identifiable. Sound description of at least two justifications in terms of advantages for the people of the USA and the environment with argument using evidence to develop statements beyond RB, eg. <i>'This will be good for Americans in the long-term'</i> . Some discussion of other options with at least two reasons offered for their rejection. Some structure, clearly communicated but with a limited use of geographical terminology.
3	7-9	Chosen option comes through strongly. Thorough explanation of why it was chosen that addresses both people of the USA and the environment. Argument is qualified with some counter-argument(s) used over chosen option i.e its strengths and weaknesses are acknowledged fully, e.g. <i>'Developing agriculture will bring more jobs and this will create further jobs in other industries such as in shops and schools as output rises'</i> . Supports argument by importing good K and U from Units 1 and 2 as in <i>'higher incomes will increase tax revenues for the government leading to an improvement in general welfare'</i> . Clear structure, well communicated and with a good use of geographical terminology.
SPaG Level 0	0	Errors severely hinder the meaning of the response or candidates do 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> Candidates spell, punctuate and use 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	<i>Intermediate performance</i> Candidates spell, punctuate and use 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	3	<i>High performance</i> Candidates spell, punctuate and use 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.

