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# **GCE MARKING SCHEME**

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**SUMMER 2016**

**GEOGRAPHY - G4  
1204/01**

## **INTRODUCTION**

This marking scheme was used by WJEC for the 2016 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

## **Guide to online marking (electronic processing)**

WJEC is using a method of marking examination scripts known as e marker ® for this paper. Under this system, candidates' scripts are scanned and then transmitted to examiners electronically via the internet. Examiners mark on-screen; marked responses and marks are then submitted automatically.

Whilst the basic principles remain unchanged, this method entails some important changes to the way the system operates when examiners mark on paper:

- Examiners do not mark completed scripts. Instead scripts are divided into segments by question (item), and are transmitted to examiners in this form. Therefore each candidate's script will be marked by a number of different examiners.
- Examiners are required to complete an online standardising exercise. This involves the marking of a number of common candidate responses (roughly 30 of each item) which will be included in the examiners' allocations at regular intervals during the process. Should marks given to these items fall outside the tolerance agreed by senior examiners on more than one occasion, examiners will be prevented from further marking of that item until the team leader has been able to resolve the issue.

In terms of technical requirements, examiners participating will need a personal computer running on Windows XP, Vista or Version 7 and a broadband internet connection. With an Apple Mac a Windows emulator is required.

For further details, please see the user guide available one marker ® when you log on. Instructions on how to log on to the system and your username and password will be sent separately.

### G4 Assessment Objectives Grid

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
<b>1</b>	4 (concepts of place, space and diversity)	3 (interpreting & unfamiliar context)	3 (analyse and synthesise geographical information)	10
<b>2</b>	3 (select human processes underpinning concepts, examples)	4 (application in unfamiliar contexts)	3 (carry out research and use of methods)	10
<b>3</b>	3 (people- environment interactions)	3 (analysis and unfamiliar contexts)	4 (research and communication)	10
<b>4</b>	7 (extend geographical ideas, concepts and processes)	11 (consider new ideas and developments, evaluation)	7 (synthesise information, reach conclusions, and communicate findings)	25
<b>5</b>	7 (extend geographical ideas, concepts and processes)	11 (evaluation of viewpoints, extend geographical ideas, concepts and processes)	7 (reach conclusions and communicate findings)	25
<b>Total</b>	24 (30%)	32 (40%)	24 (30%)	80 (100%)

## G4 SUSTAINABILITY – MARKSCHEME

These descriptors give an outline of the qualities expected of answers at each level. Normally, these will be written into the mark scheme for a specific examination, and may be modified beyond these descriptors to accommodate the demands of individual questions.

If a candidate answers in an unanticipated way, but it is clear that there is some substance to the answer, the following guidelines may be used in allocating a mark to the answer. If in any doubt, please consult your team leader.

### 10 mark questions

Explanation of some kind is the most likely demand of these questions. For other kinds of command, comparable qualities to those given for explanation can be expected.

<b>Level 3 (8 - 10 marks)</b>	Answers at this level have a good explanation. Explanations may be brief or quite long; their distinguishing quality is that they are clear. Answers need not be fully comprehensive but should be extensive enough to cover most aspects that can be reasonably expected for the question posed. Points of explanation should have some supporting evidence, either from resources provided or from knowledge gained from the candidate's own studies. If the question has more than one aspect, then each of these will all be addressed soundly.
<b>Level 2 (4 - 7 marks)</b>	Answers in Level 2 will either (i) contain a small amount of clear explanation but several points that might reasonably be expected will be missing, or (ii) be answers that are more comprehensive but the explanation is not really clear, or (iii) be clear on several points but support for the explanations will be missing or be too generalised, 'as in the Amazon'. If the question has more than one aspect, one may be dealt with adequately, but others may be underdeveloped, leading to an unbalanced answer.
<b>Level 1 (1 - 3 marks)</b>	In answers at this level there will only be the beginnings of an answer to the question, and they will have major weaknesses. Explanations will be unclear or may be missing altogether. Correct information that could be relevant may be stated, but it will be left to the reader to put two and two together. Answers that deal with more than one point will be over simple on all of them. Any support that is given will be very general 'e.g. Africa'. If a question has more than one aspect, only one may be addressed and others ignored. Answers may be incorrect or faulty in some other way.

## 25 mark questions

These questions will have a strong evaluative element. Some form of debate needs to be engaged in to reach the two top levels. Some questions may have a command for description or explanation in the early part of the wording. If only those parts are attempted, answers can gain a maximum mark of the top of Level 3.

<b>Level 5 (22 - 25 marks)</b>	<p>A range of evidence supporting more than one possible conclusion will be clearly stated. There will be a good attempt to weigh up the evidence. This may be by showing that one piece of evidence carries more weight than others, or that there are far more points in favour of one point of view than for any others. These questions will often have a 'how far' or 'to what extent' element, and evidence given will be used deal with such aspects. The structure of the answer will be evaluative throughout. Conceptual understanding and specific knowledge will both be very good. Answers will be well ordered and logical, with clear expression in the chosen language.</p>
<b>Level 4 (17 - 21 marks)</b>	<p>A reasonable amount of evidence on both sides of the debate will be presented here. There will be some attempt to weigh up the evidence in order to show that it points more one way than the other, or to try and assess 'how far'. These will either be limited or confined to just one or two sentences, or unbalanced, being too sweeping for one side over others. All other aspects of the answer expected up to Level 3 will be present. Conceptual understanding or specific knowledge may be good, but not equally strong on both. Answers will have only minor flaws in logical ordering or linguistic expression.</p>
<b>Level 3 (10 - 16 marks)</b>	<p>These answers will have a good explanation. There will be some attempt to show that there are arguments on both sides of the case, but these will be few, scattered and in most instances, not supported by any evidence. There may be some evidence of conceptual understanding, and/or the odd piece of specific knowledge. Structure and expression may have flaws.</p>
<b>Level 2 (5 - 9 marks)</b>	<p>Answers at this level will be mainly simple description or basic explanation, with evidence of some of the comparable qualities expected at Level 2 for the 10 mark questions. Any attempt to deal with the evaluative components will be brief, and either be very simple, confined only to one side or have very little support. There will be weaknesses of structure and expression.</p>
<b>Level 1 (1 - 4 marks)</b>	<p>Some relevant knowledge may be stated, but few points will have any element of explanation. Any evaluation will be a simple statement of a point of view without any valid supporting evidence. The structure may be muddled and expression weak or unclear. Planning notes or fragments can be given a mark in this range.</p>

## **GCE GEOGRAPHY**

### **G4: SUSTAINABILITY**

#### **MARK SCHEME – SUMMER 2016**

If a candidate answers in a way not anticipated by the mark scheme, but has an acceptable answer to the question set, please use the generic mark scheme on pages 4 and 5 to determine an appropriate mark. If in doubt please contact your team leader.

For all questions, the following qualifying words are available;

**Accomplished**  
**Competent**  
**Intermediate (+/-)**  
**Basic**  
**Beginnings**

These can be elaborated further as:

**Accomplished** -  
a clear answer covering almost all aspects of the question, with relatively minor, if any, faults

**Competent** -  
an answer addressing many aspects of the question, but with some clear shortcomings

**Intermediate** -  
an answer to the question, but mainly simple with at least one (lower -) or more (upper +) points of better quality

**Basic** –  
an answer, but all very simple or superficial or brief or only very partial in coverage of what could be expected

**Beginnings** -  
not really an answer to the question, but may contain occasional relevant material

## SECTION A

### Q.1 Describe variations in the growth rates of cities throughout the world. [10]

Annotations for this question:

- Knowledge of the growth rates of at least two differing cities
- Suggestions of some patterns, types or trends
- Evidence in support

For the knowledge background, Figures 1 – 4 on pages 4 and 5 provide information for those not going beyond the Resource Folder. Figures 5 to 8 on pages 6 and 7 provide material that can be used to help find patterns, types or trends. Candidates should show that different cities, or types of city, have clearly different rates of growth and should be able to show variations.

<b>Level 3 (8 - 10 marks)</b>	Good description of variations in growth rates. Clear distinction made between at least two different growth rates. Extensive support from cities, covering different rates of growth.
<b>Level 2 (4 - 7 marks)</b>	Some description of variations in growth rates. Distinction made between at least two different growth rates. Some support from cities, covering different rates of growth.
<b>Level 1 (1 - 3 marks)</b>	Limited description of variations in growth rates. Superficial suggestions of types of growth, if any, given. Limited support given.



**Q.2 Outline problems associated with the supply of energy.**

**[10]**

Annotations for this question:

- Knowledge of problems associated with sources of energy supply
- Clear identification of problems
- Evidence in support

Figure 14 indicates that fossil fuels have finite amounts with some scale and location. Deforestation is clear in Figure 20. Financial and environmental costs are given in Figure 23.

<b>Level 3 (8 - 10 marks)</b>	Good knowledge of at least two problems associated with sources of energy supply. Clear understanding of problems caused by the supply of energy from one or more energy sources. Good support is provided for most points raised.
<b>Level 2 (4 - 7 marks)</b>	Some knowledge of at least two problems associated with sources of energy supply. Understanding of problems caused by the supply of energy from one or more energy sources. Some support is provided for points raised.
<b>Level 1 (1 - 3 marks)</b>	Limited knowledge of problems associated with sources of energy supply. Superficial understanding of problems, if any, given. Limited support given.

**Q.3 Outline the advantages of two alternative sources of energy.**

**[10]**

Annotations for this question:

- Knowledge of two alternative sources of energy
- Understanding of the advantages of two alternative sources of energy
- Evidence in support

Ideas for alternative sources to use are shown in Figure 17 and of scale on Figure 18 on page 12 for candidates wishing to use material beyond the Resource Folder. Details of biofuels are given on Figure 19 on page 13, and details of photovoltaic cells and areas where they can be used to different degrees are shown in Figures 21 and 22 on pages 14 and 15. Information from Figure 23 on page 15 could be used here. Candidates should show knowledge of what is involved with each of the two forms and how they provide an advantage. The outline should show some understanding of these two ways, such as newly available areas, environmental benefits, or relative costs.

<b>Level 3 (8 - 10 marks)</b>	Good knowledge of two forms of alternative energy. Clear understanding of advantages related to both forms is shown, depending on choice. Good support is given for most points raised.
<b>Level 2 (4 - 7 marks)</b>	Some knowledge of two forms of alternative energy. Understanding of advantages related to both forms is shown, depending on choice. Some support is given for most points raised.
<b>Level 1 (1 - 3 marks)</b>	Limited knowledge of the advantages of two sources of energy. Superficial understanding of advantages, if any, given. Limited support given.

**Q.4 'The growth of cities inevitably causes an increase in energy use.'**  
**Assess how far this is true and its implications for sustainability.**

**[25]**

Annotations for this question:

- Knowledge and understanding of energy use
- Contribution of cities and appreciation of other demands
- Evidence and support
- Sustainability
- Assessment

Growth of cities, some uses of energy in cities, and some alternative sources of energy should already be established through questions 1 – 3. In addition, some uses of energy relevant to cities are made clear. Information related to heating and cooling in cities is given in Figures 9 to 12 on pages 8 and 9 and can be sufficient as examples of the use of energy in cities provided all other elements of the question are dealt with. Candidates are free to introduce other uses of energy in cities if they have the information. Candidates may like to take growth of cities in terms of population or areal extent (or both). Either is acceptable and there is no penalty for building an argument based on just one. Sustainability may be examined through limits to supplies, costs, environmental impacts or strategies that have been attempted. Moderate to good answers will assess individual points. Very good answers will consider the relative importance of points made leading to an overall judgement.

<b>Level 5 (22 - 25 marks)</b>	Answers at this level will make fully clear links between the growth of cities and energy supplies with issues of sustainability introduced. Implications for sustainability will be considered throughout, and different degrees of sustainability identified. Extensive evidence will be provided in support. The answer will be well structured and logical, and expressed in clear language.
<b>Level 4 (17 - 21 marks)</b>	A good answer but with either imbalance between city growth and energy supplies, or some lack of depth if both are considered equally, or limited assessment of the validity of the statement. Valid points on sustainability made. Some good evidence will be given. A well-ordered answer with good expression.
<b>Level 3 (10 - 16 marks)</b>	A sound answer, but with either strong imbalance, or lack of depth on most points considered. Sustainability may be understood at the upper end of the range but be more token at the lower end. Consideration of validity and implications may be present but limited at the upper end and missing towards the lower end. A little evidence will be given. Minor flaws in organisation and expression are likely.
<b>Level 2 (5 - 9 marks)</b>	Some valid points are raised, but are limited and shallow. Sustainability may be mentioned but understanding of it is weak and simplistic. Evidence will be poorly linked to the answer. Frequent problems with structure and expression will be present.
<b>Level 1 (1 - 4 marks)</b>	Isolated points that could be relevant to the answer are made, but are largely up to the reader to work out. The word 'sustainability' may be included, but little understanding of it is shown. Poor or no evidence is given. The whole answer will be poorly organised, with poor expression.

**Q.5 Describe ways in which physical factors can limit food production. How far can technological developments overcome these limitations and ensure a sustainable supply of food? [25]**

Annotations for this question:

- Knowledge of physical factors controlling food production
- Understanding of technological developments in food production
- Evidence and support
- Sustainability
- Assessment

There will be little in the Resource Folder to help in answering this question, but if any candidate can use information that has been so presented, there is no penalty. Exceptionally good understanding of physical factors limiting food production or, technological developments in food production, but nothing more, can gain up to mid Level 2, 13 marks. Answers without some depth to sustainability would be limited to the top of Level 3. Good answers will assess the sustainability of issues raised. The best answers will consider the relative importance of sustainability issues in order to address 'how far'.

<p><b>Level 5 (22 - 25 marks)</b></p>	<p>Several factors limiting food production will be described in detail, either separately initially or introduced throughout. Different technological developments will be considered, with a good appreciation of different degrees of sustainability. Extensive evidence will be provided in support. The answer will be well structured and logical, and expressed in clear language.</p>
<p><b>Level 4 (17 - 21 marks)</b></p>	<p>Several factors limiting food production will be suggested, but some may lack detail, or may be unclear or rather brief. Some technological developments will be introduced, with some appreciation of sustainability. Some good evidence will be given. A well-ordered answer with good expression.</p>
<p><b>Level 3 (10 - 16 marks)</b></p>	<p>There will be some (or even many) suggestions about factors limiting food production but there will either be limited detail about them, or if more detailed, then not addressing the assessment of any technological developments. There may be some discussion of technological developments and sustainability at the upper end of the range, with one or the other neglected at the lower end, but such answers are likely to be weaker on description and detail. A little evidence will be given. Minor flaws in organisation and expression are likely.</p>
<p><b>Level 2 (5 - 9 marks)</b></p>	<p>Suggestions made may be sketchy with very little detail to them. Solutions will be simplistic. Evidence will be poorly linked to the answer. Frequent problems with structure and expression will be present.</p>
<p><b>Level 1 (1 - 4 marks)</b></p>	<p>Any suggestions made will be very generalised lacking detail and/or reasoning. Any attempts at assessment will be simple, unsupported statements of they are/are not. Poor or no evidence is given. The whole answer will be poorly organised, with poor expression.</p>