

Mark Scheme (Results)

Summer 2016

Pearson Edexcel GCSE Geography B
(5GB3H/01)

Unit 3: Making Geographical Decisions

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Summer 2016

Publications Code 5GB3H_01_1606_MS

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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(s)	Marks
1(a) (i)	When species die out (1) Or equivalent	(1)

Question Number	Correct Answer(s)	Reject	Marks
1(a) (ii)	30,000 species are disappearing (1) rate of extinction is higher than at any time before (1) at least 100 times so (1) many endangered species (Figure 1 a) and/or data from resource (1) bees example (1) scientists have identified it as such (1)	High rate of species loss – many species disappearing or equivalent Causes – e.g. a result of human actions	(3) 1+1+1

Question Number	Correct Answer(s)	Marks
1(b)	Plants are producers in food chain (1) Because most animals eat plants i.e. herbivores (1) or live in them (habitat) (1) and those that don't eat animals that do i.e. predators (1) so food web/chain disrupted and changed (1) specific example to illustrate e.g. mice/kestrels and/or example of difficulties of finding food/adaptation (1)	(3) 1+1+1

Question Number	Correct Answer	Marks
1 (c)	Overall distribution is spread out or equivalent idea e.g. all continents (except Antarctica) have some (1) Overall distribution is uneven and/or more in northern hemisphere than southern hemisphere (1) most in the tropics or equivalent idea e.g 'around'/close to the equator (1) many in warmer regions/areas and/or not many in the colder regions/areas (1) the vast majority are in the developing world (1) a large number are in mountainous areas (1) large number are coast or similar idea e.g. 'edges' (1) large number of islands (1) any one illustrative example at sub-continental level (1)	(3) (1+1) + (1) or 1+1+1

Question Number	Correct Answers	Marks
2 (a)	One mark for a minimum of two basic, legitimate causes (1) extension of that through further description and/or data	(2) (1+1)

Question Number	Correct Answer	Marks
2(b)	<p>Answers need to focus on habitat loss and not species decline or biodiversity.</p> <p>Population growth (1) will lead to clearance of land to make way for food crops (1) for building cities etc. (1) data used to support any ONE point e.g. 0.5 -1.5% land clearance – 11.5 billion people in 2060 etc. (1)</p> <p>Globalisation (1) may involve land purchases by TNCs which often takes place in biodiversity hotspots (1) and may lead to local population being displaced into new areas (1)</p> <p>Climate change may speed up habitat loss (1)</p> <p>Allow any reasonable response(s)</p>	<p>(4) (1+1) + (1+1)</p> <p>+</p> <p>(1+1+1) + 1</p>

Question Number	Correct Answer	Marks
2 (c)	<p>High population growth takes place in much of tropical Africa (and elsewhere) (1) which may cause species loss as a result of habitat clearance e.g. rainforests (1)</p> <p>Increasing land bought by TNCs (1) in the developing world (which are in areas of rapid population growth) (1) much of it in (biodiversity) 'hotspots' (1) to satisfy growing demand for food (1)</p> <p>Displacement of population occurs into new 'areas' (1) where species might be lost as a result of forest clearance (1)</p> <p>Higher demand for 'stuff' as a result (of population growth) (1) impact of same in terms of species loss (1)</p> <p>Allow any reasonable response(s)</p> <p>Limit to 3 if no reference to species loss/hotspots</p>	<p>(4) (1+1) + (1+1) Or (1+1+1)) + 1</p>

Question Number	Correct Answers	Reject	Marks
2 (d)	<p>1. Economic Growth</p> <p>Economic growth inevitably leads to more resources being used (1) more rapid growth in developing world (1) where are many biodiversity hotspots (1) rates of energy usage may rise (1) examples of resource use e.g. Chinese coal fired power stations from RB (1) Kn and Und from Unit 2, e.g. increase in meat eating diets (1) or any other legitimate extension (1) (all of this) leads to destruction of environment e.g. deforestation (1) may lead to increase in greenhouse gases (e.g. CO₂) (1) and therefore global warming (1)</p> <p>2. Inequalities of wealth and consumption</p> <p>Over-consumption by a few and/or 76.6% of resources consumed by richest 20% (1) example of same – long distance foreign holidays, US 4x4s (1) growing middle-class in countries such as India and China (1) landless/impoverished might be forced into environmentally sensitive areas (1) leading to negative environmental impacts e.g. polluted water (1)</p> <p>Do not credit the same extensions for both sections e.g. habitat destruction, resources being used up, global warming as a consequence.</p> <p>Allow up to 4 marks for either part.</p>	<p>Excepting the mark awarded for the statement that 20% of population consume 76.6% of resources....</p> <p>...do not credit (numeric) data unless that data is part of a legitimate point in which case it is the point that is credited and not the data</p> <p>Do not credit 'environment is threatened' as an example of negative environmental impact – expect a clear and specific example of same</p>	<p>(6)</p> <p>(1+1+1)+ (1+1+1)</p> <p>Or</p> <p>(1+1) +1 + (1+1) +1</p> <p>Or</p> <p>((1+1) + (1+1)) +(1+1)</p>

Question Number	Indicative content	
*3 QWC i-ii-iii	<p>Some answers will use both Section 3 and knowledge and understanding from Unit 1 and Unit 2 to explain different views on this relationship. At the top end, points will be well developed with detail and/or data and information from the booklet that explain the graphs.</p> <p>Command is 'compare' and focus is on the relationship between population growth and resources.</p> <p>Malthus:</p> <ul style="list-style-type: none"> • Pessimistic with a fixed carrying capacity • Arithmetic growth in output but clear limits imposed by 'nature' (in RB) • Population growth unrestrained and will 'crash if it exceeds carrying capacity' – crash involves famine, war etc. • May have K and U about neo-Malthusian views which address resources running out • Might address Malthus's real motives in fear of revolution and promoting abolition of poor law <p>Boserup</p> <ul style="list-style-type: none"> • Boserupian view is optimistic about ability of human species to adapt and respond thus increasing carrying capacity • So we never run out of resources • Because we always find a substitute • In fact population pressure is a positive thing – we need it to make technical progress <p>Graphs have two elements. Carrying capacity is the population that can be supported by a given ecosystem/area. On this level it is a planetary relationship. Population seen as uncontrolled by Malthusians - an independent variable.</p>	
Level	Mark	Descriptor
Level 0	0	No acceptable response
Level 1	1–2	Simply describes the two theories but probably just one element from each or one graph being the focus, without added explanatory detail. Text taken from RB. Limited structure to answer and basic use of geographical terminology.
Level 2	3–4	Sound description of both graphs that covers most elements. Some explanation of relationship with elements that go beyond the RB text. May include examples e.g war, famine, GM crops etc, states differences. Some structure, clearly communicated but with a limited use of geographical terminology.
Level 3	5–6	Good description of both graphs. Explanation of relationship shows clear understanding of carrying capacity idea that goes beyond the RB and adds some complexity. Will have illustrative examples to help explanation. Comparison is made. Clear structure, well communicated and with a good use of geographical terminology.

Question Number	Indicative content	
*4 QWC i-ii-iii	<p>Some answers will use both Section 4 and knowledge and understanding from Unit 1 and Unit 2 to explain different views on these relationships. At the top end, points will be well developed with detail and/or data and information from the booklet that help explain the questionnaire results.</p> <p>Do you think that we should protect the environment even if it slows economic growth and costs jobs?</p> <ul style="list-style-type: none"> • All countries have majorities in favour • China and India notable • Japanese least committed • Doesn't seem to have any relationship with development status/GDP per capita • Emerging countries (BRICS) seem most committed and more prepared to make sacrifices • Because they depend on the environment more or the environment is more visibly damaged by industry? • Post industrial economies have less visible evidence? • Maybe changes as economies change/grow over time and, of course, the performance of an economy at any one time. <p>Would you be prepared to pay higher prices for food and other goods so that we can better protect the environment?</p> <ul style="list-style-type: none"> • Much more variance than Q1 • Chinese figure is highest (by far!) but India also high • French, Americans and Nigerians most reluctant • Less obvious pattern than Q1 • May be driven by the severity of environmental issues that are faced, e.g. China • Or sense of fairness/equity; role of green agenda -Germany? • There is a (weak) relationship between the two sets of results (willingness to pay taxes and environmental cares) – China, India, S.Korea, but the relationship is by no means perfect – Brazil/Kenya 	
Level	Mark	Descriptor
Level 0	0	No acceptable response
Level 1	1–2	Describes the results simply but not balanced and perhaps generic or becoming a list. Makes one or two explanatory assertive statements. Limited structure to answer and basic use of geographical terminology.
Level 2	3–4	Sound overview of both sets of results or one described in detail. Explanation of results suggests understanding of role of development/economic growth. Some structure, clearly communicated but with a limited use of geographical terminology.
Level 3	5–6	Good, detailed description of both sets of results. Explanation of relationship shows clear understanding of role of development and economic changes, both short term and long term. Attempts to address spatial and temporal elements in explanation. Clear structure, well communicated and with a good use of geographical terminology.

Question Number	Indicative content
<p>*5 QWC i-ii-iii</p>	<p>Candidates will use the RB and their K and U from Units 1 and 2.</p> <p>All four options offer plenty of room for discussion. Any of the options could be considered; there are no preferred/better options. Candidates are asked to 'justify their choice' which compels them to address the other three options.</p> <p>Broadly, decide levels as follows.</p> <ul style="list-style-type: none"> • Simple, undeveloped statements are limited to Level 1, e.g. '<i>Option 1 might create more wealth</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 3 marks, e.g. '<i>Option 2 will address the rate of resource use, e.g. oil</i>' • An answer can reach the top of Level 3 using three developed points which are comparative (e.g. from the factors below). Exceptionally, two well-developed points can take a response to the top of Level 3 irrespective of the third point. The justification must follow logically from the argument.
	<p>Arguments for Option 1 include the following:</p> <ul style="list-style-type: none"> • Reversing or simply arresting population growth is a possible debate here • Slowing down population growth rate might buy some time • Fewer people means less resources consumed (assuming economic growth does not increase) • This will reduce pressure on the environment • Developed through examples which might involve food, water and/or energy drawn from either RB or from Kn and Und • Developed through material covered in Battle for the Biosphere, e.g. coral reefs • Theory might be revisited especially the Boserupian graph in Figure 3 – this might be dismissed as wildly optimistic • This can only happen if the UN low prediction is correct <p>Counter-arguments:</p> <ul style="list-style-type: none"> • How would this actually work? What policies? • Examination might address unpopularity of such measures – China's one child policy is likely to be quoted in this context • Reducing population may not have any effect if economic growth carries on and inequalities persist <p>Arguments for Option 2 include the following:</p> <ul style="list-style-type: none"> • Reducing or reversing economic growth is a possible debate here • Slower economic growth will simply slow down but not reverse damage to biosphere but might buy some time • This will reduce pressure on the environment

- Developed through examples which might involve food, water and/or energy drawn from either RB or from Kn and Und
- Developed through material covered in Battle for the Biosphere, e.g. coral reefs
- People are broadly onside that we need to do something for the environment so politically possible
- However some resistance to higher taxes to pay for environmental protection
- Might also address inequalities which complicate the idea of economic growth – economic growth for who?

Counter-arguments:

- Some material in Figure 4 that this would be very hard to sell to people
- Examination might address unpopularity of such measures –do people really want to sacrifice consumption – ‘greenwash’ material might appear
- Reducing economic growth not a great idea for the 1.5 billion living in poverty
- Reducing economic growth may not address inequalities

Arguments for Option 3 include the following:

- We have never run out of any resource
- Examples of same from flints to coal (?)
- Expansion of Boserupian argument – we will always find a way – examples from past
- Research has helped before, e.g. GM crops
- Expect suggestions of possible solution, e.g. hydrogen economy
- Governments always certainly need to intervene because profit motive tends to drive higher consumption
- Population growth a good thing because it stimulates change
- Economic growth a good thing because it provides money for research

Counter-arguments:

- If money is spent on research then it isn’t spent on something else. What would that be?
- Expanding government spending in an economic crisis means higher taxes
- Much resistance to that on Figure 4
- Too much wishful thinking in the power of technology – examples of that might be mentioned – Chernobyl?

Arguments for Option 4 include the following:

- The evidence is quite compelling that we are in considerable trouble
- A great deal of evidence in the RB and from Unit 1
- Expect something on climate change for Unit 1
- Various ‘tipping-point’ scenarios, especially over climate change would make mitigation policies more to do with delay rather than prevention
- There would be no point in cutting back on consumption now if the future is that bleak

		<ul style="list-style-type: none"> • Economic growth creates wealth that might be channelled into new technology • Predicting future changes is difficult – population collapse might make carrying capacity <p>Counter-arguments:</p> <ul style="list-style-type: none"> • If money is spent on research then it isn't spent on something else. What would that be? • Expanding government spending in an economic crisis means higher taxes • Much resistance to that on Figure 4 • Too much wishful thinking in the power of technology – examples of that might be mentioned – Chernobyl?
Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1–4	States at least one simply stated argument, but these are described without detail limited to one of the options, e.g. <i>'It will help save the environment'</i> . Points likely to be 'lifted' straight out of the RB, without comment or qualification. No obvious justification made other than a simple assertion that 'this is best' and no obvious counter-argument. Limited structure to answer and basic use of geographical terminology.
Level 2	5–8	Sound description of at least two arguments in some detail using evidence to develop statements beyond RB, e.g. <i>'This will allow more time for other improvements to take place'</i> . Clear attempt to explain positive effect on the environment drawing for RB and K and U from Units 1 and 2 as in <i>'this would help preserve the rainforest, a vital carbon sink'</i> . Clear references to alternatives. Justification moves beyond simple assertion with at least one counter-argument. Some structure, clearly communicated but with a limited use of geographical terminology.
Level 3	9–12	Good description of at least two advantages using evidence to develop statements fully, e.g. <i>'Researching new food production techniques such as GM crops has increased production and will continue to do so and some new technologies will reverse biosphere decline'</i> . Strong attempt to explain positive impacts of this option, importing good K and U from Units 1 and 2 as in. <i>'coral reefs will decline less quickly if we find new technologies for carbon capturing'</i> . Justification addresses at least two of the alternatives explicitly with counter-argument clear. Recognises that no option is perfect. 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.