



ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Mark scheme

June 2003

GCE

Geography A

Unit GGA3

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General Guidance

Quality of Written Communication

As required by QCA, the marking scheme for this unit includes an overall assessment of quality of written communication. There are no discrete marks for the assessment of written communications but where questions are “Levels” marked, written communication will be assessed as one of the criteria within each level.

Level 1: Language is basic, descriptions and explanations are over simplified and lack clarity.

Level 2: Generally accurate use of language; descriptions and explanations can be easily followed, but are not clearly expressed throughout.

Level 3: Accurate and appropriate use of language; descriptions and explanations are expressed with clarity throughout.

Levels Marking – General Criteria

The following general criteria relate to knowledge, understanding and their critical application and the quality of written communication as outlined in the AQA Geography A subject specification. They are designed to assist examiners in determining into which band the quality of response should be placed, and should be used when assessing the level of response an answer has achieved. It is anticipated that candidates’ performances under the various dimensions will be broadly inter-related and the general guidelines for each level are as follows:

Level 1: An answer at this level is likely to:

- display a basic understanding of the topic;
- make one of two points without support of appropriate exemplification or application of principle;
- demonstrate a simplistic style of writing perhaps lacking close relation to the term of the question and unlikely to communicate complexity of subject matter;
- lack organisation, relevance and specialist vocabulary;
- demonstrate deficiencies in legibility, spelling, grammar and punctuation which detract from the clarity of meaning.

Level 2: An answer at this level is likely to:

- display a clear understanding of the topic;
- make one or two points with support of appropriate exemplification and/or application of principle;
- demonstrate a style of writing which matches the requirements of the question and acknowledges the potential complexity of the subject matter;
- demonstrate relevance and coherence with appropriate use of specialist vocabulary;
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which do not detract from the clarity of meaning.

Level 3: An answer at this level is likely to:

- display a detailed understanding of the topic;
- make several points with support of appropriate exemplification and/or application of principle;
- demonstrate a sophisticated style of writing incorporating measured and qualified explanation and comment as required by the question and reflecting awareness of the complexity of subject matter and incompleteness/tentativeness of explanation;
- demonstrate a clear sense of purpose so that the responses are seen to closely relate to the requirements of the question with confident use of specialist vocabulary;
- demonstrate legibility of text, and qualities of spelling, grammar and punctuation which contribute to complete clarity of meaning.

NB A perfect answer is not usually required for full marks. Clearly it will be possible for an individual candidate to demonstrate variable performance between the levels. In such cases the principle of best-fit should be applied. Experience suggests that the use of exemplars within this mark scheme and the discussion which takes place during the Standardisation Meeting normally provides sufficient guidance on the use of levels in marking.

Annotation of Scripts

- Where an answer is marked using a levels of response scheme the examiner should annotate the script with 'L1', 'L2' or 'L3' at the point where that level is thought to have been reached. The consequent mark should appear in the right hand column. Where an answer fails to achieve Level 1, zero marks should be given.
- Where answers do not require levels of response marking, each script should be annotated to show that one tick equals one mark. It is helpful if the tick can be positioned in the part of the answer which is thought to be credit-worthy.

General Advice

It is important to recognise that many of the answers shown within this marking scheme are only exemplars. Where possible, the range of accepted responses is indicated, but because many questions are open-ended in their nature, alternative answers may be equally credit-worthy. The degree of acceptability is clarified through the Standardisation Meeting and subsequently by telephone with the Team Leader as necessary.

SECTION A

Question 1

- (a) (i) 2 x 1 for correctly plotting bars
1 x 1 for shading both bars according to the key **3 marks**

(ii) **Description ✓ d**

Any valid descriptive point such as:

- North America responsible for slightly more than one third; (1) (allow highest).
- Western Europe responsible for approximately 60% (1); wide range – from 35% to 1% (1).
- Generally levels higher in MEDW (1)
- but not always – Oceania main exception and also Eastern Europe (1).

Explanation ✓ e

Any valid reason such as:

- Emission levels generally higher from MEDW as long history of industrialisation (1)
- Dependence on fossil fuels (1)
- Burning of which releases CO₂ (1)
- Richer countries able to develop resources, industries (1)
- Asia highest of LEDW due to recent industrialisation (1)
- More sparsely populated Oceania lowest of MEDW (1)
- Pollution targets/laws/controls on emissions (1)

(maximum 4 for either description or explanation)

6 marks

(b)

Figure 2

Clearly shows fluctuating levels of carbon dioxide from 180 to 300 ppm.

There have been time periods when levels of carbon dioxide have exceeded current levels – 110-130,000 years ago.

Similarly, temperature change has fluctuated from –10 to + 2.5°C.

More minor fluctuations in temperature than carbon dioxide but overall link between the two lines is clear to see – that as levels of carbon dioxide rise, temperature levels also rise.

Figure 3

Shows trend since 1860 for temperatures to increase.

Up to 1940, temperatures generally below average for 1961-90 whilst since 1940 have been above – though with some fluctuations around 0. Temperatures highest during 1985-2000, especially during 1990s.

Levels of carbon dioxide have clearly risen and rate of increase has quickened from early 1960s.

The increase in carbon dioxide levels can be linked to overall warmer temperatures, with highest levels coinciding with highest temperatures from 1980.

Clearly feasible to link recent increases in temperatures and carbon dioxide to increased population levels, burning of fossil fuels and industrialisation which is indicative of human cause. Only recently (1990s) have there been efforts to reduce emissions and these will take time to have any impact in terms of stability or ultimately reducing levels.

However, Figure 2 shows earlier fluctuations which are not attributable to people and therefore indicate natural causes of change – such as changes in Earth’s orbit around the sun which can have impact on carbon dioxide levels (Milankovitch cycle). Every 15-20,000 years temperatures reduce and there is an ice age. As earth moves near sun temperatures will increase.

Level 1: Basic

Describes changes over time – both long term and short term.
Description may be generalised or use evidence laboriously. 1-3 marks
Will note link between carbon dioxide and temperatures.

Level 2: Clear

Describes important aspects of changes – both long and short term.
Offers evidence in support.
Establishes link between carbon dioxide and temperature levels.
Considers human causes at least with some, perhaps implicit, evaluation. 4-6 marks

Level 3: Detailed

Clearly describes pertinent aspects of changes – both long and short term.
Evidence used purposefully in support.
Aware of extent of link between carbon dioxide and temperature levels.
Considers both human and natural causes with evaluation explicit. 7-8 marks
8 marks

- (c) (i) 5 x 1 or 2x(1+1)+1 for labels. Basic flooding reference (1)
Labels
- likely to relate to size/jetties
 - low lying nature/gently sloping sandy beach/already protected by offshore barriers - small increase in sea level a threat
 - nature of economy/tourist based/jetties project beyond barrier.
- (Features must be arrowed and visible). **5 marks**
- (ii) 4 x 1 for valid descriptive points which must relate to changes.
- Clear reduction in extent of ice (1).
 - + 1 for assessment of how much;
e.g. N-S extent reduced by approximately two thirds (1).
 - Ice cover no longer one large continuous cover – by 2080 – 2 separate areas in middle (1).
 - Ice around coasts of e.g. Greenland, Alaska gone (1).
 - May refer to proportion of coverage – area covered by 60%– 90% has shrunk the most (1); most important level of coverage now is up to 30% (1).
- 4 marks**

(iii) **Environmental (en)**

- Low lying areas such as East Anglia would be flooded
- Coastal habitats would change or salt water extended further inland altering species living there.
- As temperatures increase (or decrease in winter for UK due to impact of melting ice on ocean currents) this will have an impact on vegetation – if warmer temperatures, biome type may change from coniferous forest in North (Scotland) to deciduous; and certain colder loving plants would be restricted to more northerly areas, e.g. spring bulbs such as daffodils and crocus.
- Wildlife and insects may change as temperatures and habitat change so some species of butterfly at present absent in north would no longer be so.
- Some species currently present may disappear as habitats threatened, e.g. wetlands/inland marshes if certain areas of south become drier. Colder loving birds/Arctic species in north as temperatures go up.

Economic (ec)

- Need to invest more money in coastal protection – to extend/make more effective – implications nationally with regard to level of public spending required.
 - farming type may change – with vines becoming more apparent in warmer, drier south, change from wheat to maize.
 - More insects will have impact on health, crops and resource allocation – taking from something else.
 - Certain economic activities threatened – skiing in Aviemore as rising temperatures mean not enough snow for long enough – job losses; impact on local economy.
- e - explanation

Level 1: Basic

Describes consequences.

Heavy reliance on Figure 7.

Environmental and economic consequences considered simultaneously. Differences not made clear or reference only to environmental or economic.

May be completely imbalanced. No explanation.

1-3 marks

Level 2: Clear

Begins to offer explanation of environmental and economic consequences where difference is clear in an organised account. Uses information contained in Figure 7 in response which has a greater balance although emphasis may still be on description.

4-6 marks

Level 3: Detailed

Clearly uses information in Figure 7 to identify environmental and economic consequences.

Explains clearly the link between global warming and changes noted.

May use own information, e.g. changes not present on Figure 7.

7-8 marks

8 marks

(d)

Issues considered likely to relate to:

- The debate as to whether global warming is a fact and doubt has an impact on willingness of countries to take remedial action.
- Who is responsible – a small number of developed countries, e.g. USA, Canada, UK etc. who now want developing countries to look for alternative means of fuelling industries (these are more costly and not necessarily as available) even though developed countries benefited from the burning of fossil fuel. Obviously developing countries such as India and Brazil perceive this as unfair.
- Vast differences in wealth means that for some countries there are no alternatives if people are to survive – e.g. burning of wood for fuel, cooking. Such countries cannot look to alternatives unlike those in developed world.
- There are therefore difficulties establishing international co-operation and of enforcing these once in place.
- Agreements such as at Rio are not binding;
- Agreements are difficult post the Kyoto conference; causing delays.
- The debate over carbon credit system – will it reduce overall levels of pollution?

It ought to encourage global co-operation and it buys time to sort out high pollution levels (by buying carbon credits from less polluting countries). However it does allow pollution to continue, ideally it would lead to selected gradual improvements. e.g. by fitting scrubber to power station in China – does this mean US has to clean up its own act?

How successful would conserving forest be in terms of level of carbon dioxide.

c - comment

Level 1: Basic

Describes problems of reducing global warming. Heavy reliance on Figure 8.

May consider a variety of problems superficially or one or two in more detail.

1-3 marks

Level 2: Clear

Begins to use information in Figure 8.

Begins to identify issues – clearer at top end of level.

Some discussion, debate apparent and makes some tentative comment.

4-6 marks

Level 3: Detailed

Clearly uses information in Figure 8 to purposefully answer question.

Issues clearly identified.

Discussion, debate apparent with clear comment noted.

7-8 marks

8 marks

- (e) (i) 1 x 1 +1 for statement or aim.
Basic statement, e.g. “.....is a suburbanised village”.
(1 mark).
With elaboration, e.g. to identify whether land use reflects model, to identify whether settlement has expected socio-economic characteristics. (1 mark). **2 marks**
- (ii) No mark for identifying data item.
- Description of method or sampling strategy and reasons (1mark) for method and (1 mark) for reasons minimum. Data collection may refer to what, how, where, when, e.g. land use survey. (4 marks maximum).
 - Ground floor land use (1) and age of buildings (1) noted throughout village and mapped on base map (1).
 - Sampled systematically (1) by placing grid over map (1) and inserting points where grid lines intersected (1). This meant all the village would be covered (1) at equal intervals (1) so a complete picture would emerge (1) representative of village as a whole.
- Sampling justification may refer to accuracy, variety, coverage, and reliability. **6 marks**

SECTION B**Question 2**

- (a) (i) 2 x 1 + 1 for correctly plotting co ordinates.
(Maximum 3 marks if city not identified). **4 marks**

- (ii) There is no clear cut relationship (1) impossible to place best fit line (1) as figures bunch in middle of population axis (between approximately 8 and 16 million (1) but spread across average growth rate from 0.2 approximately to 5.7.
Tokyo's size clearly makes it an exception (1) whilst its growth rate given its size may have been expected to be less.
Lagos and Dhaka also exceptions in terms of their very rapid growth rates – in excess of 5.5% when actual size similar to many other cities (1).
Difficult to establish generalised descriptors based on areas – some LEDW areas have as low rate of growth as MEDW e.g. Rio and Buenos Aires with Osaka and Paris.
If one description consider as exception (1 mark).
If 2 or more 1 mark for identification and 1 for descriptive point.
(Maximum 4x1 marks for description).

Comment likely to relate to extent to which there is a relationship.

Contrasts between MEDW/LEDW with highest rates of growth in excess of 2% being in LEDW, but reversal of this relationship not always apparent (see above).

Comment may seek to explain lack of a relationship.

1mark per basic comment; 1+1 if elaborated.

(Maximum 4x1 marks for comment).

6 marks

- (b) (i) Any valid illustration for appropriate factors – but must be appropriate for factor.

Countryside

City

Environmental

- natural disasters such as flooding, drought,
- desertification,
- soil erosion etc.

Economic

- job opportunities in factories,
- better paid jobs,
- work shorter hours

Political

- (civil) war,
- ethnic cleansing
- religious persecution

Social

- relatives in city
- better amenities – schools,
- hospitals etc.

4 marks

4 x 1

(Do not credit reversals).

- (ii)
- continued high levels of rural-urban migration (1)
 - age selective nature of rural-urban migration (1)
 - means that migrants are predominantly young – teens to thirties (1)
 - therefore fertility rate high (1)
 - resulting in high levels of natural increase (1)
 - given a young population structure (1)
 - and decreasing death rate (1) due to medical advances/development results in relatively high natural increase (1).
 - Suburbanisation (1) + 1 for elaboration.

4 marks

4 x 1

- (c) (i) May refer to characteristics of houses, surroundings, site and location.
6x1 or 3x (1+1) or any combination. Any valid point (1) if elaborated (1+1).
Features must be arrowed and visible. **6 marks**

- (ii) **Description** likely to relate to unevenness of distribution, e.g.:
- Concentration in suburbs – especially in northern part (largest favelas such as Morro de Alemão found here).
 - None in southern part of this area.
 - Some in centre – tend to be smaller and either to the north where there are more (around CBD) or a limited number near the south coast.
 - There are few in the outer urban area.

Explanation likely to relate to:

- High land costs in centre attracting other land users – summer, wealthy apartments so that limited space left
- However such locations are attractive due to opportunities for jobs near CBD.
- Favelas were relegated to land available at the time of migration.
- Frequently towards edge of built up area in north, often on land not ideal to build on e.g. steep slopes.
- Favelas were initially bulldozed. This was perhaps more effective in certain, wealthier areas where their presence appeared more problematic for city's image.
- Perhaps greater restrictions in outer urban area, other types of housing built.

Level 1: Basic

Describes some elements of distribution in generalised terms.
Likely to be imbalanced with little reference to explanation **1-3 marks**

Level 2: Clear

Clear description of distribution with some specific reference to evidence.
Offers some explanation with a more balanced account with understanding apparent. **4-6 marks**

Level 3: Detailed

Targeted description of distribution with evidence used in support of points made.
Explanation given in a balanced account where own knowledge/understanding may be used. **7-8 marks**
8 marks

- (iii) No credit for strategy selected, the justification put forward is to be assessed.

Likely to consider/raise point relating to –

- numbers of people affected
- involvement of local people
- cost to locals/ public authorities
- access of improvement to all/some groups
- community spirit present in different environments
- standard of living resulting (perhaps versus quality of life)
- time scale for improvements
- length of time improvements last

This is not an exhaustive list and nature of the task means that there will be a diverse range of responses.

Level 1: Basic

Selects strategy.

Seeks to justify choice.

Perhaps in a generalised way or may rely heavily on Figure 14

Will focus on selection made so account will be imbalanced.

1-4 marks

Level 2: Clear

Justify selection made with evidence used in support.

Information in Figure 14 used selectively.

Will consider also reasons for rejecting other two strategies

.although there may be imbalance between that selected and

those rejected or one of those rejected will be given little

attention.

5-7 marks

Level 3: Detailed

Clear and purposeful justification of selection.

Information in Figure 14 used perceptively to support choice.

Considers reason for rejecting other two strategies – with greater balance and support.

May realise that no strategy is perfect and that selection has certain problems.

8-10 marks

10 marks

- (d) (i) 1 x 1+1 for statement of aim.
Basic statement, e.g. ...to find out if bedload changes downstream...". (1 mark)
With elaboration, e.g. to determine whether bedload gets smaller/rounder downstream. (1 mark). **2 marks**
- (ii) No mark for identifying data item.
- Description of method or sampling strategy and reasons (4 marks maximum).
 - 1 mark for method and 1 mark for reason minimum.
 - Data collection may refer to what, how, where, when, e.g. size of bedload
 - Long axis identified visually (1) and measured using pebbleometer (1) + 1 for elaboration of how, what it is.
 - Sampled randomly (1) by somebody rolling dice and calling out number (1) walk from left bank number of metres (1) and then reach down – first stone to touch fingertips selected (done with eyes closed once point reached) (1). This meant that all metre distances across river had equal chance of being included (1) no bias in selection of largest stone, most colourful stone etc. (1).
Sampling justification may refer to accuracy, variety, coverage, and reliability. **6 marks**