General Certificate of Education

Geography 2030

GEO4B Geographical Issue Evaluation

Post-Standardisation

2012 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.

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General Guidance for GCE Geography Assistant Examiners

The mark scheme for this unit includes an overall assessment of quality of written communication. There are no discrete marks for the assessment of written communication 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.

Marking – the philosophy
Marking is positive and not negative.

Mark schemes – layout and style
The mark scheme for each question will have the following format:
a) Notes for answers (nfa) – exemplars of the material that might be offered by candidates
b) Mark scheme containing advice on the awarding of credit and levels indicators.

Point marking and Levels marking
a) Questions with a mark range of 1-4 marks will be point marked.
b) Levels will be used for all questions with a tariff of 5 marks and over.
c) Two levels only for questions with a tariff of 5 to 8 marks.
d) Three levels to be used for questions of 9 to 15 marks.

Levels Marking – General Criteria
Everyone involved in the levels marking process (examiners, teachers, students) should understand the criteria for moving from one level to the next – the “triggers”. The following general criteria are designed to assist all involved in determining into which band the quality of response should be placed. It is anticipated that candidates’ performances under the various elements will be broadly inter-related. Further development of these principles will be discussed during the standardisation process. In broad terms the levels will operate as follows:

Level 1: attempts the question to some extent (basic)

An answer at this level is likely to:

- display a basic understanding of the topic
- make one or two points without support of appropriate exemplification or application of principle
- give a basic list of characteristics, reasons and attitudes
- provide a basic account of a case study, or provide no case study evidence
- give a response to one command of a question where two (or more) commands are stated e.g. “describe and suggest reasons”
- demonstrate a simplistic style of writing perhaps lacking close relation to the terms 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: answers the question (well/clearly)

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
- give a number of characteristics, reasons, attitudes
- provide clear use of case studies
- give responses to more than one command e.g. “describe and explain..”
- 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: answers the question very well (detailed)

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
- give a wide range of characteristics, reasons, attitudes
- provide detailed accounts of a range of case studies
- respond well to more than one command
- demonstrate evidence of discussion, evaluation, assessment and synthesis depending on the requirements of the assessment
- 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.

Mechanics of marking

- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Unless indicated otherwise, always mark text before marking maps and diagrams. Do not give double credit for the same point in text and diagrams.

Annotation of Scripts

It is most important that examiners mark clearly, according to the procedures set out below.

- The right hand margin should be used for marks only.
- Where an answer is marked using a levels response scheme, the examiner should annotate the scripts with 'L1', 'L2', or 'L3' at the point where that level has been reached in the left hand margin. At each point where the answer reaches that level, the appropriate levels indicator should be given. In addition, examiners may want to indicate strong material by annotating the script as "Good Level… ". Further commentary may also be given at the end of the answer. Where an answer fails to achieve Level 1, zero marks should be given.
- Where answers do not require levels of response marking, the script should be annotated to show that one tick equals one mark. The tick should be positioned in the part of the answer which is thought to be creditworthy. For point marked question where no creditworthy points are made, zero marks should be given.

Other mechanics of marking

- All errors and contradictions should be underlined.
- Various codes may be used such as: 'rep' (repeated material), 'va' (vague), 'NAQ' (not answering question), 'seen', etc.
- Use a wavy line to indicate weak dubious material (avoiding crossing out).

Unless indicated otherwise, always mark text before marking maps and diagrams. Do not given double credit for the same point in text and diagrams.

1 (a)	**Notes for answers**	***(7 marks)***
AO3 – 7	As the figures are presented as discrete totals it would be correct to use a bar graph rather than a line graph, which would be more suitable for showing figures that form part of a sequence. There is a big range in the size of the sets of data so it would be difficult to show them all clearly on one arithmetic graph. Perhaps a semi-logarithmic bar graph could be used to allow such a big range to be shown. On the other hand, perhaps it might be more useful to include 'rafting' with 'others' so that it would be a more manageable graph. Even then it might not be possible to show all the sets clearly. The 'holiday/pleasure' category is more than twice as big as the second biggest category so perhaps it could be shown with a split bar to indicate a change of scale. Alternatively, a pie chart could be used, as it would be possible to turn the totals into percentages. This would produce a graph that was compact, striking and easily comparable. This would be more difficult to draw and would need some equipment. Some of the detail in the data would be lost by translating the totals into percentages, but this would not be a vital point if an impression was all that was needed. It is difficult to justify any choice other than a bar graph divided bar, or pie chart. Line graph, scatter graph or map are **not** acceptable. Credit should be given for diagrams where relevant and where they add to text. The answer may include relevant points explaining why other possible methods were rejected. **Mark scheme** **Level 1 (1-4 marks - mid = 3)** An appropriate choice is made. Full clear description **or** full clear justification can reach top of L1. Fair description plus some relevant justification can also reach top L1. **Level 2 (5-7 marks – mid = 6)** Description and justification must both be present and one of them should be clear to move into L2. Description and justification must both be well developed to reach the top of the level. This may well include an awareness of the range of data as an issue.	

1 (b) **AO2 – 5** **AO3 – 3**	**Notes for answers** Tourists come at all seasons, whatever the climate, so climate is obviously not the only factor. However, the lowest month has about 19 000 and the peak month has about 66 000, more than three times as many, and so there seems to be some connection. The season with fewest tourists is the wet monsoon season, although the trough in numbers comes in June and then numbers rise during July and August when the rainfall is actually heavier. Perhaps it is the closeness and humidity at the onset of the monsoon season that really keeps tourists away in June. A second trough comes from December to February, the coldest months. The temperatures in the Everest region are below freezing, on average, during this period so trekking will be particularly difficult. Climbing will be extreme as the temperature will be even lower with greater altitude. The peak season is from September to November with a second peak in March. Temperature and rainfall are both moderate at these periods which is obviously important for the trekking and climbing industries. In fact October is the best month for mountaineering in this region because skies are at their clearest and the avalanche risk is at its lowest. However, note that only one fifth of tourists come for trekking and mountaineering. The biggest category is 'holiday/pleasure'. This group might consist largely of Indians coming for lakeside, hotel holidays rather than strenuous challenges in mountains. Their needs will be different. Pilgrimage, business, official and conference visitors will be far less influenced by climate than other tourists. Note: Kathmandu's climate is different from that of the Everest region. Give good credit if an answer shows clear awareness of this. **Mark scheme** **Level 1 (1-4 marks – mid = 3)** Some relevant points are described from the two sets of data and there is at least one link made between tourist numbers and climate. At the top of the level some discussion starts to show basic reasons for the links between the two sets of data. **Level 2 (5-8 marks – mid = 7)** The key points from the data are drawn out clearly and detailed links between the two sets are made. Reasons for the links are made clearly and show geographical understanding. At the top of the level there is clear consideration of the extent of the inter-connections. Description of the extent of links **or** reasons for relationships can reach Level 2 – but Max = 5. Answers cannot gain full 8 marks if they **only** deal with trekking/climbing.	***(8 marks)***

2 **AO1 – 3** **AO2 – 5** **AO3 – 7**	In the AIB there are references to the fragility of the vegetation and the threats that this is under from Nepalese villagers and from tourists and the tourist industry. The slopes of the mountains are obviously fragile because of their recent formation, the weathering and erosion processes that can be seen and implied from the photos and in the text of the AIB and the pressure of tourists. Avalanches are obviously common and even if they are a natural phenomenon they change and alter the environment very substantially. The glaciers are under threat from global climate change and from pollution by tourists and mountaineers. The valleys are under threat from the power industry wanting to develop hydroelectric dams. The way of life of the people is fragile and under threat from the modern world and globalisation and from pressure of an increasing population, etc. This area is unique because it is the highest part of the world. It has a deep spiritual and religious significance for both the Nepalese and the rest of the world. This special nature attracts tourists, who bring income to the people, etc. References to regulation already in place are acceptable – as long as they are clearly used to make reference to the fragility, or otherwise, of the environment. **Mark scheme** **Level 1 (1-6 marks – mid = 4)** Simple statements are made about the fragility, or otherwise, of the environment. These may well be lifted more or less verbatim from the AIB. Discussion of whether the environment is worth saving is simplified and does not engage in subtleties. Makes assertions without clear references to evidence. **Level 2 (7-12 marks – mid = 10)** Clear statements are made about the fragility of the environment. These often link ideas and facts in support of the ideas. A logical argument either in favour of or against conservation is developed. Subtleties are seen in the argument. The topic is discussed with an understanding of spatial variations within the region, or with a consideration of how the situation might change over time. **Level 3 (13-15 marks – mid = 14)** A detailed sophisticated discussion is developed. Ideas are well supported by factual references. Alternative views are discussed. Clear conclusions are drawn. The answer shows synopticity.	***(15 marks)***

3 **AO1 – 3** **AO2 – 5** **AO3 – 7**	**Notes for answers** At present main sources of energy in the villages include fuel wood, burning dung, mini-hydro schemes, kerosene. This presents some social and economic problems, e.g. • Use of fuel wood is most widespread and causes most damage – deforestation, soil erosion, landslides, silting of rivers, floods and uneven flow downstream, smoke pollution in houses – especially for women. • Burning dung wastes manure and also causes pollution in the houses. • Kerosene is expensive and its import uses fuel which is a further pollutant. Some alternatives are bio-digesters, as described in the AIB; solar cookers as illustrated in the photographs on the website; mini-hydro schemes which should be researched by students, including the ITDG Nepal site quoted; large scale HEP schemes which are also described in the AIB. Bio-digesters produce gas and manure. This can save money on kerosene and save time from collecting fuelwood. Time has an economic and social value. For instance if girls are not busy collecting the wood they can go to school more regularly, raising literacy levels and increasing earning potential. The use of biogas also makes conditions healthier as it does not produce so much smoke. Running costs of bio-digesters are low as they are fed by animal waste. Capital costs are fairly low as they are already in widespread use on the sub-continent. Solar cookers are cheap to make or buy and the running costs are very low and there are no damaging by-products. Sun is plentiful at that latitude and it loses less to the atmosphere at that height. It produces hot water for cooking and washing, improving hygiene and thereby improving health. It has many similar benefits to bio-gas. Mini-hydro schemes are more expensive to set up but they produce energy on a large scale. They can be used to power homes and also to run small businesses. Start-up capital is needed but then schemes can become self-financing. HEP is likely to bring benefits on a national scale although its development may be damaging on a local scale – socially by causing disruption, even if it does bring local economic benefits to some groups. Such damage may be mainly short-term as the damage might be out-weighed by the benefits, such as might be brought by increased wealth, providing education, health care and infrastructure. On the other hand it might do long-term damage by reducing the tourist attractions of the area or by causing pressure to urbanise and industrialise. There are many alternative approaches to the answer. All must be given credit when the suggestions are based on clear evidence and are argued well.	***(15 marks)***

	Mark scheme **Level 1 (1-6 marks – mid = 4)** A basic answer. The answer will probably consist largely of information lifted from the AIB with little development of the candidate's own ideas or understanding. Some simple data might be provided from the candidate's research but this is not well used either. The answer may well be unbalanced with few sources of alternative energy discussed or with scale not well developed. At the top of the level the answer is more balanced, but ideas lack clarity and depth of understanding. **Level 2 (7-12 marks – mid 10)** A clear answer. Data from a variety of sources will often be presented and used to develop arguments and ideas. At least two energy sources are discussed (note that it is acceptable to give mini-hydro schemes and big dam HEP schemes as 2 separate sources). The answer might consider short-term and long-term issues in a simple but straightforward way. Local and national scale are both considered. At the bottom of the level the answer is not well developed and lacks clarity and/or detail. As clarity and detail increase, the answer moves towards the top of the level. **Level 3 (13-15 marks – mid = 14)** A detailed answer which considers a range of sources and the benefits that will come from their development. The answer deals with scale clearly and probably takes time-scales into account too. The answer is synoptic, shows a clear sense of place. Awareness of the variations between places within Nepal is a good indicator of Level 3.	

4 **AO1 – 2** **AO2 – 5** **AO3 – 8**	**Notes for answers** Candidates have complete scope to be creative in suggesting their rules. They might be based on the Country Code or the Climbers' Code, familiar in a UK context; they might be based on principles of sustainable tourism; or they might be one-off suggestions developed by candidates on the spur of the moment. However, their justifications must show geographical understanding and show how actions by tourists can be linked to environmental conservation.....or not. There are a number of suggestions in the AIB, some of which are in place already. Allow L1 credit for describing these or L2 credit for developing them with candidates own thoughts. Other suggestions could include: • never pick or dig up plants or wild flowers • always take your litter back to base to be disposed of correctly • respect the traditions of local people • never damage foot- or hand-holds that might be needed by other climbers • beware of avalanches and be prepared to warn other climbers too • do not stray from recognised footpaths • reduce your use of water/ food/ energy supplies so that you do not deprive your host community • never try to haggle about the union-recommended wages for guides and sherpas and so on. The authorities might: • increase monitoring of the area to fully understand the threats to the area • limit the number of visitors allowed into the area • impose taxes on visitors to ensure the they tidy up and do not damage the area • police and enforce such taxes, perhaps empowering members of local communities • invest in measures to prevent erosion of and damage to the most visited sites • open up access to other alternative sites • educate local people in conservation methods • educate visitors in aspects of environmental conservation ….. and so on. Marks should be awarded for showing geographical and environmental understanding of **this area**, its people and its physical environment in the justifications. Comparison with case studies of alternative areas which **could** be applied here are also valid.	***(15 marks)***

	Mark scheme **Level 1 (1-6 marks – mid = 4)** A basic answer in which, however sensible the suggestions, there is little useful geographical content. The answer depends very heavily on the AIB with little development of candidate's own ideas. Suggestions may be illogical or tautological. If at least two sensible suggestions are made with reasonable detail for both, the answer can reach the top of the level. **Level 2 (7-12 marks – mid = 10)** Some clear, sensible suggestions are made which show some range in the type of problem they are designed to combat. AIB forms the basis of suggestions but they are developed clearly. There is some attempt to balance the suggestions for visitors and the authorities. Answers cannot get beyond 10 marks without clear reference to **both** guidelines and management. At least two clear and logical suggestions are made tackling obvious geographical issues in a clear, sensible geographical way. As the breadth of the answer grows, whilst maintaining clear geographical argument, the answer moves through the level. **Level 3 (13-15 marks – mid = 14)** **Either** a broad range of sensible suggestions for the amelioration of real problems is made, or ve+ry good critical analysis **or** a smaller range of schemes. Ideas go beyond those in the AIB, showing originality and depth of thought. Most of the suggestions are clear and detailed. Clear and sensible suggestions are made for both visitors and the authorities. The answer is synoptic and shows real geographical understanding and sense of place(s).	