

**GCE AS**

**Geography**

**January 2010**

**Mark Schemes**

Issued: April 2010



MARK SCHEMES (2010)

Foreword

*Introduction*

Mark Schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

*The Purpose of Mark Schemes*

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of 16- and 18-year-old students in schools and colleges. The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes therefore are regarded as a part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

The Council hopes that the mark schemes will be viewed and used in a constructive way as a further support to the teaching and learning processes.



## CONTENTS

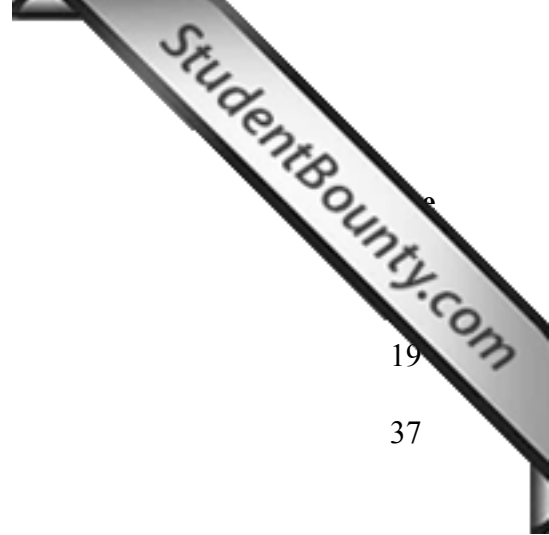
A2 1: Module 4

A2 2: Module 5

A2 3: Module 6

19

37







*Rewarding Learning*

**ADVANCED**  
**General Certificate of Education**  
**January 2010**

---

## **Geography**

**Assessment Unit A2 1**

*assessing*

**Module 4: Physical Processes and Human Interactions**

**[A2G11]**

**FRIDAY 22 JANUARY, AFTERNOON**

---

# **MARK SCHEME**

## Introductory Remarks

Note that the assessment objectives (AOs) for this specification are more extensive than those for the previous syllabus. There are now four AOs, and the style of questions and the requirements of the mark scheme have had to be modified somewhat to take account of them, particularly AO2 and AO3 with their need for “critical understanding”. It is worth reproducing the AOs here:

- AO1 Show knowledge of the specified content;
- AO2 Show critical understanding of the specified content;
- AO3 Apply knowledge and critical understanding to unfamiliar contexts;
- AO4 Select and use a variety of skills and techniques, including communicative skills, appropriate to geographical studies.

## General Instructions for Markers

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all markers are following exactly the same instructions and making the same judgements so far as this is possible. Markers must apply the mark scheme in a consistent manner and to the standard agreed at the standardising meeting.

It is important to recognise that in some cases there may be other correct responses that are equally acceptable to those included in this mark scheme. There may be instances where certain judgements have to be left to the experience of the examiner, for example, where there is no absolute, correct answer.

Markers are advised that there is no correlation between length and quality of response. Candidates may provide a very concise answer that fully addresses the requirements of the question and is therefore worthy of full or almost full marks. Alternatively, a candidate may provide a very long answer which also addresses the requirements of the question and is equally worthy of full or almost full marks. It is important, therefore, not to be influenced by the length of the candidate’s response but rather by the extent to which the requirements of the mark scheme have been met.

Some candidates may present answers in writing that are difficult to read. Markers should take the time to establish what points are being expressed before deciding on a mark allocation. However, candidates should present answers which are legible and markers should not spend a disproportionate amount of time trying to decipher writing that is illegible.

## Levels of Response

For questions with an allocation of six or more marks three levels of response will be provided to help guide the marking process. General descriptions of the criteria governing levels of response mark schemes are set out on the next page. When deciding about the level of a response, a “best fit” approach should be taken. It will not be necessary for a response to meet the requirements of all the criteria within any given level for that level to be awarded. For example, a Level 3 response does not require all of the possible knowledge and understanding which might be realistically expected from an AS or AL candidate to be present in the answer.

Having decided what the level is, it is then important that a mark from within the range for that level, which accurately reflects the value of the candidate’s answer, is awarded.



## General Descriptions for Marking Criteria

| <b>Knowledge and Understanding</b>   | <b>Skills</b>  | <b>Quality of Written Communication</b>   |   |
|--|--|---|---|
| <p>The candidate will show a wide-ranging and accurate knowledge and a clear understanding of the concepts/ideas relevant to the question. All or most of the knowledge and understanding that can be expected is given.</p> | <p>The candidate will display a high level of ability through insightful analysis and interpretation of the resource material with little or no gaps, errors or misapprehensions. All that is significant is extracted from the resource material.</p> | <p>The candidate will express complex subject matter using an appropriate form and style of writing. Material included in the answers will be relevant and clearly organised. It will involve the use of specialist vocabulary and be written legibly and with few, if any, errors in spelling, grammar and punctuation.</p>  | 3 |
| <p>The candidate will display an adequate to good knowledge and understanding of many of the relevant concepts/ideas. Much of the body of knowledge that can be reasonably expected is given.</p>                            | <p>The candidate will display evidence of the ability to analyse and interpret the resource material but gaps, errors and/or misapprehensions may be in evidence.</p>  | <p>The candidate will express ideas using an appropriate form and style of writing. Material included will be relevant and organised but arguments may stray from the main point. Some specialist terms will be used and there may be occasional errors in spelling, grammar and punctuation. Legibility is satisfactory.</p> | 2 |
| <p>The candidate will display some accurate knowledge and understanding but alongside errors and significant gaps. The relevance of the information to the question may be tenuous.</p>                                      | <p>The candidate will be able to show only limited ability to analyse and interpret the resource material and gaps, errors and/or misapprehensions will be clearly evidenced.</p>  | <p>The candidate will have a form and style of writing which is not fluent. Only relatively simple ideas can be dealt with competently. Material included may have dubious relevance. There will be noticeable errors in spelling, grammar and punctuation. Writing may be illegible in places.</p>                           | 1 |

**Unit A: Managing Fluvial and Coastal Environments**

- 1 (a) (i) Candidates should be able to describe a variety of ways in which human demands are placed upon the area shown on the OS map extract. A non-exhaustive list may include: demands placed resulting from domestic/residential development; agricultural demands; industrial demands; demands related to leisure activities. A variety is required, along with evidence drawn from the resources, such as Grid References.

**Level 3 ([7]-[9])**

Appropriate descriptions are given and strongly supported by evidence from the map. The answer provides a range of suggestions with some detail.

**Level 2 ([4]-[6])**

Although appropriate suggestions are given and supported by evidence from the map, depth/detail or range of response may be restricted.

**Level 1 ([1]-[3])**

Suggestions offered are generalised or inappropriate, there is no reference to the resources or resource reference is inappropriate. [9]

- (ii) Appropriate discussion of ideas should be given. A range of comment is acceptable, and comments should be dependent upon the demand selected. A maximum of [4] is available if more than one benefit is given and developed in the context of the resources.

If only one benefit is given, or the discussion is cursory or lacking in locational relevance, a maximum of [2] should be awarded. [4]

- (iii) Appropriate discussion of ideas should be given. A range of comment is acceptable, and comments should be dependent upon the demand selected. A maximum of [4] is available if a detailed discussion is given and developed in the context of the resources.

If the discussion is cursory or lacking in locational relevance, a maximum of [2] should be awarded. [4]

- (b) This is a case study question and, therefore, reference must be made to a named small scale coastal sand dune case study. The question is synoptic and, as such, requires reference to human and physical interplay of the study.

- (i) Candidates are expected to provide specific details as to the way in which the natural balance of their selected sand dune ecosystem may be upset by human intervention.

**Level 3 ([5]-[6])**

The answer refers to a relevant case study example of an appropriate scale. A high level of detail regarding the way in which the natural balance of the selected sand dune system is upset by human intervention. Thus, synopticity is clearly addressed.

**Level 2 ([3]-[4])**

Although the answer refers to a relevant case study example of an appropriate scale, the case study detail may be restricted in quantity or in relevance to the question focus and/or terminology may be imprecise. Synopticity is addressed.

**Level 1 ([1]-[2])**

The answer may omit case study detail, or makes reference to a case study of an inappropriate scale or nature. Limited depth and detail may be presented, or key elements of the question neglected i.e. negative human intervention upon the ecosystem. Synopticity may be neglected. [6]

- (ii) The candidate is asked both to describe and to evaluate the remedial strategies used to reduce the impact of human pressure within their given case study. Each strategy may be evaluated in a discreet fashion, or a generic evaluation may be offered; both are acceptable. Synopticity should be addressed.

**Level 3 ([9]-[12])**

The answer refers to a relevant case study example of an appropriate scale. A number of appropriate remedial strategies are both described and evaluated. Appropriate details are given. Synopticity is fully addressed.

**Level 2 ([5]-[8])**

The answer refers to a relevant case study example of an appropriate scale. Although a number of appropriate remedial strategies are both described and evaluated, their range may be restricted or the answer may be unbalanced. Case study detail may be restricted and/or terminology imprecise. Synopticity is addressed.

**Level 1 ([1]-[4])**

The answer may refer to a case study of an inappropriate scale or nature. The strategies presented may be of very restricted range, or inappropriate or lacking in detail, or one or both of the key elements of the question may be neglected. Synopticity may be restricted. [12]

- 2 (a) Candidates are required to make distinction between hard and soft coastal protection engineering strategies and to provide locational examples. In essence, hard engineering strategies incorporate built structures which work against natural processes whilst soft engineering strategies aim to work with natural processes.

**Level 3 ([7]-[8])**

An appropriate distinction is drawn with clear mention of both hard and soft engineering strategies. Appropriate locational examples for both hard and soft engineering strategies are given. Depth/details are present.

**Level 2 ([4]-[6])**

A distinction is drawn, although it may be lacking in clarity/precision. Both hard and soft engineering strategies are mentioned, although, perhaps, in an unbalanced fashion. Appropriate locational examples for both hard and soft engineering strategies are given. Depth/details may be restricted.

**Level 1 ([1]-[3])**

The distinction between hard and soft engineering strategies is not drawn. Locational examples for either hard or soft engineering strategies, or both, are omitted. Depth/details are very restricted; the answer is cursory only. There may be poor use of terminology. [8]

- (b) The candidate should present an annotated diagram or diagrams to support an explanation of the way in which the selected landform has been formed. Both diagrammatic material and written description are required. The cliff line and associated wave cut platform have been formed by erosive processes; the beach and dune system have been formed by depositional processes.

**Level 3 ([7]-[9])**

An accurate and well presented diagram or diagrams is presented along with a clear description of the relevant coastal processes. Depth/details are present.

**Level 2 ([4]-[6])**

Either the diagram/s or explanation of the creative processes is incomplete in a significant way (such as restricted depth/detail, poor quality of construction).

**Level 1 ([1]-[3])**

The response may lack any relevant diagram and/or the explanation may be very restricted in depth, quality or relevance. [9]

(c) This is a case study question and, therefore, reference must be made to a named regional scale study of river basin management. The question is synoptic and, as such, requires reference to human and physical interplay of the study; both the physical and the human impacts of the river basin management scheme should be made explicit and supported with relevant detail.

**(i) Level 3 ([5]-[6])**

The candidate provides a sound and detailed description of the management strategies employed in an appropriate regional scale example of river basin management. Synopticity is fully addressed.

**Level 2 ([3]-[4])**

The candidate provides some description of the management strategies employed in an appropriate regional scale example of river basin management. Synopticity is addressed.

**Level 1 ([1]-[2])**

The answer is underdeveloped in terms of description. Terminology may be vague. There may be no evidence of an attempt to address synopticity. A case study of an inappropriate scale or focus may have been used.

[6]

**(ii) Level 3 ([9]-[12])**

The candidate provides a sound and detailed discussion of the issue in the context of an appropriate case study. A clear evaluation of the extent to which the benefits have compensated for the conflicts created is given (perhaps as an introduction or conclusion or, alternatively, throughout the discussion). Synopticity is fully addressed.

**Level 2 ([5]-[8])**

The candidate provides a discussion of the issue in the context of an appropriate case study. The discussion may be unbalanced or limited in terms of depth/detail or focus upon the question. Some evaluation of the extent to which the benefits have compensated for the conflicts created is given (perhaps as an introduction or conclusion or, alternatively, throughout the discussion), although it may be restricted in depth and/or quality. Synopticity is addressed.

**Level 1 ([1]-[4])**

The answer is underdeveloped in terms of discussion. Terminology may be vague. Any evaluation of the extent to which the benefits have compensated for the conflicts created may be restricted. There may be no evidence of an attempt to address synopticity. A case study of an inappropriate scale or focus may have been used.

[12]

35

**Unit B: The Nature and Vulnerability of Tropical Ecosystems**

- 3 (a) The question requires the selection of any two of the four options. For each environmental impact selected the links from the process of deforestation to the impact should be clarified. For all four impacts more than one set of relevant links is shown in the diagram and these should be fully described to attain full marks.  $2 \times 4$

**Reduced Plant Diversity**

One link involves the changes to climate, in particular temperature, the second link relates to the loss of topsoil which both reduces soil fertility and restricts seed germination due to laterite.

**Local climate change**

Changes to both the diurnal temperature, due to increases in soil albedo and the seasonal pattern of rainfall, due to reduced transpiration are noted.

**Increased risk of flooding**

Again two links are noted the increased amount of surface runoff and the addition of sediment load due to soil erosion.

**Changes to soil**

The rapid weathering of topsoil leads to both reduced soil fertility due to the loss of humus and the creation of a laterite layer as iron and aluminium oxides accumulate. [8]

- syn (b) The focus of this question is the relationship between the practice of slash and burn agriculture and nutrient cycling. The agricultural system should be accurately described and how it maintains the nutrient cycle explained. The question does not require a single location case study but reference to places where slash and burn has been practiced is required. As a synoptic question links interaction between human activity and the environment must be clearly addressed.

**Level 3 ([9]-[12])**

The answer contains a clear description of the stages of slash and burn agriculture and identifies how this maintains the nutrient cycle with the tropical forests. Reference is made to appropriate locations for the system. Synopticity is fully addressed.

**Level 2 ([5]-[8])**

While all the key elements of the question (the slash and burn system, its links to nutrient cycle and relevant location references) are addressed, the depth and detail of some aspects is restricted. Synopticity is noted.

**Level 1 ([1]-[4])**

The answer may lack reference to an appropriate location or an explanation of the links to the nutrient cycle. Synopticity may be restricted. [12]



- (c) A tropical semi-arid region has to be identified and a description of the four named aspects of that environment given. The description of the four required aspects should refer to the region identified and reference to specific plant and animal species is expected.

**Level 3 ([11]-[15])**

The response refers to a relevant regional case study. Each of the four required aspects is accurately described in the context.

**Level 2 ([6]-[10])**

The answer lacks detail of the require elements or one of the four may not be described. Reference to the regional case study may be limited perhaps linked to only one aspect.

**Level 1 ([1]-[5])**

The response may lack reference to a suitable case study. Two or more of the four aspects may be neglected or the description is cursory or inaccurate.

[15]

35

- 4 (a) (i) The question focuses on vegetation restoration and the candidates should identify each of the four data sets linked to this. In summary two columns, tree number and diversity index suggest that after ten years the plot has returned to its pre-clearance standing (exceeded it in tree number/density). On the other hand the number of tree species and their mean height is below that of the natural forest though the table shows that in both the pattern of change is towards restoration. Any reference to soil conditions is not relevant. One mark for an accurate mention of each of the four data sets. [4]

(ii) Description (2 marks)

The percentage of both organic matter and nitrogen in the soil one year after abandonment is less than half that of the uncleared forest. These figures increase slowly, but not consistently over the next nine years drawing closer to the natural figures.

Explanation (3 marks)

The process of recovery involves the recolonisation of the plot as illustrated by the vegetation data. Litter from these plants helps to provide the soil with organic material and after decomposition nitrogen. Answers should refer to the succession process as plants and related animal life invades the abandoned plot. Look for understanding of the process and an incorporation of the data from the resource table. [5]

- (b) While a soil profile diagram is not required it may legitimately be used by candidates in their response. The main characteristics of an aridisol include: shallow depth; lack of organic matter; poorly developed horizons; a lack of phosphates and/or nitrates and salt concentrations in the B-horizon (sub-soil). Explanation of these characteristics primarily involves the nature of the climate both directly and indirectly. Directly with only a short summer wet season (totalling 300-500mm of rain) it provides little water for soil formation and development processes such as weathering of parent material, rainfall nutrient input and leaching. Capillary action is likely concentrating soluble salts in the upper soil. Indirectly the lack of rain and high temperatures restricts plant growth and therefore also limits ground cover, roots systems and organic litter input.

**Level 3 ([8]-[10])**

The answer contains a clear description of an aridisol which is then explained with accuracy.

**Level 2 ([4]-[7])**

While the key elements of the question, both description and explanation are present the depth and detail given is limited. The description may be full but the explanation restricted.

**Level 1 ([1]-[3])**

The answer lacks one of the key elements, most likely an accurate explanation of the soil's characteristics. The answer is cursory with little accurate or relevant material. [10]

- syn (c) Both elements of this question are synoptic and links between human management and the physical environment should be evident.

- (i) With reference to a specific location the response should describe accurately large-scale deforestation. The causes, nature, scale and impact of the process are all relevant.

**Level 3 ([5]-[6])**

The answer describes, with accuracy the large-scale deforestation process for a named case study. A range of elements are noted such as cause, scale, and impact.

**Level 2 ([3]-[4])**

An appropriate case study is provided but the references to it may be vague or inaccurate. Alternatively, the description is limited to one aspect such as the causes or the impacts of deforestation

**Level 1 ([1]-[2])**

A cursory answer with little depth or detail perhaps lacking a relevant case study. [6]



- (ii) This answer requires a discussion in which the nature of attempts to manage forest resources sustainably would need to be described and commented on. The discussion should link the management to the physical environment in a synoptic fashion.

**Level 3 ([8]-[10])**

The answer contains a clear description of the stages of slash and burn agriculture and identifies how this maintains the nutrient cycle with the tropical forests. Reference is made to appropriate locations for the system. Synopticity is fully addressed.

**Level 2 ([4]-[7])**

While all the key elements of the question (the slash and burn system, its links to nutrient cycle and relevant location references) are addressed, the depth and detail of some aspects is restricted. Synopticity is noted.

**Level 1 ([1]-[3])**

An answer lacking any case study reference would be confined to this level as would an answer that did not focus on management that attempts to be sustainable.

[10]

35

- 5 (a) Candidates should make reference to places for illustration and describe their classification into rare and continuous hazards.

Award [2] marks for appropriate reference to places. A maximum of [3] marks is available for a well-developed and informed response which indicates that pollution hazards may be classified as rare and continuous. [5]

- (b) (i) Candidates should describe the human activities which contribute to the Greenhouse Effect. The Resource may prompt candidates to make mention of carbon dioxide, nitrogen dioxide, hydrocarbons and chlorofluorocarbons.

**Level 3 ([7]-[8])**

The candidate describes at least two human activities presented on the Resource which contribute to the Greenhouse Effect. A high level of depth and detail is presented.

**Level 2 ([4]-[6])**

Although the candidate describes at least two human activities presented on the Resource which contribute to the Greenhouse Effect, details/depth are restricted.

**Level 1 ([1]-[3])**

The candidate may describe only one human activity presented on the Resource which contributes to the Greenhouse Effect. The response may be inappropriate, or cursory.

[8]

**(ii) Level 3 ([6]-[7])**

The potential impacts upon **both** the human and physical environments of an environmental outcome, other than the Greenhouse Effect, are described. A high level of depth and detail is presented.

**Level 2 ([3]-[5])**

The potential impacts upon **both** the human and physical environments of an environmental outcome, other than the Greenhouse Effect, are described, although, perhaps, in an unbalanced way. Depth/detail may be restricted.

**Level 1 ([1]-[2])**

The potential impacts upon either the human and physical environments of an environmental outcome, other than the Greenhouse Effect, may be neglected. The response may lack validity or relevance. The discussion may be cursory, lacking in detail/depth. [7]

- (c)** This is a synoptic question and, as such, candidates should give some attention to the interplay between the human and physical environments in their response. Case study material is a fundamental requirement; specific details identifying the causes of the pollution and an evaluation of the effectiveness of the pollution management strategies are required.

**Level 3 ([11]-[15])**

The causes of the river pollution in a regional scale case study are described with depth and detail. The pollution management strategies are evaluated, either discreetly or generically, in a well developed fashion. Synopticity is fully addressed.

**Level 2 ([6]-[10])**

The causes of the river pollution in a regional scale case study are described, although ideas may not be fully developed or supported with depth and detail. The pollution management strategies are evaluated, either discreetly or generically, although in an under-developed fashion. Synopticity is addressed.

**Level 1 ([1]-[5])**

A restricted range of causes is described; depth/detail may be limited. The evaluation of management strategies may be absent, or cursory. A case study of an inappropriate scale may be employed, or case study material neglected. Synopticity may be neglected. [15]

35

- 6 (a) Candidates should provide some discussion as to the difficulties associated with arriving at a definition of pollution. Although there is no standard answer, ideas may include: differential scales; differing sources and sinks; the rare and continuous nature of pollution etc. One reason only maximum [2]. Two reasons with restricted detail maximum [4]. At least two reasons with detail required for maximum [5] marks. [5]
- (b) Candidates should outline two valid and discrete reasons ( $2 \times [3]$ ) to explain why waste disposal is an increasing issue for MEDC countries. A non-exhaustive list would include: the effluence of affluence; financial implications; challenge of recycling, reuse and reduction. A cursory mention of a valid reason should be awarded [1] mark only; maximum [3] should be awarded to valid reasons clearly outlined. [6]
- (c) Candidates should discuss how each of the three policies may contribute to a sustainable solution for waste management.

**Level 3 ([7]-[9])**

Each of the three key policies is fully discussed in the context of sustainable waste management. A high level of details from the resource is employed in the response in order to address the demands of the question.

**Level 2 ([4]-[6])**

Although each of the three key policies is discussed in the context of sustainable waste management, the response may be unbalanced. Details from the resource are employed in the response, perhaps without manipulation.

**Level 1 ([1]-[3])**

Not all of the three key policies may be addressed. The context of sustainable waste management may be neglected. Either details from the resource may be employed verbatim in the response, or the level of resource detail employed may be restricted. [9]

- (d) As a synoptic question, the interplay of human and physical environments should be addressed in a context relevant to the question.

**Level 3 ([11]-[15])**

The candidate outlines fully the potential benefits of nuclear resource development in the context of a relevant case study of an appropriate scale. A sound description as to how the impact of radiation pollution can limit this potential is given. A high level of relevant detail is present throughout. Synopticity is fully addressed.

**Level 2 ([6]-[10])**

The candidate outlines some potential benefits of nuclear resource development in the context of a relevant case study of an appropriate scale. A description as to how the impact of radiation pollution can limit this potential is given, although insight/depth/details may be restricted. Synopticity is addressed.

**Level 1 ([1]-[5])**

The candidate may not address both elements of the question, the response may be lacking in relevant detail, or the candidate may employ a case study case study of an inappropriate scale. Synopticity may be neglected. [15]

35

**Unit D: Natural Hazards and Human Activity**

7 (a) (i) A destructive or convergent margin. [1]

(ii) A diagram is required, and the likely style of diagram would be a cross-section view of a subduction zone at a destructive plate margin. As the diagram is only an aid to explanation it may vary from a simple outline to a detailed annotated illustration. In either case it should represent the environment shown on the map with a deep ocean trench with parallel islands with volcanoes. The explanation concerns the subduction and destruction of the ocean plate from the south along the Sunda Trench. The deep melting of this plate provides magma for the volcanic activity along the Indonesian islands including Java.

**Level 3 ([8]-[10])**

The answer includes an accurate and relevant diagram which is used to illustrate a sound explanation of the processes involved in creating the tectonic features noted.

**Level 2 ([4]-[7])**

While a diagram is provided it, or the accompanying explanation lacks depth and detail of the processes involved. Terminology may be restricted.

**Level 1 ([1]-[3])**

An explanation without a diagram is confined to this level. Alternatively, a poor diagram with an explanation lacking detail or appropriate terminology would be. [10]

(b) A description, and not merely a listing, of both **economic** hazards and benefits are required and a reasonable balance in coverage of the two is desirable. Benefits or hazards that are solely social or environmental are not relevant and should be regarded as irrelevant. General reference should be made to places for most of the hazards and benefits described.

**Level 3 ([7]-[9])**

The answer focuses on economic benefits and hazards with a balanced description of both. Clear and relevant reference to places is made.

**Level 2 ([4]-[6])**

Both economic benefits and hazards are described with some locational reference but the depth and range of description is restricted.

**Level 1 ([1]-[3])**

An answer that omits one of the key aspects of the question: benefits, hazards or reference to places. Alternatively a poorly focussed answer that lacks a range or depth of volcanic benefits and hazards. [9]

**syn (c)** One case study is required from **either** a MEDC or a LEDC. The answer should discuss management of both primary and secondary impacts in the context of stage of development. Better responses will include discussion on the preparation for earthquakes as well as both the immediate and long-term responses to earthquake activity.

**Level 3 ([11]-[15])**

The answer accurately interprets the question by discussing one relevant case study and examining how its stage of development influenced its management of both the primary and secondary impacts. Synopticity is well developed.

**Level 2 ([6]-[10])**

The answer includes a relevant study and discusses management of impacts but the range, depth or detail provided is limited. The synoptic element is underdeveloped.

**Level 1 ([1]-[5])**

The response does not address the key focus of the question, namely the role of development in management of earthquake impacts. The answer may not have a relevant case study or merely describes impacts rather than discuss management. Synopticity may not be addressed. [15]

35

**8 (a)** The resource provides all the required material for this answer and candidates are expected to use all the information available and to present it in a coherent way without resorting to straightforward plagiarism of the resource. The economic and social problems of heavy rainfall are noted: including the death of people and livestock; the loss of crops for the subsistence population; the migration of rural people to find work in cities; and the increase of food prices. The same rains were good news for villagers in areas of irrigated farming as they ensured adequate irrigation water for the season. It is also noted that the monsoon variability can cause too little water for agriculture equally destructive to people's livelihoods and the nation's economy.

**Level 3 ([7]-[9])**

The answer makes good use of the resource to focus on how the variability of the monsoon impacts the economy and social life of the rural community. The candidate uses their own words to describe these impacts.

**Level 2 ([4]-[6])**

The answer makes sound use of some of the resource but either it overlooks material or presents it in an undigested form without showing their understanding of the impacts. The variability or positive impacts may not be developed.

**Level 1 ([1]-[3])**

Very limited use is made of the resource or alternatively the response simply copies material, relevant or otherwise from the text. [9]

- (b) The diagram and description may be general in nature or, more likely, tied to a location. Any diagram plan view or cross-section may be employed. The key is that the diagram/s and accompanying text should describe summer monsoon airflows and weather. The seasonal reversal of winds is not the focus here it is rather the on-shore wet winds and the convectional uplift into the upper atmosphere of the summer season.

**Level 3 ([8]-[10])**

A clear and relevant diagram with an accurate account of the summer monsoon airflows and associated weather is provided.

**Level 2 ([4]-[7])**

A relevant diagram is provided but it and/or the written description is limited in accuracy, depth or detail. A lack of reference to summer monsoon weather conditions may be a limiting factor in some responses.

**Level 1 ([1]-[3])**

An answer, of any quality, that lacks a relevant diagram will be confined to this level. An answer with an inaccurate diagram and with a poor description, would be similarly limited. [10]

- syn (c) (i) Either a mid-latitude storm (depression) or drought (blocking anticyclone) can be expected. In both elements of the question specific case study detail is expected.

**Level 3 ([5]-[6])**

The specific atmospheric conditions appropriate to the selected event are given. That is the description is not of a depression or anticyclone but of that particular to the event.

**Level 2 ([3]-[4])**

Some relevant case study causes are provided but the depth and detail of these is limited.

**Level 1 ([1]-[2])**

Little if any case study detail is provided and perhaps impacts rather than cause are the focus. [6]

- (ii) The command word is discuss and therefore the answer should go beyond mere description of the human response to the event. Case study detail that is both accurate and relevant should be provided

**Level 3 ([6]-[10])**

A range of human responses, possibly short and long-term are noted with detail relate to the specific study. The synoptic element is well developed.

**Level 2 ([4]-[7])**

The answer contains relevant case study detail but may be limited in its depth or range. Alternatively, the discussion may focus on impacts with responses only included in the general discussion. The synoptic element is developed.

**Level 1 ([1]-[3])**

The response does not discuss the responses and/or the case study detail is restricted in depth or detail. Synopticity is not developed. [10]

35





*Rewarding Learning*

**ADVANCED**  
**General Certificate of Education**  
**January 2010**

---

## **Geography**

**Assessment Unit A2 2**

*assessing*

**Module 5: Processes and Issues in  
Human Geography**

**[A2G21]**

**TUESDAY 26 JANUARY, MORNING**

---

**MARK  
SCHEME**

- 1 (a) (i) Natural population change is that which results from the relationship between births and deaths [1] over time [1]. Migration is not taken into account [1]. Any two mentioned see the answer get full marks. [2]
- (ii) [1] × 3 for dealing with each of the curves.  
[1] for using figures. [4]
- (b) (i) A goes in stage 2 [1]  
B goes in stage 3 [1]  
C is the population growth curve [1]  
Labels on both axes [1]  
Stages identified correctly [1]  
Birth rate and death rate curves correctly identified and acceptable shapes [1] [6]
- (ii) The key to the answer is in the last couple of lines, improvements in agricultural, medical and public health technology. This expectation of humankind's innate inventiveness to tackle problems is 'Boserupian'.

**Level 3 ([7]-[8])**

The candidate expresses knowledge about Boserup's ideas and is able to see where they are expressed in the passage and explains how they would operate to lead to population sustainability. The language is appropriate.

**Level 2 ([4]-[6])**

The candidate can recognise where Boserup's solutions are shown but maybe does not go into great depth about how these 'support the ideas ... proposed by Ester Boserup'.

**Level 1 ([1]-[3])**

The candidate struggles to complete the task, perhaps not knowing what Boserup said or being unable to find her ideas in the passage. Language and terminology may be inadequate. [8]

- (c) Three sub-optimal possibilities arise here.
1. The question is on the negative impacts; thus any ‘positive’ material is to be ignored unless used to add context. Answers all on positive impacts confine to Level 1.
  2. They have to use both their case studies of either fertility or migration policies. There does not have to be precise balance, but a grossly unbalanced answer would not reach Level 3, whilst one that gives only one case study will be confined to Level 1.
  3. The question is about society. Accept a broad definition of this, certainly allow cultural matters, but beware that there is not an emphasis on economy. If that is what the answer is about, confine to Level 1.

**Level 3 ([11]-[15])**

There is reasonable balance between the amount of attention placed on both studies. The candidate displays detailed knowledge of the policies and their social impacts—the little emperors in China would be one issue from the fertility policy for example—and answers in a mature style using appropriate terminology.

**Level 2 ([6]-[10])**

Two case studies are used, if not with precise balance. The focus is on social issues but there may be issues about the depth and detail of the response.

**Level 1 ([1]-[5])**

The variety of sub-optimal routes to Level 1 were given above. Full answers at this level will have material of merit, but will lack command of the topic and, perhaps also of the language and terminology needed. [15]

35

- 2 (a) (i) The question restricts them to the use of Resource 2A, so no specific reward for other material. If Resource 2A is not used, Level 1.

**Level 3 ([5]-[6])**

Resource 2A is used fully, all of the different headings are used, but not every one of the factors need be mentioned. The answer is couched in a discursive way; it does not just copy out the Resource although figures are used on occasion.

**Level 2 ([3]-[4])**

The answer is reasonably full, but the discussion may lack some coherence. Language use is acceptable

**Level 1 ([1]-[2])**

Short answers making insufficient use of the Resource will be here. There may well be problems with language and terminology. [6]

- (ii) Here is where their own material is brought up. They have studied fertility policies in relation to economic, social cultural and moral considerations. They also have case study material, but that is not needed here. If it appears, that is fine, it will presumably add depth, but there is no requirement for it and full marks can be gained without mention of a place other than Italy.
- If Resource 2B is not used, Level 1.
  - If they have not brought in anything else and just describe Resource 2B, Level 1.
  - If there is no 'explanation'; maximum Level 2.

**Level 3 ([7]-[8])**

The answer has depth; it explains the variation. Reasons are suggested, backed up by use of outside material. Language and terminology are appropriate.

**Level 2 ([4]-[6])**

There is some use of Resource 2B together with outside material, but the explanation may lack depth or coherence.

**Level 1 ([1]-[3])**

Sub-optimal possibilities were detailed shown above. Full answers have some merit but lack adequate understanding. Language use may be weak. [8]

- (b)  $[3] \times 2$ , for push factors and pull factors. Reserve [1] in both cases for mention of place. If they answer discursively and you cannot mark in this way, mark in levels out of [6] (Level 3 ([5]-[6]); Level 2 ([3]-[4]) Level 1 ([1]-[2])). [6]

(c) This is from Box 3. It is a complicated question in that they have four things to do: population size and also its distribution for both their out-migration area and their in-migration area. This is not  $[3.75] \times 4$ , of course, and do not expect equal balance, but for Level 3 an answer must at least have mentioned all aspects.

- If only one case study is used, the answer can get Level 2 maximum.
- No case studies, Level 1.
- A focus on causes etc, anything other than impact, Level 1.

**Level 3 ([11]-[15])**

The answer is full in that there is coverage of all four aspects of the question. There is proper case study detail and the candidate displays command of both the material and the language and terminology necessary for its analysis.

**Level 2 ([6]-[10])**

Excellent answers with one case study can be here as can those which do not deal at all with either size or distribution. Full answers may lack depth, not displaying sufficiently detailed knowledge of their case studies, for example.

**Level 1 ([1]-[5])**

Sub-optimal possibilities were listed above. Full answers have something to reward but will be wanting in terms of detail and proper understanding.

Language use may be poor.

[15]

35

## Unit B: Issues in Ethnic Diversity

- 3 (a) (i) Integration refers to a process whereby ethnic minorities engage with their adopted country's traditions and values. They may maintain aspects of their home country's traditions but they will be regarded as British citizens. The UK citizenship tests were designed to promote integration of ethnic minorities into British society by making the applicant learn about the workings of the British state. The would be citizen will acquire knowledge of British traditions and values as well as an understanding of the legal system, entitlement to vote etc. The formal citizenship ceremony is regarded as an acceptance on the part of the British government that the immigrant has shown a willingness to integrate into British society. The immigrant is also expected to have some use of English and this will break down barriers to communication that exist where immigrants do not speak English.

### Level 3 ([5]-[6])

A thorough answer, which makes good use of the Resource and demonstrates an understanding of integration would be at this level. The candidate demonstrates sound understanding and writes in good English.

### Level 2 ([3]-[4])

An answer at this level will still have good material, but the depth and detail will be less than the previous level. There may be inadequate use of the Resource or the concept of integration is not fully explained. English is of good quality.

### Level 1 ([1]-[2])

An answer at this level will have serious weaknesses in terms of detail, depth and accuracy. There may also be errors in English. [6]

- (ii) The sample questions are from a website offering citizenship applicants an opportunity to test their knowledge. The questions shown deal with a number of topics ranging from the distribution of ethnic minorities, the legal system and regional dialects. The candidates have to decide if these questions are fit for purpose in line with the information given in Resource 3A. The candidates are free to adopt any stance on this but they must justify their opinion. They may decide some are better than others but as always it is their ability to justify their opinion that is being marked.

We do not need long answer for 4 marks [4]

- (b) The specification lists segregation, pluralism, violence and discrimination as processes maintaining ethnic diversity in urban areas. They have to select any two of these and explain how each of their chosen processes can maintain ethnic diversity. Most will do this as 2 stand alone answers and the marks should be awarded as follows. Award [1] for a correctly identified process and award out of [4] for the explanation.

- **Segregation** – where ethnic groups live apart either on a voluntary or forced basis. As there is no mixing each group remains separate with its own schools, political parties etc.
- **Pluralism** – each ethnic group has its own political party etc. Groups

often vote and make decisions based on party lines which means there is little cohesion in the region. There are limited opportunities for ethnic mixing

- **Discrimination** – where one ethnic group controls access to the country's resources and they are allocated on the basis of privilege rather than merit. Such a situation brings about disharmony.

(2 × [1]) + (2 × [4]) [10]

- (c) This is case study material of a **LEDC**, if someone uses **MEDC**, award level 2 maximum. They have to explain the underlying causes of the conflict and discuss the outcomes and responses to the conflict. Do not reserve equal marks for each of the three parts of the question but if one part is omitted completely deduct **5 marks**.

**Level 3 ([11]-[15])**

There is a correct choice of case study. There is good understanding shown with depth and detail in all aspects. The answer is well written.

**Level 2 ([6]-[10])**

The case study is still correctly chosen but there is less detail and depth throughout or one aspect is only dealt with in a superficial manner. English is still good.

**Level 1 ([1]-[5])**

This answer is lacking in detail and depth on all aspects or there may be incorrect information. Use of English may be flawed. [15]

35

- 4 (a) (i) The two primary factors defining ethnicity in Chad are **religion and race**. In the north of Chad there are people of Arab race and Muslim religion, while in the south there are black Africans who are Christian. These two groups are visibly different through their skin colour and their respective religions have outward displays such as dress code for Muslims. These differences have added to the conflict in the region because each group had a clearly defined regional distribution with Christians in the south and Muslims in the north. Added to this is the support given to each group by the international community with Libya supporting the Muslims in the north and France supporting the Christians in the south. Since gaining independence, Chad has had a difficult time and the various governments have failed to unite the country. There is plenty to say here from the resource and they are not required to have any additional material. Therefore all marks are awarded for their use of the resource irrespective of recent developments in the region. Make sure they discuss how ethnicity has contributed to the conflict. We do not want an abridged version of the resource. As ever they must focus on the question set. **Award 1 mark** for each of the 2 primary factors and the remaining **6 marks** for the discussion (No marks awarded for identifying secondary factors.)

### Level 3 ([7]-[8])

Two primary factors are correctly identified. There is thorough resource use showing a good understanding. There is sound discussion and the answer is focused on the question set. The answer is well written.

### Level 2 ([4]-[6])

An answer that only identifies one primary factor that defines ethnicity in Chad correctly could make it to this level if the discussion was very good. Otherwise the answer is still sound but lacks depth. It is still a well-written answer.

### Level 1 ([1]-[3])

This is an answer flawed by lack of detail/depth or accuracy. There may be mistakes in grammar. [8]

- (ii) This ethnic conflict has attracted considerable international attention for many reasons:
- France, as the former colonial ruler of Chad, has been involved for historical reasons.
  - France has also supported the southern Christians against the Libyan backed northern Muslims
  - Libya has been involved in a territorial dispute with Chad resulting in a Libyan invasion and annexation of part of northern Chad.
- (Resource 4B)**
- Conflicts in neighbouring Sudan and Central African Republic have impacted on Chad with large numbers of refugees
  - The EU have attempted to broker a peace deal in the region on humanitarian grounds and also due to pressure from France.
  - This country has rich mineral resources so there is an economic reason behind some of the international intervention.



There are only 4 marks available so we should not expect to get all of these points. They are asked for reasons, therefore more than one is required. Full marks could be awarded for two reasons explained well. [4]

- (b) They have to discuss how these processes have resulted in increased ethnic diversity. **2 × 4 marks**. Look for a definition of each process **and** how it brings about ethnic diversity. No need for examples but many may use them. However, a good answer without examples could theoretically still get full marks.

**Colonisation:** where one country takes control of another. The colonial power will usually establish and run an administrative centre in the colony. They may also pay little attention to tribal territories as in the carving up of Africa amongst European nations etc.

**Migration:** the movement of people across a National boundary will result in ethnic diversity, particularly where there is clustering of the migrants in specific parts of the city/country. Many will note the increased ethnic diversity in the UK from the numbers of economic migrants from East Europe as a result of the expansion of the EU.

(2 × [4]) [8]

- (c) **Federalism:** This is a political accommodation where ethnic groups have clearly defined distributions. A tiered system of government allows the ethnic group to have some political control and make decisions while still being part of the overall national Government eg Canada or Nigeria. Make sure their examples of federalism are dealing with ethnic diversity. The USA is a federation but as the states are not defined by ethnicity candidates should not use this as an example here. Such answers should be awarded as if there was no example given.

**Separation** In plural societies ethnic groups may be forcibly separated as was the case in the apartheid system in South Africa or they may be physically separated by walls etc. as in Israel and the West Bank. They may also be separated for economic reasons where one group has greater financial assets and can afford or choose where to live, whereas the other groups with less money can only live in the poorer areas. Ethnic groups may also separate for defence or to be with people of similar background to themselves. Finally, separation can also take the form of partition as in the break up of the former Yugoslavia.

**Conflict:** It is a sad reality that ethnic contact has often resulted in conflict. The conflict can have many causes from discrimination in jobs or in the allocation of resources to human rights violations and genocide. The specification also includes territorial disputes, historical animosities and unequal distribution of resources and political power. They should have plenty to write on this topic but make sure they use examples.

(3 × [5]) [15]

35

Look for a clear understanding of each outcome and some examples need to be included. If no examples are used award out of [3].

5 (a) (i) Any of the issues below would be worth [1], to a maximum of [4]:

- scrutinised by the public;
- public health officials involved;
- aboriginal communities involved;
- community engagement techniques;
- public reporting;
- all 3 levels of government involved;
- community benefits from the remediated site.

[4]

(ii) ‘This and other brown field development sites’: if there is no ‘other’, Level 1; if there is no ‘this’, i.e. no use of Resource 5A, Level 2 maximum. They are not obliged to give case-study details, but an answer which does not may struggle for depth. No focus on the last phrase, on sustainable development, maximum Level 2.

**Level 3 ([8]-[10])**

Answers at this level make adequate use of Resource 5A and bring in useful, valid material from their own experiences. The focus is on sustainable development and the answer is couched in proper language and terminology.

**Level 2 ([4]-[7])**

An excellent answer without overt use of Resource 5A may be here; otherwise the answers have considerable merit but may lack depth.

**Level 1 ([1]-[3])**

A sub-optimal possibility was identified above. Otherwise answers, though with something to reward, are lacking in detail or understanding and may have problems with language. [10]

(b) If they describe each in turn you can mark  $[2] \times 3$ . Most will presumably put them together. Do not require each of the three resources to be mentioned individually. For high marks, certainly for Level 3, they should be aware that whilst public transport is good for sustainability (more efficient, less pollution per passenger km, less congestion etc—especially regarding the underground railway) there are still negatives. They are expensive to construct; very rigid in that they are tied to fixed lines which channels development into certain directions and, especially in the case of that awful monorail are an eyesore: look at that pleasant classical facade with a steel girder at first floor level.

**Level 3 ([5]-[6])**

A full answer that deals with the Resources sufficiently and has a balance regarding sustainability.

**Level 2 ([3]-[4])**

There may not be much of a balance but if the focus is entirely on the positive side, there has to be good detail and proper resource use.

**Level 1 ([1]-[2])**

Whilst there is something of merit the answer is shallow and fails to demonstrate complete understanding. It may be descriptive, without getting properly into sustainability. [6]

- (c) Two urban case studies. If they deal only with one then it will have to be excellent to get into Level 2, which will be its maximum. If they deal with policies and practices separately, that is to be applauded and rewarded. If these are not addressed in this way, Level 3 can still be obtained if everything else is done well. The better answers will probably be those that conflate their two case studies. If you get one just followed by the next, two stand alones, Level 3 entry is permitted but will probably not be achieved often.

**Level 3 ([11]-[15])**

Two case studies are used, both in good detail. There is a proper concentration on sustainable development and the policies/practices. Command of the material and of the proper language and terminology is seen.

**Level 2 ([6]-[10])**

Most stand alones will be here. The focus will be correct, but depth and detail may be rather light. An excellent answer which is unbalanced, even to the point of having only one study may be here.

**Level 1 ([1]-[5])**

Most of those that do not adopt the optimal approach will be in Level 1. Full answers have merit, but are flawed in approach or understanding. [15]

35

6 (a) The way the question is phrased means that there does not have to be much overt use of Resource 6A, but an answer will not get [4] or [5] without mention. The question asks about benefits. Do not give reward for the problems unless they are used in context. Levels of depth, detail and command, as always, will determine the marks. [5]

(b) ‘Use the Resource to help you’, so there has to be both resource use and their own material. The Resource is quite detailed and will take some time to interrogate, so anybody cutting corners by not using it will be confined to Level 1. No extra material, Level 2 maximum. Another important phrase is ‘attempt to address problems’, which suggests that there might be problems remaining or caused by the policies as are clear in the Resource.

**Level 3 ([8]-[10])**

The answer is full; there is good resource use and their own material. There is a realisation that strategies do not solve all the problems. Language use and terminology are appropriate.

**Level 2 ([4]-[7])**

A sub-optimal route to Level 2 was identified above. Full answers have understanding of traffic management strategies but may be wanting in terms of depth and detail.

**Level 1 ([1]-[3])**

A sub-optimal possibility was outlined. Full answers must have something to credit, but through reasons of inadequate depth or understanding will not be worthy of high reward. [10]

(c) They have to demonstrate an awareness of what is meant by ‘protected land’ [2]. The other [3] for why areas have to be designated, for conservation, heritage etc. Depth is needed for top marks. [5]

(d) This is their national case study, from Box 1. Any other case study sees the answer confined to Level 1. This is containment policies, green belts and the like, not protected land, that was dealt with in 6 (c). No focus on containment, confine to Level 1.

**Level 3 ([11]-[15])**

There is proper focus on containment policies and the case study material is both appropriate in scale and detailed in terms of its presentation. The candidate knows the material and can couch the answer in good English using appropriate terminology.

**Level 2 ([6]-[10])**

The case study is appropriate and the answer has the correct focus and some merit, but may lack the command seen of those that are awarded Level 3.

**Level 1 ([1]-[5])**

Sub-optimal routes to a Level 1 mark were seen above. Full answers worthy of a third or less of the marks available will obviously display flaws, probably in terms of length, depth or understanding. [15]

35

### Unit D: The Changing Nature of Economic Activity

- 7 (a) (i) There are a number of possibilities. The most straightforward method would be a compound bar graph for each time period subdivided for each region. Alternatively a series of bar charts (one for each time period) or a line graph for each region could be used. Pie charts or proportional circles are equally acceptable but these would require some manipulation of the data. Accept any technique that is plausible for [1]. The other [2] are for their explanation of how the technique would be used. There is no requirement to draw anything but that might help with the explanation. [3]
- (ii) Resource 7 enables them to give a description of the increasing scale of tourism and their own material will give the explanation for this increase in numbers and range of destinations. The table shows an overall increase from 25 million tourists in 1950 to 806 million in 2005. This gives an average of 6.5% increase in the time span of this table but the growth has been more rapid in terms of actual numbers in recent times. There were an extra 120 million tourists between 2000 and 2005. The pattern of growth has also changed over time. The strongest rates of growth are in Asia and the Pacific region from 0.2 million in 1950 to 155.4 million in 2005. Meanwhile the rate of growth is slowing down in America and Europe but these are still the areas with the overall largest numbers. Expect a sound description of trends with the world pattern and at least 2 regions and figures used. This is straightforward and the Resource is easily understood. Their own material will give the explanation for these trends and enable them to deal with the range of destinations aspect of the question. The scale and range of destinations for tourists have increased in recent years because people have more disposable income to spend on travelling more frequently to destinations further field. There are many technological advances in transport to facilitate this travel and competition amongst the different airlines etc keeps prices relatively low. We get longer holidays and many people have several holidays each year and holiday companies have developed a wide variety of holiday types. There are increased opportunities through the Internet etc. This is fairly straightforward. Make sure they address both aspects of range and destination.
- If there is no extra material and they only describe the trends in the Resource award from **Level 1 maximum**.
  - If either range/ destination is omitted completely in the explanation award from **Level 2 maximum**.
  - If they make no reference to the Resource confine to **Level 1**

#### Level 3 ([7]-[9])

The Resource is thoroughly examined and used to good effect in describing the trends. There is good understanding shown with depth and detail on both range and destination. The answer is well written.

#### Level 2 ([4]-[6])

This is still a good answer but there is less detail and depth throughout or one aspect is only dealt with in a superficial manner. English is still good.

**Level 1 ([1]-[3])**

This answer is lacking in detail and depth on all aspects or there may be incorrect information. Use of English may be flawed. [9]

- (b) **Product cycle:** a model which shows how a tourist region/resort changes through time. At the beginning a resort grows in popularity and expands. The resort then suffers from over development or saturation. Saturation is followed by decline and loss of popularity. This could be answered through the use of diagram and detailed annotation.

**Carrying capacity:** the level of use that a resource, site or facility can support before suffering significant deterioration. Significant deterioration is subjective and will vary in its meaning between different holiday types and areas. Look for the sense of these terms rather than textbook definitions.

(2 × [4]) [8]

- (c) This is their case study of a tourism management. The case study can be either regional or national in scale. They have to discuss the aims of the policy and then discuss the outcomes. Remember this is case study material and we should be guided by the normal requirements of a good case study answer i.e. knowledge of place and detail.

**Level 3 ([11]-[15])**

There is a correct choice of case study. There is good understanding shown with depth and detail in both aspects- aims and outcomes. The answer is well written.

**Level 2 ([6]-[10])**

The case study is still correctly chosen but there is less detail and depth throughout or one aspect is only dealt with in a superficial manner. English is still good.

**Level 1 ([1]-[5])**

This answer is lacking in detail and depth on all aspects or there may be incorrect information. Use of English may be flawed. [15]

35



- 8 (a) (i) **Deindustrialisation**: is the decline of a major manufacturing industry within a country or region e.g. iron and steel or in this case ship building and its associated knock on effects. It is usually associated with heavy and large scale industry. They are asked to give reasons why it may occur. The resource material is there to help but do not expect much resource use here. A mention of shipbuilding in Belfast is sufficient. For those who make no reference to the resource at all deduct [1]. [4]
- (ii) Resource use is needed here as well as some additional material. **Resource 8A** shows a vast area of derelict land and visual pollution with the iconic cranes in the background. The size of this site should suggest huge numbers of people unemployed and the resultant knock on effects for this region (negative effect). **Resources 8B** and **8C** show new investment and modern industries with more pleasing working environments (positive) in the same area. Most will recognize the name Titanic Quarter as a link with the past and the possibility of tourism although there is no requirement for them to know this. They should see these changes as a more positive outlook. However, these new industries require different skills so at best there will be a need for retraining of the workforce (positive) but it is more likely that the workers will come from other parts of the city and local unemployment may be unaffected by these new developments (negative). It should also be obvious that the numbers employed will be many fewer than in the shipbuilding industries (negative). There is plenty to get from the Resources. Do not expect them to refer to all four Resources individually but they need to refer to **8A or 8B and 8C**. **Resource 8D** is there for reference only but do not penalise if it is not acknowledged. Their extra material will most likely be in the form of discussion and that is perfectly acceptable. There is no absolute number of impacts required but for a top-level answer look to see a range of consequences. Better answers will look at positive and negative consequences but again this is not obligatory so the full range of marks are available for an answer that only deals with either positive (unlikely) or negative consequences (more likely). This is fairly straightforward so expect good stuff here. Award as follows:
- No Resource use – Level 1 maximum
  - No extra material used – Level 1 maximum
  - One resource missed (apart from Resource 8D) – Level 2 maximum

**Level 3 ([7]-[8])**

Both aspects of the question are adequately handled i.e. good resource use and extra material. At least three consequences are discussed in detail.

**Level 2 ([4]-[6])**

At this level, the candidate is still in control of the topic. The main problem with an answer at this level is lack of detail or inadequate Resource use.

**Level 1 ([1]-[3])**

The sub-optimal situation above is here. Other ways of achieving Level 1 are through serious lack of detail or inaccuracies. [8]



- (b) **Vertical Integration:** refers to the integration of all stages of production by one major company. Today it is largely associated with the large TNCs and will usually see some of the lesser skilled jobs being carried out in LEDCs. They may make reference to their case study of vertical integration but there is no penalty for those who answer without reference to an example.

**Globalisation** describes the way modern industry is now multi-national. Developments in transport and communications along with international trade agreements make it possible for large firms to carry out production in several different countries. Globalisation usually involves the use of cheap labour in LEDCs thereby maximising the profits of the large companies. Mark for the sense of it rather than a textbook definition.

(2 × [4]) [8]

- (c) This is their case study of a region undergoing agricultural change. The case study can be either local or regional in scale. There are three things to do here- describe the change and discuss the resultant social and environmental consequences – but do not reserve equal marks for each as the detail they will have on each will depend on their case study. However, if one aspect is missed completely, Maximum Level 2. Similarly do not expect a given number/type of changes to be discussed. The specification is quite flexible in this respect and we must accommodate this. Remember this is case study material and we should be guided by the normal requirements of a good case study answer i.e. knowledge of place and detail.

**Level 3 ([11]-[15])**

There is a correct choice of case study. There is good understanding shown with depth and detail in all aspects. The answer is well written.

**Level 2 ([6]-[10])**

The case study is still correctly chosen but there is less detail and depth throughout or one aspect is only dealt with in a superficial manner. English is still good.

**Level 1 ([1]-[5])**

This answer is lacking in detail and depth on all aspects or there may be incorrect information. Use of English may be flawed. [15]

35





*Rewarding Learning*

**General Certificate of Education**

**January 2010**

---

## **Geography**

**Assessment Unit A2 3**

*assessing*

**Module 6: Skills and Decision Making  
in Geography**

**[A2G31]**

**TUESDAY 2 FEBRUARY, AFTERNOON**

---

**MARK  
SCHEME**

## Introductory Remarks

Note that the assessment objectives (AOs) for this specification are more extensive than those for the previous syllabus. There are now four AOs, and the style of questions and the requirements of the mark scheme have had to be modified somewhat to take account of them, particularly AO2 and AO3 with their need for “critical understanding”. It is worth reproducing the AOs here:

- AO1 Show knowledge of the specified content;
- AO2 Show critical understanding of the specified content;
- AO3 Apply knowledge and critical understanding to unfamiliar contexts;
- AO4 Select and use a variety of skills and techniques, including communicative skills, appropriate to geographical studies.

## General Instructions for Markers

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all markers are following exactly the same instructions and making the same judgements so far as this is possible. Markers must apply the mark scheme in a consistent manner and to the standard agreed at the standardising meeting.

It is important to recognise that in some cases there may be other correct responses that are equally acceptable to those included in this mark scheme. There may be instances where certain judgements have to be left to the experience of the examiner, for example, where there is no absolute, correct answer.

Markers are advised that there is no correlation between length and quality of response. Candidates may provide a very concise answer that fully addresses the requirements of the question and is therefore worthy of full or almost full marks. Alternatively, a candidate may provide a very long answer which also addresses the requirements of the question and is equally worthy of full or almost full marks. It is important, therefore, not to be influenced by the length of the candidate’s response but rather by the extent to which the requirements of the mark scheme have been met.

Some candidates may present answers in writing that are difficult to read. Markers should take the time to establish what points are being expressed before deciding on a mark allocation. However, candidates should present answers which are legible and markers should not spend a disproportionate amount of time trying to decipher writing that is illegible.

## Levels of Response

For questions with an allocation of six or more marks three levels of response will be provided to help guide the marking process. General descriptions of the criteria governing levels of response mark schemes are set out on the next page. When deciding about the level of a response, a “best fit” approach should be taken. It will not be necessary for a response to meet the requirements of all the criteria within any given level for that level to be awarded. For example, a Level 3 response does not require all of the possible knowledge and understanding which might be realistically expected from an AS or AL candidate to be present in the answer.

Having decided what the level is, it is then important that a mark from within the range for that level, which accurately reflects the value of the candidate’s answer, is awarded.

| <b>Knowledge Understanding</b>   | <b>Skills</b>   | <b>Quality of Language</b>   |   |
|--|---|--|---|
| <p>The candidate will show a wide-ranging and accurate knowledge and a clear understanding of the concepts/ideas relevant to the question. All or most of the knowledge and understanding that can be expected is given.</p> | <p>The candidate will display a high level, of ability through insightful analysis and interpretation of the resource material with little or no gaps, errors or misapprehensions. All that is significant is extracted from the resource material.</p> | <p>The candidate will express complex subject matter using an appropriate form and style of writing. Material included in the answers will be relevant and clearly organised. It will involve the use of specialist vocabulary and be written legibly and with few, if any, errors in spelling, grammar and punctuation.</p> | 3 |
| <p>The candidate will display an adequate to good knowledge and understanding of many of the relevant concepts/ideas. Much of the body of knowledge that can be reasonably expected is given.</p>                            | <p>The candidate will display evidence of the ability to analyse and interpret the resource material but gaps, errors and/or misapprehensions may be in evidence.</p>   | <p>The candidate will express ideas using an appropriate form and style of writing. Material included will be relevant and organised but arguments may stray from the main point. Some specialist terms may be used and there may be occasional errors in spelling, grammar and punctuation. Legibility is satisfactory.</p> | 2 |
| <p>The candidate will display some accurate knowledge and understanding but alongside errors and significant gaps. The relevance of the information to the question may be tenuous.</p>                                      | <p>The candidate will be able to show only limited ability to analyse and interpret the resource material and gaps, errors and/or misapprehensions will be clearly evidenced.</p>   | <p>The candidate will have a form and style of writing which is not fluent. Only relatively simple ideas can be dealt with competently. Material included may have dubious relevance. There will be noticeable errors in spelling, grammar and punctuation. Writing may be illegible in places</p>                           | 1 |

## Geographical Skills

### Section A

#### Skills and Techniques

- 1 (a) (i)** Location quotient is a measure of concentration of something in a sub-area, compared with the concentration in the area as a whole [2]
- (ii)** Total employment in all regions; total in high and medium-high technology industries in UK. [1]
- (iii)** The East Midlands with a LQ of 2.06 has a higher concentration of High and Medium – high Technology industries than the UK as a whole, with more than twice as many industries as would be expected given the number of industries in the area. Northern Ireland, on the other hand has a value of 1.02 which, as close to 1, has about the same number of these industries as would be expected, given the number of industries that are in the region. With 0.71, the East of England has a very low concentration with less than three quarters of the number of these industries as might be expected.
- Look for a correct interpretation in each case and good use of figures for full marks [4]
- (b) (i)** One advantage is that it is very easy to read and compare values.
- Accept any correct advantage [1]
- (ii)** If a value to the rear of the graph is low, it would not be visible to the viewer.
- Or  
It is complicated to construct, especially without a computer
- Accept any correct disadvantage [1]
- (iii)** In County Down the lowest pesticide used is Molluscicides with about 50 hectares sprayed. The other values are much higher. Seed treatments are applied to about 400 hectares, and over 1000 hectares are sprayed with fungicides. Insecticides are applied to just a few more hectares than that but the largest area is sprayed with herbicides with over 2000 hectares treated with this.
- Look for the differences in values to be contrasted and for some correct figures to be used for full marks. Note that explanation is not required so should not be expected. Even if attempted, it cannot be credited. [3]

2 Name of sampling technique suitable for named fieldwork exercise: 1 mark

Description of how it operates: 3 marks

Explanation of how it is a suitable technique: 4 marks

If the description belongs to a different sampling technique from that stated, or inappropriate for the context chosen, this should still be worthy of credit, but should provide for a maximum of 3 of the potential 7 marks for description and explanation.

[8]

8

**Section A**

**20**

## Section B

### Decision Making Exercise

#### 3 Introduction: some guiding principles

The ideas outlined in the ‘Guidance on Content’ section are lines of thought that candidates might take in their report. They are not to be seen as the definitive answer, though it is to be expected that the points outlined below will feature, if only in part, in most answers. When allocating marks look favourably on answers which:

- (a) avoid undue verbatim quoting from Resource Booklet and adopt a consistent style,
- (b) use the full range of the resource material appropriate to the task – particularly where it is provided in non-literary format such as the OS map, printed maps and photographs,
- (c) apply knowledge and concepts that are not specifically raised in the resource material, yet are both illuminating and relevant to the task,
- (d) maximise opportunities presented by the resource material,
- (e) appreciate that “bias” might exist in resource material which expresses particular views,
- (f) avoid undue repetition of the same answer material in different sections or, if overlap is unavoidable, present it in a fresh way, and
- (g) back up points with specific detail, e.g. giving statistical information where it is provided rather than making vague statements when details are readily available.

#### Guidance on content

##### A. Introduction

(Describe briefly the proposed development and outline the potential demand for it)

The plan is for two full-size world-class championship golf courses within sand dunes on the coast of northeast Scotland at the Menie Estate, close to Aberdeen. There will also be a golf driving range, a golf academy and a practice area. Additionally a large clubhouse and five-star hotel with conference and banquet facilities are planned. The hotel will contain a spa, tennis courts and there will be other recreational facilities. Residential units on the site include 36 luxury four- and eight-bedroom golf lodges. There will also be 950 holiday homes with views out over the North Sea. In the future it is planned that more residences will be built. Within the site there will also be a maintenance facility for the golf courses and a research centre for grass. In all the site runs to 452 hectares.



The aim is to create, what the developers say will be the 'greatest golf course in the world'. It is designed to attract important golfing events such as the Ryder Cup and other major championships. This golf course will employ more than 800 jobs and this would suggest that the potential demand for the course to be built would be high.

On the other hand some protected land will be lost (the Foveran Links SSSI) and this may fuel a lack of demand for the development. The fact that Aberdeenshire councillors voted against it in 2007 would support this.

### **Level 3 ([7]–[8])**

The candidate clearly describes the proposed development and effectively discusses the local needs for such a development. Both elements are included the resource material is handled confidently and to good effect and is consistently local.

### **Level 2 ([4]–[6])**

The candidate makes fewer clear and correct points. There is little or no development of any point, but points made are valid. There may be an imbalance between the discussion of the need and the description of the project. The candidate may not examine both global and national need.

### **Level 1 ([1]–[3])**

The candidate presents little content and a lot of it is irrelevant to the need for the development or the description of it. Some of the points made may lack validity.

8

## **B. The likely impact on:**

### **(i) The local environment**

(Discuss the environmental impact of the proposed development and the counterarguments)

The sanddunes on which this golf course is planned to be built provide one of the most spectacular habitats in the whole of Scotland. In consequence, they are preserved as a Site of Special Scientific Interest (SSSI) and are claimed to be within the top five sand dune systems in the United Kingdom in terms of their environmental value. Opponents of the scheme predict that the development, if it goes ahead, will destroy one third of the Foveran Links SSSI, a wildlife site of national importance. Seven species of endangered birds including redshank, skylarks and lapwings, are threatened by this golf development. These birds depend on the rich dune ecosystem and the adjoining beach. Aberdeenshire Council is required by Scottish law to conserve biodiversity. Allowing this development to go ahead will reduce biodiversity in the council area.

While a golf course can sometimes be developed in a rural environment with some success, doing this in an SSSI will be much more difficult. In such places the biodiversity and ecological status of the environment needs to be taken into account before it can be permitted. This golf resort could

be located somewhere elsewhere in the area and these protected dunes could be preserved. However, so far the developer has refused to consider keeping his development in the local area but not developing it on the protected dunes.

Among others the Scottish Wildlife Trust have concerns that this development will have a disastrous environmental impact on this locally (and nationally) important sand dune system.

It is the moving sand which makes this site special. Resource B5 shows how these dunes will be stabilized. This will reduce most of the value of the dune habitat and reduce biodiversity in the dunes. While the developers claim that the damage can be mimimised, the chances of success are poor and the area is likely to be so badly damaged that it is unlikely that it will remain of scientific interest.

Proponents of the scheme argue, on the other hand, that there are more than 200 kilometres of beaches in this part of Scotland, so the development will only affect a small proportion of those. In any case the developer states that “the course will improve the local environment as previous courses have environmental protection, and I do not think anyone has got as many awards as we have ... I believe environmentally, when we are finished, the course will be better environmentally than before we started. It’s possible I could lose a great deal of money. It would cost a lot less money if we did not care about the environment.”

The developers concede that the SSSI in the dunes, and the areas to the south of it, are important environmentally and also that the impact on the dunes in some places will be what they term “severe adverse”. However, they argue that the shifting sands within the sanddunes will stabilise naturally by the end of the century, even without any development. Large areas of sand are colonised with vegetation, unless other things interfere with these natural processes. As a result many of the dune species associated with the present dunes would probably disappear in any case. The dunes are dynamic at present but this may be only temporary and so the range of species may decline naturally in the long term. As the leader of Aberdeen City council has pointed out, it is important to look to the long term future of the area and the developer will want to preserve the wildlife as much as everyone else.

The golf courses are designed around the particularly environmentally rich low-lying dune slacks As a result habitat loss will be minimised. While opponents of the scheme allege that dune slacks will be destroyed. In fact GIS show that only 3 of the smaller dune slacks will be destroyed. In addition, out of the 38 dune slacks in the area, only 17 will be affected in any way by the development.

Some of the habitats affected by the development will be relocated, thus reducing the impact of the development. Habitat translocation has a high success rate, although it may take up to five years to complete.

**Level 3 ([9]-[12])**

Candidate states clearly the main environmental impact and the counterarguments. **Two** or more different factors should be discussed. The account will have many of these characteristics:

- the points made will be consistently relevant and logically structured. The environment along the route will be the scale considered, not the global environment,
- the ideas will demonstrate insight and a level of sophistication,
- clear understanding of all concepts will be demonstrated,
- use will be made of most of the relevant resource material – no significant points will be omitted,
- figures, where available and appropriate, will be used to good effect, and
- ideas will be expressed clearly and effectively.

**Level 2 ([5]-[8])**

Candidate will have fewer lines of thought or discussion may be limited. However, while ideas may lack depth and/or detail, they are still adequate. There may be a heavy imbalance between the two sides of the argument. The account may show deficiencies in the following ways:

- understanding displayed but an over-reliance on verbatim quoting, even though appropriate,
- resource material used but some information not as well exploited as it could be,
- largely related to the question but some irrelevant material introduced, and
- ideas not expressed particularly logically or clearly.

**Level 1 ([1]-[4])**

- Simple understanding demonstrated but sketchily dealt with,
- verbatim use of resources, sometimes not fully appropriately,
- some use made of the resource material but many relevant resources omitted, and
- little or no structure or logic in the ordering of content.

12

**(ii) Local and national economy**

(Discuss the possible beneficial effects on the local economy and the counterarguments)

There are a number of beneficial impacts on the local economy around this part of Aberdeenshire. Aberdeen is the gateway to the North Sea oil reserves and, since the 1970s, residents of this part of Scotland have had higher incomes and increased employment as a consequence of the oil. However, there have been falls in oil industry profits in recent years. As a result, many business leaders in the area argue that the building of this valuable golf resort in this rather remote part of Scotland could be the biggest boost to the area since those oil was found in the North Sea, and will help to replace the jobs lost since oil earnings fell away.

There will also be an estimated 400% increase in the numbers of tourists attracted to this area as a result of the golf resort, bringing increased opportunities for local businesses and greatly increasing the employment

possibilities for local people. The development will help to diversify the local areas' economy by developing tourism. As there is severely limited top quality hotel accommodation locally, the development will solve that and bring advantages locally as a result.

Most of the business groups in the area support the development (The Chambers of Commerce in Scotland, the Scottish Council for Development and Industry, the Federation of Small Businesses and the Confederation of British Industry, for example). As Scotland's economy has suffered in the 'Credit Crunch' like the rest of the UK and wider afield, business owners in Scotland are even more in favour of developments such as this one. The development will bring jobs to the construction industry and, as construction costs could be more than £1 billion, this will bring major benefits to the local economy.

There will also be a lot of employment for local people after the construction is finished, thus bringing wealth into the local economy. Many of the jobs will go to local people.

On the other hand, while opponents of the scheme accept that the development will bring jobs to the area, the unemployment rate in both Aberdeen city and the surrounding area is less than 2%. In consequence the need for increased employment in the area is not proven and is less important than the need to conserve this precious environment. One local commentator, Jim Robinson, in a blog said that he had two jobs just to struggle to make a living in the area and the influx of rich Americans into the area will result in "inflated prices that will appear once businesses realise that they have a lot of money"

### Level 3 ([9]-[12])

Candidate states clearly the main beneficial effects and the counterarguments. **Two** or more different factors should be discussed. Note that there is less in the counterarguments, but look for some meat there too. The account will have many of these characteristics:

- the points made will be consistently relevant and logically structured and will not stray beyond the local economy or, if they do, the local impact will be highlighted,
- the ideas will demonstrate insight and a level of sophistication,
- clear understanding of all concepts will be demonstrated,
- use will be made of most of the relevant resource material - no significant points will be omitted,
- figures, where available and appropriate, will be used to good effect, and
- ideas will be expressed clearly and effectively.

### Level 2 ([5]-[8])

Candidate will have fewer lines of thought or discussion may be limited. However, while ideas may lack depth and/or detail, they are still adequate. There may be an even heavier imbalance between the two sides of the argument than is apparent from the resources. The account may show deficiencies in the following ways:

- understanding displayed but an over-reliance on verbatim quoting, even though appropriate,

- resource material used but some information not as well exploited as it could be,
- largely related to the question but some irrelevant material introduced, and
- ideas not expressed particularly logically or clearly.

**Level 1 ([1]-[4])**

- Simple understanding demonstrated but sketchily dealt with,
- verbatim use of resources, sometimes not fully appropriately,
- some use made of the resource material but many relevant resources omitted, and
- little or no structure or logic in the ordering of content.

12

**(ii) the social impact on local people**

(the social impact on local people and the counterarguments)

In the quiet village of Balmedie close to the development the local people object to the proposed development which they characterise as a “gated community”. It contains too many luxury houses which would threaten to change the nature of the local community. As house prices are already high in Aberdeen and the surrounding areas locals fear that property prices will rise further. Rich outsiders attracted to the area by the luxury properties, fine hotels and golf courses and so on may lead to local people not being able to afford to live in the area and having to move out. They also fear a loss of privacy and an increase of traffic on local roads.

Another fear is that public access to the beach and dunes will become limited, and this will reduce recreational opportunities for local people. Vikki, in a submission to forum stated that Balmedie is a beautiful natural stretch of beach which she has walked on for years. “It would break my heart to see it being ripped up by JCBs and [to be] told that I’m no longer allowed to walk there.”

The sheer size and scale of this development is something entirely new to this area and will be out of keeping with it. The new housing proposed will bring few benefits to local people but will create a sprawling corridor of urban growth with a negative impact on the landscape character. Current planning policy for the countryside of Scotland is that houses should not be built, except where there are specific exemptions. This proposed housing does not be exempt.

On the other hand the developers can claim that local people actually are in favour of the development. They point out that Aberdeenshire Council, for every letter in objection to the planning application proposal, received 3 letters in support of it: 105 to 327. They also point out that a petition objecting to the proposal has only 28 signatures. They accept that local opinion is divided, but argue that more people support the proposal than are against it.

**Level 3 ([5]-[6])**

Candidate states clearly the main effects and the counterarguments.

**Two** or more different factors should be discussed. The account will have



many of these characteristics:

- the points made will be consistently relevant and logically structured and will not stray beyond the local people,
- the ideas will demonstrate insight and a level of sophistication,
- clear understanding of all concepts will be demonstrated,
- use will be made of most of the relevant resource material – no significant points will be omitted,
- figures, where available and appropriate, will be used to good effect, and
- ideas will be expressed clearly and effectively.

**Level 2 ([3]-[4])**

Candidate will have fewer lines of thought or discussion may be limited. However, while ideas may lack depth and/or detail, they are still adequate. There may be a heavy imbalance between the two sides of the argument. The account may show deficiencies in the following ways:

- understanding displayed but an over-reliance on verbatim quoting, even though appropriate,
- resource material used but some information not as well exploited as it could be,
- largely related to the question but some irrelevant material introduced, and
- ideas not expressed particularly logically or clearly.

**Level 1 ([1]-[2])**

- Simple understanding demonstrated but sketchily dealt with,
- verbatim use of resources, sometimes not fully appropriately,
- some use made of the resource material but many relevant resources omitted, and
- little or no structure or logic in the ordering of content.

6

**C. Decision**

(State clearly your decision and justify it on the basis of the greater overall benefits)

The recommendation may overlap with some of the points made in B with regards to environmental, economic and social impacts of the proposed development. However, the emphasis here has to be on the *greater overall benefits* of one option over the other. In this section, candidates can weigh up the relative merits of both positions. *No mark for stating a decision alone without a justification.*

**Level 3 ([8]-[10])**

Candidate states clearly a decision. A range of reasons are provided in justification. The account will have many of the following:

- There is evidence that the arguments of both sides are being balanced, one against the other
- Links are made between diverse aspects of resource material, not possible in B
- Points are consistently relevant and logically structured
- There is a clear grasp of the concepts used

**Level 2 ([4]-[7])**

Candidate states or clearly implies a decision. There are fewer lines of thought or discussion, but what is present is relevant and correct or supportable in what is argued.

There may be deficiencies such as:

- Too much verbatim quoting or overuse of quotations in full
- Important sections of resource material not utilised
- Irrelevant material introduced
- Ideas not expressed particularly logically or clearly
- Understanding of concepts not always clearly demonstrated

**Level 1 ([1]-[3])**

- Few lines of thought and sketchy in detail
- Large gaps in the use of resource material
- Little or no structure or logic in the ordering of the concepts

**Format**

|  |     |   |
|--|-----|---|
| Clear format headings <b>using the headings provided</b> throughout  | [1] |   |
| Clear subheadings <b>using the subheadings provided</b> in Section B | [1] | 2 |

**Role**

|                 |     |   |
|-----------------|-----|---|
| Role adopted    | [1] |   |
| Role maintained | [1] | 2 |

**Graph**

|  |     |   |
|--|-----|---|
| Reference in report                    | [1] |   |
| Appropriateness of the technique used  | [1] |   |
| Accuracy of the data presented         | [3] |   |
| Conventions (key, labeled axes, title) | [3] | 8 |

|  |  |           |
|--|--|-----------|
|  |  | <b>60</b> |
|--|--|-----------|

|  |  |           |
|--|--|-----------|
|  |  | <b>80</b> |
|--|--|-----------|

