

General Certificate of Education

Geography 5036 *Specification B*

GGB1 The Dynamics of Change

Mark Scheme

2006 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.

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 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 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.

The Marking process.

A sample of the 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 Meetings 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 level 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 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.

Question 1

- (a) Expect to see 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) – clearly in context of aim(s) of study. **(3 marks)**
- (b) Method is described clearly in context of study; candidate should indicate how the method of data analysis was used.
Some reason for using this method should be clear in terms of its advantages, perhaps because it allowed objective analysis or statistical significance to be determined.
- Level 1 Basic (0-3 marks)**
Method described in general terms without reference or link to analysis of data.
- Level 2 Clear (4-7 marks)**
Clear indication as to method of data analysis and developed reference to suggest the advantages of the method. **(7 marks)**
- Total** **10 marks**

Question 2

- (a) An optimistic approach suggests that there are sufficient resources, if they are used effectively, to support the population. Candidates are likely to refer to the work of Boserup who presented evidence to show that human societies were able to respond to increase population pressure by reducing/eliminating fallow periods and by multi-cropping. These adaptations led to increased yields and agricultural output.
- The oft quoted “necessity is the mother of invention” does sum up this idea. Population growth is not limited by resource availability; it is ‘optimistic’ in that it suggests that mankind is able to do something about adverse situations.

Level 1 Basic (0-3 marks)

Basic answer which outlines general idea, gives basic quote.

Level 2 Clear (4-5 marks)

Some clear reference to idea of ‘optimistic’; mankind’s ability to adapt to pressures supported by some indication as to how resources have been used more effectively.

(5 marks)

- (b)

	A	B	C	D	Total
1990	300	290	100	101	791
1995	255	220	140	120	735
1999	280	205	155	110	750

Group A have shown a fall then rise, but 20m less over a decade; Group B have decreased throughout; a fall of 85m. Group C increased over time by 55m, Group D increased then decreased but showed an overall increase by 9m. Total number underfed has fallen, then risen but is 41m lower by 1999. This could allow some optimism in that the overall situation has improved. ‘Optimists’ do tend to adopt theoretical arguments, i.e. what the Earth is capable of supporting; in reality about 10% of the world population is actually underfed. But, some encouragement from a) and b) where there have been improvements. With only 10% being underfed some might argue that this is an optimistic situation globally; clearly a pessimistic approach might be more appropriate for some regions of the world. The debate could focus on the scale of a problem globally and in specific (yet unspecified) areas. A number of areas in Africa do have a persistent problem with the provision of food (and water), the most basic and essential of resources. There are plenty of opportunities for good candidates to show understanding and skill.

Only 84 countries in the sample - ?? indication as to which countries are included or the total population of these. Limited data.

Level 1 Basic (0-3 marks)

Answer deals with basic changes to graph, some individual line description and quantification. Good use of material could go to the top of level.

Level 2 Clear (4-7 marks)

Answer reveals some understanding of issue and relevance of data. Some evaluation of the usefulness, or otherwise, of the data. An indication that the candidate appreciates the idea of optimistic and pessimistic in terms of the 'resource'. Some appreciation of the issue of 'scale'.

(7 marks)

(c)

Clearly depends on the system chosen, must be **renewable**.

Wind, wave, tidal, HEP, solar, biomass, biogas, geothermal, ocean thermal energy (any other)

We should expect to see some reference to FACTORS/REASONS; likely to be influenced by resource availability/ reliability; costs/ capital; pollution/reduction of carbon etc; link to ease of transfer/market demands etc – government policies – response to Kyoto protocol.

Level 1 Basic (0-2 marks)

System identified; no development beyond availability of that resource in the country or desire to reduce pollution.

Level 2 Clear (3-5 marks)

*Answer links to development to at least two factors/reasons; well illustrated for **that system**. Factors are likely to be linked to example at top of level.*

(5 marks)

Total

17 marks

Question 3

- (a) Possible reasons; lack of investment in the past; foreign competition; cheap imports; increased mechanisation/robotisation; greater productivity.

Regional differences could reflect the fact that some regions had more manufacturing jobs in the first place; they had more to lose when de-industrialisation set in. There have been heavy losses in ‘traditional’ heavy industrial areas (including London and SE). N Ireland has lost lots of jobs in heavy industry but as with other regions there has been some gain recently through regional investment. Some ‘losses’ may have been offset by the growth of more modern high-tech industry or through linkages to incoming investment.

Level 1 Basic (0-3 marks)

Answer deals with reasons for overall decline or regional variation. List factors without indicating how this links to decline; no real attempt to differentiate between regions.

Level 2 Clear (4-8 marks)

Either aspect done well can access Level 2. High scoring answers need to present development of at least 2 reasons for overall decline (breadth and depth can be rewarded). Some reference to named regions in terms of variation in decline.

Level 3 (9-10 marks)

Both national and regional aspects are well covered – clear reasons/examples. Attempt to explain regional variations.

(10 marks)

- (b) The precise detail will depend upon the example(s) chosen; but we might expect to see some common elements in the answer.

Although population growth has slowed down in the last 30 years; there is an increasing demand for housing; social changes such as separation and divorce have all led to a need for further housing development. There is an increasing number of the elderly and a reduction in the number of children; smaller family size – growth in single person households – both for elderly and young adults (mainly males).

This has contributed to continued expansion on the urban fringe; detached, executive style housing despite smaller families.

There has been the growth of housing in regeneration schemes; conversion of former industrial units or commercial units; ‘docklands’ type of development. Flats and apartments (one to four bedroom).

There has been the growth in ‘starter homes’ and single occupancy units, houses and homes adapted for elderly residents, flats and modern terraced homes (generally up to two bedroom); mainly in central (often brownfield) locations.

Level 1 Basic (0-3 marks)

A basic answer which refers to social or demographic changes in a general way; no development of example(s).

Level 2 Clear (4-8 marks)

Answer develops ideas on changes (either social or demographic as specified) and shows how the changes link to the growth of a related type of housing or location.

Some reference to S & D needed to access the top of level. Answer makes clear reference to both types of change; good links to both types (size) and location of housing developments.

(7 marks)

Total

17 marks

Question 4

- (a) There is a belt of dense cloud stretching from Iceland towards S Norway and the north of Scotland. Thinner, patchier cloud over most of the British Isles with some concentration over the Irish Sea, parts of eastern and southern England. The density of cloud is related to the position of the occluded front and fronts of a depression system centred over Iceland. Uplift of air along a front causes cooling, condensation and cloud formation.
In the south of England, and to the south of Britain, there is much less cloud; this area is under the influence of higher pressure; anticyclonic conditions where the divergence and subsidence causes the air to warm up and dry out. Some anomalies, e.g. S Norway – higher pressure

Level 1 Basic (0-2 marks)

Answer gives some idea of cloud distribution with some simple connection to fronts.

Level 2 Clear (3-5 marks)

Clear description presented, accurate locations.

Good links to development at fronts/processes.

Good reference to anticyclonic conditions – MECDs to consider cloud / lack of cloud for full marks.

(5 marks)

- (b) Standard changes during movement of warm and cold fronts. Processes include uplift of Tm air over Pm air, steepness of cold front etc. Winds/ppt/temp changes etc.

Level 1 Basic (0-3 marks)

Answer gives some description of weather change but poor development of reasons.

Level 2 Clear (4-7 marks)

Answer makes clear link between a projected weather change and a sound reason/process. 1 theme well developed can access Level 2. Further progression to top of level if other aspects developed.

(7 marks)

- (c) (i) Infiltration is the downward movement/passage of water in the soil.
2 marks for a well expressed definition.
- (ii) Factors include:
antecedent conditions; amount of water already in soil
Texture of the soil, amount of pore space
Vegetation and roots, breaking up the soil to allow water to enter.

(2 marks)

Any two factors, 1 mark each

(2 marks)**Total****16 marks**