



## General Certificate of Education

# Geography 5036 *Specification B*

*GGB1 The Dynamics of Change*

## Mark Scheme

*2006 examination – January 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.

## GENERAL GUIDANCE FOR GCE GEOGRAPHY ASSISTANT EXAMINERS

### 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 the 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 may 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 not be regarded as such. More NFA may be added at the standardisation meeting if it is 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 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 questions 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 “triggers” 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 specific 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.

### The Marking Process

A sample of an Examiner's marked scripts will be marked again by a Senior Examiner according to the procedures set out by the Board. Also the scripts may be re-examined at the Awards Meeting and the subsequent Grade Review. Therefore, it is most important that Examiners mark clearly according to the procedures set out below.

- All marking should be done in red.
- The right-hand margin should be used for marks only.
- The overall mark for a question must be ringed at the end of the answer.
- The total mark for the question must be transferred to the front of the script.
- The left-hand margin is where an indication of the level achieved is written. Comments and codes (see below) may also be written on the left.
- Indications of the levels achieved may also occur in the body of the answer if this is easier for the Examiner to apply (e.g. in the marking of diagrams).
- Ticks should be used for short answer responses and Level I responses only, with one tick representing one mark (to the maximum allowed in a Levels scheme).
- Levels II, III and IV should be indicated with a Roman II, III or IV on the script, and this symbol should be used each time this Level is achieved. Examiners may wish to bracket an area of text where this level of response has been achieved.
- Once a candidate has reached Level II, additional Level I credit should be indicated using a + symbol. If these points are of sufficient quality **one additional mark** can be awarded (assuming no further Level II points are made).
- Examiners may indicate strong Level II or III material by writing "Level II (or III) – "good" in the left hand margin of the script. The Examiner should ensure that this is reflected in the **awarding of an appropriate number of marks** at the end of the answer.
- Level III is to be used only for questions of 9 marks or more, and Level IV is to be used only for questions of 25 marks in total.

### Other Mechanics of Marking

- Underline all errors and contradictions.
- Cross out irrelevant sections using a line from top-left to bottom right. (However, be careful to check that there is no valid material, however brief, in the mass of irrelevance).
- Indicate repeated material with "rep".
- Other useful marking codes can be used, for example, "va" for vague, "NQ" or "Not Qu." for failure to answer the question, "Irrel" for irrelevant material, and "SIF" for self-penalising material.
- Put a wavy line in the left-hand margin to indicate weak dubious material.
- If the rubric is contravened, mark all answers but count only the best mark towards the candidate's total mark for the script. Put the mark for the question on the front of the script in the usual way, but also write "RAM Rubric" on the front of the script.
- Large areas of text must not be left blank – use the wavy line or write "seen" alongside the text. All pages must have an indication that they have been read, especially supplementary sheets.
- Unless indicated otherwise always mark text before marking maps and diagrams – do not give double credit for the same point made in the text and a diagram.

### Quality of Language Descriptors

The following descriptors concerning the quality of language must be applied to **all** questions in which candidates are required to produce extended writing. To attain full marks available at a level of response, the appropriate Quality of Language descriptor must be achieved. Use the same quality of language levels as are used in the geographical element of the mark scheme under consideration.

#### **Three-level descriptors**

- |                  |   |
|------------------|---|
| <b>LEVEL I</b>   | <ul style="list-style-type: none"><li>• Style of writing is suitable for only simple subject matter.</li><li>• Expression of only simple ideas, using a limited range of specialist terms.</li><li>• Reasonable accuracy in the use of English.</li></ul>   |
| <b>LEVEL II</b>  | <ul style="list-style-type: none"><li>• Manner of dealing with subject matter is acceptable, but could be improved.</li><li>• Reasonable clarity and fluency of expression of ideas, using a good range of specialist terms, when appropriate.</li><li>• Considerable accuracy in the use of English.</li></ul> |
| <b>LEVEL III</b> | <ul style="list-style-type: none"><li>• Style of writing is appropriate to subject matter.</li><li>• Organises relevant information and ideas clearly and coherently, using a wide range of specialist vocabulary, when appropriate.</li><li>• Accurate in the use of English.</li></ul>                        |

#### **Two-level descriptors**

- |                 |   |
|-----------------|---|
| <b>LEVEL I</b>  | <ul style="list-style-type: none"><li>• Manner of dealing with subject matter is acceptable, but could be improved.</li><li>• Reasonable clarity and fluency of expression of ideas, using a good range of specialist terms, when appropriate.</li><li>• Considerable accuracy in the use of English.</li></ul> |
| <b>LEVEL II</b> | <ul style="list-style-type: none"><li>• Style of writing is appropriate to subject matter.</li><li>• Organises relevant information and ideas clearly and coherently, using a wide range of specialist vocabulary, when appropriate.</li><li>• Accurate in the use of English.</li></ul>                        |

## Question 1

- (a) Expect to see a well-stated aim(s) and clearly formulated hypotheses or null hypotheses.

Point mark:

Clear aim (1)

(Indication of hypotheses but poorly stated) (1)

Well-stated, directional hypotheses (2)

**(3 marks)**

- (b) Method is described clearly in context of study; candidate should indicate the data that are being presented.

Some reason for using this method should be clear in terms of ‘being useful’, perhaps because it allowed clear patterns to be observed or some form of analysis to be undertaken, albeit at a fairly superficial or subjective level.

**Level 1**

*Method described without reference to its usefulness.*

**(0-3 marks)**

**Level 2**

*Clear indication as to method of presentation or developed reference to show how technique was useful. Some indication as to why method was chosen – expands on “useful”.*

**(4-7 marks)**

## Question 2

- (a) Graded profile is the term given to the long profile of a river in equilibrium, when inputs and outputs are balanced. A graded profile shows a (gradient that decreases progressively downvalley;) graded to sea level.

Point mark:

2 marks for a well developed statement.

**(2 marks)**

- (b) Knick points and waterfalls may be seen as modifications to this ‘normal’ concave profile with convex sections being caused by knick points and waterfalls. Knick points may be lithological or erosional etc. Waterfalls may be vertical barrier, or cap rock – may be part of base level adjustments – regarding/knick points.  
Local base levels, etc.  
Expect to see some development of role of differential erosion or base level change.

### **Level 1**

**(0-3 marks)**

*A basic answer describing the general effects of knick points/waterfalls.*

### **Level 2**

**(4-8 marks)**

*Answer develops reasons for variations; reason sufficiently developed to explain gradient change, e.g. lithological interruption along course or change in sea level/base level. One well-developed factor allows access to Level 2. Further factors or development of initial idea moves answer higher Level 2. A well developed example can access Level 2.*

### **Level 3**

**(9-10 marks)**

*A well-developed answer covering knick points and waterfalls.*

- (c) Deliberately left open to allow candidates to develop any **one** land use change in some detail Change could increase or decrease lag time, peak discharge, total discharge, etc. Afforestation, deforestation, increase in livestock density, urban development/expansion, change in crop cover/type. We would expect to see some comment on impact on interception, infiltration, through-flow/overland flow, speed of transfer and response.  
Construction of dams.

### **Level 1**

**(0-3 marks)**

*Answer gives some idea of change to hydrograph, describes characteristics without linking change to shape.*

### **Level 2**

**(4-5 marks)**

*Clear link from land use change to modification to basin hydrological cycle to specific elements of hydrograph.*

**Question 3**

- (a) Optimum population: when there is an ideal balance between population and resources at the given level of technology. This produces the highest possible standard of living.

Point mark:

2 marks for a well-stated definition.

**(2 marks)**

- (b) (i) The graph suggests that there is some link between the use of irrigation and the availability of adequate food resources but not a consistent one. The percentage underfed is high in Sub Saharan Africa where there is a low percentage of irrigated land, but in Latin America, Near East/N Africa and in East and SE Asia, the percentage underfed is very similar despite wide variations in percent of irrigated land. In S Asia, the highest percentage of irrigated land has still resulted in a relatively high percentage that is underfed. Generally speaking, better access to water does tend to lower levels of under-nourishment.

Point mark:

1 mark per valid observation; identification of general pattern, plus anomalies (similarity in 3 areas + S Asia).

**(4 marks)**

- (ii) Allow any two indicators and justification; but indicators must relate to aspects of 'development'.

Point mark:

Allow up to 2 marks for each valid/justified indicator.

**(4 marks)**

- (c) Methods: use of catalytic converters; burning fuels with lower sulphur content, reduction in fossil fuels/increase in renewables, gas desulphurisation schemes; reduce overall demand for electricity and car travel, carbon credits etc. – accept as a 'method'.

**Level 1**

**(0-3 marks)**

*Answer identifies some methods in a general way with brief reference to underlying problems.*

**Level 2**

**(4-7 marks)**

*A more developed answer which develops methods and links them to a specific problem/issue.*

*Two well-developed methods needed to access Level 2, specific methods are linked to a cause.*

#### Question 4

- (a) (i) In 1981, the ethnic population is in % terms concentrated in the inner wards, particularly to the north of the city centre (5 and 11). The higher densities > 10% are found in a belt running N-S just east of centre line (7-8 south to 11-13). Much lower percentages are found on the periphery to west and even in inner areas to west of city centre.

Point mark:

1 mark for each valid element of pattern/trend/specific illustration.

**(4 marks)**

- (ii) By 2001 there is some modification to the pattern, although the highest concentration, in some classes, is still found in central/inner N wards 5 and 11. The belt (>10%) from 7-8 southwards has been extended right across the city to 3-9 on southern edge. Ward 14 now has >10% concentration. There are now >5% ethnic concentration in all wards to east of the city centre and in inner wards to west. The areas on the western periphery (1-15) have <5% concentration.

The Asian and Black ethnic population has maintained a strong concentration in the central areas, but there are clear indications of dispersal to outer areas in the last 20 years. The pattern has changed to some extent; already well established in the central wards by 1981.

As expected, there is a high concentration in centre; usual reasons given for this are:

Cost of housing/rent, nearness to transport and work, safety, close to cultural/ethnic facilities established in these areas.

More recent dispersal may reflect greater integration/security/confidence, improvements in educational attainment and income, ability to afford more expensive housing, outward movement of employment.

#### **Level 1**

**(0-3 marks)**

*Answer describes the pattern without reason.*

#### **Level 2**

**(4-7 marks)**

*Clear development of factors to support description pattern.*

*Two well-developed reasons could achieve full credit in support of good comment on 2001 – some element of consistency v changes. Some description needed to act as frame for reasons.*

- (b) Part-time employment: this has been attractive to both the employee and the employer. Employees gain through flexibility and free time, although many part-time workers are students or parents who can fit part-time work into their schedule.

Employers also gain flexibility for evening work, peak labour periods etc. Also cheaper to employ part-time staff, fewer costs, cheaper wages, fewer rights etc.

Self-employment is also popular with an increasing number of workers; freedom, flexibility, responsible for own work and control of earnings, escape from pressures of employment. Also banks/financial companies have been keen to lend money for sound business ideas; some use of redundancy money in setting up businesses.

Home working – reflecting the IT revolution – ability to communicate/transfer information to businesses via e-mail/fax etc.

Video conferencing – gives individuals flexibility – allows them to combine work/leisure/other responsibilities.

**Level 1**

**(0-3 marks)**

*Basic ideas on type of employment, answer identifies factors; usually from point of view of employee or employer.*

**Level 2**

**(4-5 marks)**

*Answer makes some reference to the advantages to both employees and employers, or sourcing of funds to enable self-employment etc.*