



## **General Certificate of Education**

# **Geography GGB1**

*Specification B Post-Standardisation*

# **Mark Scheme**

*2008 examination - June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this Mark Scheme are available to download from the AQA Website: [www.aqa.org.uk](http://www.aqa.org.uk)

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# GGB1

## General Instructions to Examiners on Marking.

It is important that every Examiner marks the scripts to the same standard as the rest of the panel. All Examiners must operate the Marking Scheme in a similar and consistent manner, and hence they must all participate in the application of that scheme at the Standardisation Meeting. In particular they should take careful note of all decisions taken or changes made at that meeting. Examiners are allocated to a Team Leader for the period of examining, and any difficulties that arise should be discussed with that person.

### The Marking Scheme

The Marking Scheme consists of two sections for **each question or sub-question – the Notes for Answers and the Mark Scheme itself.**

#### Notes for answers (NFA):

These indicate the possible content for the various sections of the question paper. In some cases (for example short answer questions) the NFA might indicate the only response that is acceptable, but in many cases they indicate either a range of suitable responses, or an exemplar of the type of response required. Therefore in most cases, the NFA do **not** provide model answers, and should be regarded as such. More NFA may be added at the standardisation meeting if it felt by the Principal Examiner that details of appropriate ways of answering the question have been omitted.

#### The Mark Scheme

This is provided in italics and provides the instructions to Examiners as to how they are to assess the work of the candidates. The number of marks allocated within the mark scheme to a question should correspond to the number of marks for that question on the question paper.

There are two ways in which the Mark Scheme operates:

- (a) It indicates how the marks to short answer question are to be allocated – usually to a maximum of 4 marks.
- (b) It indicates how examiners should move through the levels in a level response mark scheme – usually to all questions of 5 marks or more. Each level has a levels descriptor, with clear statements of the “trigger” to move candidates from one level to another. Each level contains a range of marks as shown on the Mark Scheme.

A number of features have been used to distinguish between levels, for example:

- a number of characteristics, reasons, attitudes etc
- the degree of specification, for example the use of specification case studies, or accurate detail
- responses to more than one command word, for example, describe and suggest reasons
- the degree of linkage between two aspects of the question
- the depth of understanding of a concept.

## GGB1

### Question 1

1 (a) Order of level of development

1. D
2. B
3. A
4. C

The indicators strongly support D as the most developed; low growth rate, low IMR, more elderly and high life expectancy.

Equally, C appears as the least developed; high IMR. 2% growth rate for population, low life expectancy.

There is more conflicting evidence for B and A; growth rates are similar, as are fertility rates; but B has lower IMR and higher life expectancy; these two indicators show the largest differences which support the chosen order.

#### **Level 1 (0-3 marks)**

*Answer established order (1 and 4), but little evidence; (no rationale for 2 and 3).*

#### **Level 2 (4-7 marks)**

*Answer presents sound evidence for 1 and 4; their reasoning justifies 2 and 3.*

*All 4 'correct' on basis of evidence; especially sound reasons on their evidence for 2 and 3 credit full marks.*

1 (b) 'Altering the balance' of population and resources could refer to the problem of overpopulation or under population, or an imbalance in the population structure; an ageing population.

Candidates are likely to focus on the problem of too many people for the resources availability.

Methods could (i) decrease population growth or (ii) increase resource output or both. Candidates could also refer to the problem of increasing population to maximise resource potential in some areas; e.g. Singapore.

Some areas, such as Japan, parts of W Europe, have problems of ageing population which is also an 'imbalance'. This could open up debate on methods to address the problem of labour supply in such economies.

#### **Level 1 (0-4 marks)**

*Basic answer which only states the problem, simplistic solutions.*

#### **Level 2 (5-8 marks)**

*Answer provides some detail on an example; it is clear how the solution addresses the problem. A well developed answer on an example with reference to more than one method can reach top of level. The focus could be on population or resources at this level.*

**Level 3 (9-10 marks)**

*Answer must show how problem has been addressed using different methods. There must be good reference to population and resource aspects to enter Level 3.*

**Question 2**

- 2 (a) Reasons could include;  
Lack of investment in the past; foreign competition; cheap imports; lower wages in LEDCs encouraging TNCs to locate outside UK or move away from UK; increased mechanisation / robotisation; greater productivity.  
Candidates need to show how the factor produces a reduction in UK manufacturing workforce.

**Level 1 (0-4 marks)**

*Answer presents reasons with no links to loss of employment.*

**Level 2 (5-8 marks)**

*Clear illustration as to role of factor. Reference to relevant example – links to loss of employment.*

- 2 (b) Industries tend to be high technology, computer based or research establishments; they are often described as footloose, post-fordist industries. They produce more specialised products using flexible systems and requiring highly skilled, usually non-unionised labour. Raw material inputs and market orientation are less significant than labour, environmental and site factors. If they can 'locate anywhere' why select these locations? Answer can go beyond photograph evidence.  
Science Parks offer room for expansion, very good infrastructure connections, can be located in pleasant environments away from 'traditional' areas, near to highly skilled, well qualified graduate employees; usually near to centres of academic excellence and research facilities. They often have strong links, common-point linkage, with other firms on the park; external factors in production.

**Level 1 (0-4 marks)**

*Answer identifies some basic characteristics and some features of these locations; but makes no connection to explain the attraction to science parks. Simple connection to graduates and universities, or 'space'.*

**Level 2 (5-8 marks)**

*Clear links presented between the characteristics of industries and the way that these are met in science park developments.  
High scoring answer needs some reference to the nature of the firm and location factors rather than simply 'near to universities'.*

**Question 3**

- 3 (a) Chosen hypothesis must be clear; method of analysis applied needs to be described and developed along with some indication as to how the method was useful; perhaps allowing student to identify trends or patterns or correlation.

**Level 1 (0-3 marks)**

*Method named without reference to how it was used in analysis.  
Simplistic advantages; “easy to do” type of approach.*

**Level 2 (4-5 marks)**

*Clear indication as to analytical method; good description of processing and / or presentation of data; developed reference of the technique.*

- 3 (b) This provides an opportunity for candidates to develop some ideas as to how their results link to their aims and understanding of the chosen topic.  
We should expect more than the usual ‘benefits of field work’; ‘seeing for oneself’, although this is a valuable aspect of fieldwork.  
Candidates should be able to undertake some evaluation / interpretation of results in relation to general theory or ‘models’.  
Reference to general trends supporting textbook theory or consideration of anomalies would form part of this.

**Level 1 (0-3 marks)**

*Answer presents ‘textbook’ material with no direct reference to own results.  
General benefits of fieldwork.*

**Level 2 (4-5 marks)**

*Answer makes clear reference to results relating to specific example or location / topic.  
Attempts to make sense of own results in context of study.*

**Question 4**

- 4 (a) (i) An increase in vegetation cover will increase interception and evapotranspiration; this will slow down transfer of water to the ground surface and will lengthen the lag time. Trees will also encourage infiltration and throughflow which will increase the transfer time to the channel and increase lag time.  
Type of vegetation could influence lag – depending on season. **(3 marks)**

- 4 (a) (ii) A period of wet weather before a storm event will lead to saturation of pore space in the soil storage zone; this will reduce infiltration producing greater run off which will transfer water more quickly to the channel and decrease the lag time – or reverse argument for period of dry weather. **(3 marks)**

**Point mark.**

*3 marks for each well developed explanation.*

- 4 (b) Increases in discharge (and velocity) increase the size (and range) of particles that can be picked up and transported. This can be related to competence and capacity which vary in relation to velocity. This is normally shown in the Hjulstorm Curve; silt and small sand are picked up first; clay particles and larger sands are only picked up as the velocity increases; gravels are only picked up at higher discharges. As discharges decreases the particles are deposited in size order, largest first. Clay particles can still be transported at very low velocity. Capacity (total load) and competence (size of largest particle carried) are both proportional to velocity; capacity  $v^3$ ; competence  $v^6$ .

**Level 1 (0-4 marks)**

*Answer presents general pattern of change; increase related to larger particles; decrease linked to deposition. Higher velocity equals more load / larger load.*

**Level 2 (5-6 marks)**

*Some development of detail; link to competence / capacity or comments on specific particles; e.g. clays need higher velocities for pick up than larger sands.*

*Reference to transport (or deposition) needed to score full marks.*

- 4 (c) This is an open question allowing candidates to take any scale / features etc; accept answers on straight and meandering channel profiles. Do not credit answers on valley cross profile or ox bow lake formation. Candidates may consider pools and riffles. We should expect some detail on the actual shape of the channel cross-section. Diagram must link **processes** to aspects of **shape**.



**Level 1 (0-2 marks)**

*Answer presents a diagram with inadequate labelling; no link between the processes and shape.*

**Level 2 (3-5 marks)**

*Well-developed answer with clearly labelled diagram to illustrate the role of specified processes; good links to 'shape'; comments on role of abrasion and hydraulic action; particles in suspension producing undercutting and collapse; lateral erosion. Some reference to deposition needed for full credit.*