General Certificate of Education

Geography 5031
Specification A

GGA3 Geography Skills

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.

GGA3

General Guidance for A Level Geography Assistant Examiners

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)   Any valid label – 6 × 1.
             Likely to relate to different heights of vegetation;
             different species apparent;
             density of cover;
             density of canopy;
             specific features.
             Detailed observations will attract marks, e.g. no low branches, variety
             of species.
             Labels must relate to what can be seen and to vegetation specifically.
             Labels must be appropriately arrowed or written clearly directly on
             feature.   **6 marks**

       (ii)   2 × 1 for plotting precipitation information.
             1 × 1 for plotting temperature for both months.   **3 marks**

       (iii) Figure 1:
             Should relate to height of vegetation and appreciate tallest is result of
             effort to seek sunlight for photosynthesis; limited low growing
             vegetation due to limited amount of light which penetrates. Canopy
             relatively dense for similar reasons. Tree trunks draped in plants –
             these plants climb up the trees to reach the light.
             Density/diversity due to nature of the climate – hot, humid conditions
             conducive to growth – may quote figures from graph in support. As
             long as trees remain and natural cycle in place – climate will support
             rich growth.

             Figure 3:
             Should be used to provide climatic data to support points made.

             Figure 4a:
             Shows buttress roots – develop to support tall trees – giving them
             stability and increasing water intake over area spread.

             Figure 4b:
             Shows drip tip (and waxy) leaves. These developed to channel water
             (of which there is a lot) off the leaf without damaging it and
             transpiration is encouraged.

Level 1   **1-3 marks**
Tendency to describe Figures 1, 3 and 4.
Reliance on these.
Separate consideration of vegetation and climate.

Level 2   **4-6 marks**
Begins to use information.
Focus on purpose – explain.
Some reference to evidence.

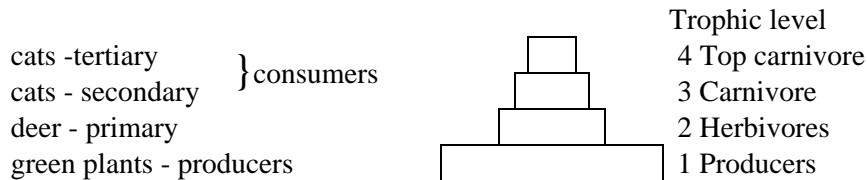**Level 3**   **7-8 marks**
Clear, purposeful use of information.
Link between features of vegetation and climate are explicit.
Evidence is used in support – 3 of 4 figures referred to.

(b)

	Trophic level
cats -tertiary	4 Top carnivore
cats - secondary } consumers	3 Carnivore
deer - primary	2 Herbivores
green plants - producers	1 Producers

1 × 1 for sketch – relative proportions.
Up to 3 × 1 for identifying level and example.   **4 marks**

(c)   Overall reduction in nutrients available (1). Removal of trees takes away source of nutrient (1). Subsequent land use – crops/grass – do not provide nutrients (1) as eaten by cattle or harvested (1) so litter store falls (1) and there is no subsequent decay into humus in the soil (1). Those nutrients present are leached from soil at an increasing rate (1) and there is an increased amount of overland flow taking nutrients away at surface level (1). 6 × 1.   **6 marks**

(d)   (i)   Overall reduction in global or continental context (1). Large areas of deforestation along coastal areas, e.g. eastern seaboard of South America (1). Current areas once more extensive – now tend to be discontinuous (1) e.g. West Africa, parts of Borneo (1). Largest current extent clearly in Amazonia – but this has fastest rate of contraction with relatively small area left by 2050 (1). Similarly only Papua New Guinea in SE Asia has any significant extent of forest by 2050 (1). Comment should refer to relative amount of forest left versus deforested area on key; location of forest left; implications of the loss or causes of it.
Maximum 3 for either description or comment – minimum of 2.
5 × 1.   **5 marks**

(ii) Physical issues (p):
- destruction of biodiversity/biome itself;
- impact on global warming;
- may refer to soil erosion, gulleying;
- may consider relative proportion deforested to that left.

Economic issues (ec):
- forest in LEDCs – countries need to utilise forest to develop and pay-off debt – but is this short-term gain;
- unsustainable – unless managed effectively;
- is there a need to develop more sustainable products – such as fruit?

Social issues (s):
- rainforest is home to many people – specialist skills/knowledge/culture – some of who are now forced to live on reservations if they remain. Should their way of life be threatened?
- medicinal value of many plants unknown – 1% trees only tested for possible use – but over 100 medicines – potential clear;
- because MEDCs destroyed their forest – no real argument for saying LEDCs should not do the same.

Level 1   **1-4 marks**
Heavy reliance on information in Figure 8.
Describes physical/economic/social problems/features.
Possible clear imbalance.

Level 2   **5-7 marks**
Begins to use Figure 8 to answer the question.
Begins to consider/debate ideas relating to at least 2/3 categories.
Tentative comment.

Level 3   **8-10 marks**
Clear purposeful use of Figure 8 in the context of the question.
Clear discussion/debate of issues relating to all 3 categories, although may still be imbalanced.
Focused explicit comment.

(e) (i) Aim: ✓a
– e.g. to determine whether (village) is suburbanised (1). If elaborated +1.
Theory/model: ✓ t
land use of suburbanised village … described relating to zones. 1 + 1.
or reference to expected socio-economic contrast between newcomers and indigenous residents. 1+1.   **3 marks**

(ii)   Primary data:
       Survey of function and building age.
       Function/age determined per sheet (1) dominant purpose (1) unless
       streets very long in which case sections used (1).
       Categories identified – core/ribbon development/1960s housing/1980s
       housing – any 2 (2 × 1).

       ✓ j Justification:
       Using main purpose for streets gives overview (1) and allows complete
       coverage of villages (1) whilst function/age allows it to be determined
       whether model appropriate (1) especially if similar categories used.
       Maximum 4 on outline/justification minimum 1. (5 × 1)   **5 marks**

Question 2

(a) Highest levels of urban population (75% and over) occur in N America, Oceania/Australasia, much of Western Europe, CIS, Japan (1). Portugal is a clear exception here with between 25 – 49.99 (1). Much of South America also has these high levels but only one African country (1). Africa and South and South East Asia have extensive areas with percentage between 25.0 – 49.9 (1) with relatively few locations with between 0 – 24.9 – tend to be edge Sahara – and individual with some in S-E Asia/Indonesia (1) 50.0–74.9 category appears most in Eastern Europe, part of N Africa and Middle East.
6 × 1- any valid descriptive point.
Must refer to pattern unless indicating exceptions, individual country references not relevant unless indicating exceptions.   **6 marks**

(b) Description (✓d) likely to refer to:
All continental areas have increased (1).
Rates clearly vary – fastest increase in urban dwellers up to 1990 (with predictions to continue) in Asia (1) at increasing rates – with evidence (1).
Slowest rates of increase in Europe (1) + 1 for evidence.
Relatively slow rates predicted to slow further from 2010 to 2030 (1) + 1 for evidence.
Latin America shows rapid increase but numbers begin to slow (1) + 1 for evidence.
Africa has fastest relative increase – numbers increasing threefold between 1990 and 2030 (1) whilst Asia has fastest absolute increase – over 1500 million between 1990 and 2030.

Explanation (✓e) likely to refer to:
Contrasting times of urbanisation and speeds – slower in Europe where process began earlier due to mechanisation in rural areas (1) move to factories in towns (1) process more gradual over longer (1).
Rates clearly slowing in Europe as some people actually moving out (1) counter-urbanisation (1) with reasons (1).
Most rapid growth in LEDCs due to rural-urban migration (1) + 1 for push + 1 for pull factor. Age selectivity of migration important – young – 15-30 (1). Impact of this on natural increase.
Any valid point – 1 per basic point; 1+1 per developed point.
Maximum 5, minimum 3 for each component.   **8 marks**

(c)   (i) 3 × 1 for correctly adding bar.
          1 × 1 for using key.   **4 marks**

(ii) Description (d) likely to refer to – 2000
     concentration in South East Asia;
     few in S America – all east coast;
     few in N America/C America – relatively scattered here;
     only two in Africa; none in Australasia or Europe;

     2000–2015 (ch)
     distribution relatively unchanged;
     additional mega-cities mainly add to South East Asian
     cluster except Istanbul.
     Slowest increases in Japan (no change), North America, China, followed
     by S America.
     Substantial additions in many South East Asian areas, with African city
     of Lagos showing clearest increase.
     No additional mega-cities in Africa – still none in Europe/ Australasia

     Comment (c) may refer to degree of clustering.
     Degree of change.
     Reasons for rapid increase in some places, not others.
     Surprise e.g. that Africa despite rates of urbanisation does not have
     more.

Level 1   **1-3 marks**
Description of information.
Will consider 2000 and 2015 separately.
Overview of distribution will lack clarity - piecemeal.

Level 2   **4-6 marks**
Begins to target description to purpose – distribution.
Will begin to consider changes – size or distribution.
Components likely to be imbalanced.
Some evidence used in support.
Tentative comment.

Level 3   **7-8 marks**
Clear purposeful description.
Distribution and changes in size and distribution clearly addressed.
Balance evident relatively.
Evidence used in support.
Clear, explicit comment.

(d)   (i) Any valid label relating to buildings (✓b), e.g. number of storeys, age,
          building materials, design, function / or environment (✓e), e.g. riverside
          location, paths adjacent to river, landscaping.
          Labels must point to or be written clearly on feature.
          Maximum 4, minimum 2 for either component.   **6 marks**

(ii) Environmental issues (en)
Development of brownfield sites means reusing land that may be vacant, waste, derelict buildings, polluted sites. Thus enhanced urban/inner-city environment.
Prevents urban sprawl and problems that go with this – congestion, pollution.
Often rivers, canals can be utilised – cleaned up to become attractive features – fashionable at present.
However, concern may be expressed about health on certain brownfield sites – and relative quality overall when compared to greenfield sites.

Economic issues (ec)
Development of brownfield sites brings people back to edge of CBD location. Increases customers for CBD services – makes more vibrant. Revitalises often struggling areas following decentralisation.   Can stimulate economic growth.

Social issues (s)
Bringing population back, which will increase mix of population living in relative proximity to city centre. Developments can lead to creation of new communities with on-site facilities. Could argue living near to place of work reduces stress of lengthy journey to work.

Level 1   **1-4 marks**
Describes information – perhaps indiscriminately from Figure 14.
Emphasis likely on environmental issues.
Heavy reliance on Figure 14.

Level 2   **5-7 marks**
Begins to use information.
At least 2/3 categories considered.
Some evidence used in support of points.
Tentative awareness of issues/comment.

Level 3   **8-10 marks**
Clear, purposeful use of information.
Some reference to all 3 categories.
Evidence used to back up points.
Explicit comment; clear awareness of issues.

(e)   (i) Aim: ✓a
- to determine whether vegetation changes on a transect through sand dunes (1).   If elaborated +1.
Theory/model: ✓t
psammosere – and expectations – relative to features on model. (1 + 1)   **3 marks**

(ii)   e.g. diversity of species – collected at 5/10 metre intervals (1) by
throwing a 100 square quadrat (1) and then counting number of different
species that appear in it (1) and record as percentage by counting squares
occupied (1).

✓ j Justification – regular intervals ensure even coverage (1). 100
squares makes it easy to determine percentage type of cover (1) throwing
makes final selection relatively random (1) so less chance of selecting
somewhere where results will fit the pattern (1).
Maximum 4, minimum 1 on either component. 5×1.   **5 marks**