



GCSE MARKING SCHEME

SUMMER 2016

**GEOGRAPHY - SPECIFICATION A
UNIT 1 (FOUNDATION TIER)
4231/01**

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.

Unit 1 Foundation Tier

Theme 1 – Water Question 1		Rationale	Expected answer	AO1	AO2	AO3	Total
(a)	Study the map below.						
	(i)	Complete the following paragraph by choosing your answers from the box below	Credit these responses only.	steeper (1) 417 (1) easterly (1) 197809 (1)		4	4
	(ii)	Suggest why the A6187 main road may be at risk from flooding. Use map evidence only.	Credit one mark for each relevant statement to a maximum of 3. Allow one development point – but it must relate to map evidence. Reserve 2 marks for direct map evidence.	Close to river (1) floodplain (1) flat (1) surrounding hills (1) tributary from north (1) valley (1) reference to contours (1) 4/6 fig grid ref (1) development (1)	1	2	3
(b)	Study the photograph below.						
		Describe how the process of abrasion (corrasion) will affect the river cliff shown at X.	Credit one mark for each relevant statement to a maximum of 3. Needs to apply to river cliff/outside bank of meander for full marks. Max 2 for generalised description of process. Reserve one mark for reference to load.	River load/rocks/pebbles/stones (1) carried in suspension/river current (1) high energy conditions (1) thrown at outside bend/river cliff (1) eroding outwards/lateral (1) undercutting (1)	2	1	3
(c)	Describe how different strategies have helped to reduce river flooding. Use one or more examples to help your answer.		See levels mark scheme below	3	2		5
TOTALS				5	4	6	15

Question 1(c) (ii)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.
Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in very general terms. Limited understanding of flood prevention but some merit to answer. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	Description of at least one flood prevention strategy with some attempt to explain how it has worked. Lacking in detail. Example is brief, cursory or not given. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	Description of at least two strategies. Example(s) located to explain how flooding has been tackled. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

The answer could focus on hard or soft engineering or a combination of both. Hard engineering involved human intervention in the workings of a river catchment or channel. Various hard engineering strategies could be described but the main ones to look for are channelisation, dredging, dam construction, levees, flood walls and revetments. Soft engineering involves using natural features of the river such as reverting to flood meadows or applying building restrictions to floodplains to enable them to operate naturally. At the higher levels candidates will give some explanation for how chosen methods work and this may include some assessment of their effectiveness. Use of examples will involve named projects/ivers of named urban areas where methods have been used.

Remember that this is Foundation tier, so full marks only equate to C grade and not A*.

Theme 2 – Climate Change Question 2		Rationale	Expected answer	AO1	AO2	AO3	Total
(a)	Study the diagram below.						
(i)	Use the diagram to identify two effects of climate change.	Credit one mark for each of any two correct descriptions from diagram. Must indicate increasing/decreasing (in any way).	Reduction in ice sheets/glaciers (1) increasing air temperatures (1) less sea ice (1) rising sea levels (1) increasing ocean heat (1) increasing ocean acidity (1) increasing extreme weather events (1) increasing frequency of storms (1) increasing sea surface temperature (1)			2	2
(ii)	Complete the diagram to show that sea surface temperatures are increasing .	Credit one mark for correct symbol located in circle.	Upward arrow (1)			1	1
(iii)	Choose one effect shown on the diagram and explain why it might cause problems for people.	<p>Credit one mark for each statement and its elaboration. Do not award first mark for description from diagram alone, credit must be for explanation.</p> <p>Second or linked point could come from diagram, e.g. increased air temperatures lead to less sea ice as long as link is explained. Ensure development points have taken answer further to max 2.</p> <p>If candidate chooses intensity and frequency of extreme weather, no credit for floods or fire. Answer must elaborate further on how these affect people.</p>	<p>Reduction in ice sheets/glaciers lead to increased sea levels (1) coastal flooding (1) economic/social losses (1) increased costs of protection (1).</p> <p>Increasing air temperatures lead to changing crop patterns (1) drought (1) food shortages (1) named place (1).</p> <p>More intense/frequent extreme weather events lead to increased storm damage (1) trees/power lines down (1) more travel disruption (1).</p> <p>More intense/frequent storms lead to more flood damage to homes (1) higher costs of insurance (1).</p>	3			3

(b)	Study the graph below.							
	(i)	Describe how the emission of carbon dioxide differs between Europe and China.	Credit one mark for each valid statement. Accept converse of any point listed. Answer must offer direct comparison for any marks.	Europe steadier (1) China increasing faster (1) Europe higher before 2007 (1) China higher after 2007 (1). Accurate quantification (1)		2	2	
	(ii)	Explain why rapid growth of industry in some countries may add to climate change.	Credit one valid statement and its elaboration which must link to climate change.	More factories (1) so more fossil fuels/ more CO2 (1). More transport/ cars/ lorries (1) so more fossil fuels/ more CO2 (1) global warming/greenhouse effect (1)	2		2	
(c)	Describe how technologies can be used to reduce the impact of climate change in the future. Use one or more examples to help you answer.			See levels mark scheme below.	3	2	5	
TOTALS					6	4	5	15

Question 2(c)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.

Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in general terms. Limited understanding of combatting climate change but some merit to answer. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	At least one new technology described competently or two strategies described briefly. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	More than one new technology described accurately and in some detail. Clear link to the impact on climate change in the future. Example is located. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

Most candidates will focus on cleaner energy solutions such as wind, solar, wave/tidal, HEP which do not release carbon emissions. At least two technologies needed for level 3. Credit reference to the actions of individuals in installing technology such as solar panels to reduce fossil fuel dependence. Also, for level 3, there must be some understanding or explanation of how these strategies will impact in the future. Reference to international agreements may have merit as long as these lead into agreements for fossil fuel reduction, using new technologies to substitute. The question refers to reducing the impact of climate change, so be prepared also to credit strategies such as hurricane/storm monitoring which do not reduce the climate change per se, but do attempt to treat the impact of it. Examples may refer to countries or regions of a country where projects have been implemented.

Remember that this is Foundation tier, so full marks only equate to C grade and not A*.

Theme 3 – Living in an Active Zone Question 3		Rationale	Expected answer	A01	A02	A03	Total
(a)	Study the information below.						
	(i) On which island is Mount Kelud?	Credit this response only.	Java (1)			1	1
	(ii) Give the compass direction from Mount Kelud to the city of Surabaya.	Credit either response.	North-east or North-north east (1)			1	1
	(iii) Give the distance in kilometres from Mount Kelud to the capital city Jakarta.	Credit this response only.	750 (1)			1	1
	(iv) Complete the box below to give the latitude and longitude of Mount Kelud.	Credit response in this range. Must have direction for mark.	7-8 degrees south (1)			1	1
(b)	Suggest how the ash from this eruption caused a hazard for people in Surabaya.	Credit two valid statements or one point developed.	Ash reduces visibility (1) hazardous road conditions / potential for accidents (1). Ash causes injury (1) breathing difficulties (1). Damages / collapse of buildings (1) cost of clear up (1). negative impact on farming (1) so less food/higher food price (1). Disrupts air travel (1) so planes cannot take off (1). Pollutes water supply (1) makes water acidic (1).		2		2

(c)	Describe two ways scientists can monitor the activity of a volcano.	Credit only two valid statements 2 x (1+1). Ensure development is related to describing methods of monitoring to max 2.	Tilt meters / lasers (1) measure ground deformation/ change shape (1). Satellites (1) record movement / heat (1). Gas readings (1) CO2/ SO2/ other example (1). Seismometers (1) measure earthquake activity (1). Remote sensing (1) measure heat / gas / deformation (1). Thermal image (1) measure heat of ground (1). Visual sign (1) e.g. ash cloud / lava flow / size of lava lake (1) Water acidity (1) as gases/magma rise.	4			4
(d)	Describe ways in which the effects of earthquakes can be reduced. Use one or more examples to help your answer.	See levels mark scheme below.	3	2		5	
TOTALS				7	4	4	15

Question 3 (d)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.
Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in very general terms. Limited understanding of how effects can be reduced but some merit to answer. No example used or example irrelevant or inaccurate. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	One strategy described competently in some detail or two described briefly. Some understanding of how strategy reduces impact of earthquakes. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	At least two strategies described accurately and in detail. Clear knowledge of effectiveness in reducing impact of earthquakes. At least one located in a named example using case study material for full marks. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

There is a wide range of strategies that could be used which may centre around attempts to predict earthquakes using monitoring and seismic gap theory leading on to increased preparedness through earthquake drills, education for residents and training for emergency services. Many answers will concentrate on protection using earthquake resistant building design and tsunami warning systems. Credit breadth and/or depth in the answer and look for detailed use of case study material to illustrate answers in the higher level. Remember that this is Foundation tier, so full marks only equate to C grade and not A*

Theme 4 – Changing Populations Question 4		Rationale	Expected answer	AO1	AO2	AO3	Total
(a)	Study the graph below.						
	(i)	Choose from the words below to describe the trend in the UK's birth rate from 1950 to 2015. Underline the correct answer.	Credit this response only. Highlighted in any way.	Fluctuating (1)		1	1
	(ii)	Tick the three statements about the number of births in the UK that are true.	Credit one mark for each correct response. Credit no marks if there are four ticks. Do not credit if all options are ticked.	A (1) D (1) E (1)		3	3
	(iii)	Suggest why the UK birth rate fell between 1964 and 1977.	Credit two separate reasons or one reason that is developed. Ensure development point takes answer forward and shows greater level of understanding.	Increased use of contraception (1) introduction of pill (1). Improved status of women (1) working (1) increase in age of marriage (1). Reduced infant mortality (1) due to better health care (1). Better education (1) economic reasons (1) Legal abortion (1).	2		2
(b)	Study the graph below.						
	(i)	Describe the shape of the graph.	Credit one mark for each valid statement to a maximum of 2. This is a skills question so credit understanding of the shape of the pyramid.	Pyramid / triangular (1). Wide base (1) progressively narrower / narrow top (1). Concave sides (1) symmetrical (1).		2	2
	(ii)	What does the shape of the graph tell you about the structure of Kenya's population?	Credit one mark for each valid statement to a maximum of 2. Points do not need to relate to those made in (i) as long as reference is being made to shape.	Many children (1) expanding population (1) few older people (1) high dependent population (1)	2		2
(c)	Explain why large numbers of people migrate from rural to urban areas. Use one or more examples to help your answer.		See levels mark scheme below.	3	2		5
TOTALS				3	6	6	15

Question 4(c)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.
Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in general terms. Limited understanding of rural to urban migration but some merit to answer. No example used or example irrelevant or inaccurate. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	Reference to push or pull factors in some detail or both in simple terms. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	Detailed understanding of both push and pull factors in migration. Examples are relevant or make use of detailed case study material. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

This is a question basically on push/pull factors. At level 2, answers may be quite general so look for specific place reference for entry into level 3. There is no longer a requirement to study LEDC/MEDC so exercise discretion on the appropriateness of an example. As long as the focus of the answer is on rural-urban migration, it could be a poor region in a relatively wealthy country. An example could be the movement of people from Gauteng to Pretoria in South Africa which is used in a popular text book and has often shown up in questions of this nature in previous years. The focus should be on the reasons for the migration so look for detail in the description/explanation of the push/pull factors. Remember that this is the Foundation tier, so full marks only equate to C Grade and not A*.

Theme 5 – Interdependence Question 5		Rationale	Expected answer	AO1	AO2	AO3	Total
(a)	Study the maps below.						
	(i)	Complete the sentence below by underlining one correct word.	Credit this response only.	Globalisation (1)	1		1
	(ii)	Use the maps to complete the following sentences. Underline the correct answer.	Credit these responses only. One mark for each correct answer.	Europe (1) Asia (1) very many (1)		3	3
	(iii)	Describe the relationship between the population size of the UK and the number of athletes in an Olympic Games who compete for the UK.	Credit one valid statement with one mark.	Many athletes compared to population (1)		1	1
	(iv)	Give one problem with using maps like Map B.	Credit one valid statement with one mark.	Confusing/difficult to read (1) no quantities / no scale (1)		1	1
(b)	Suggest how the 2016 Olympic Games may bring one benefit and one problem to Brazil.		Credit up to two valid statements (one benefit and one problem) each for one mark plus the elaboration of either for one or two additional marks. i.e. 2+2 or 3+1 Credit valid references to benefits and problems of globalisation OR increased tourism.	Benefits: Job creation (1) in construction (1) hospitality (1) retail (1) wealth (1). New stadia (1) legacy of sporting facilities in future (1) prestige/national pride (1). Visitors/ tourists spending money/ foreign currency (1). Problems: TNC dominance (1) profits leaked (1) poorest people unlikely to benefit (1). Increased anti-social behaviour / crime (1) increased congestion (1) increased (specified) pollution / litter (1) Jobs only temporary (1) increased spread of disease (1) clearance of land/shanty homes (1) increased debt for Brazil (1).		4	4
(c)	Describe the positive and negative impacts of the increase in the number of countries which have become members of the European Union (EU).			See levels mark scheme below.	5		5
TOTALS				6	4	5	15

Question 5 (c)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.

Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in general terms. Limited understanding of issues or impact but some merit to answer. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	Some detail in positive or negative impact or simple reference to both. Answer has merit but lacking in depth. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	Balanced answer addressing at least one positive and negative impact in detail or a range of impacts in less detail. Good understanding of impact of European Union enlargement. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

Positive impacts of EU enlargement might include economic advantages for both migrants and receiving countries as people exploit the opening of national borders between member countries. Candidates may also refer to cultural enrichment and benefits of bringing language, food and other cultural attributes to new areas. They may also refer to the benefits of the single market and the removal of trade barriers between member states. Negative impacts are likely to focus on tensions between populations due to immigration and perceptions of higher crime rates and the taking of jobs. Some may also refer to pressure on health and social services, including school places, etc. Although, the question does not specifically ask for reference to examples, credit these where they are given as they may add depth to an answer and serve to open up level 3. In any case here, there is a wide range of ways in which the question can be tackled so be prepared to credit depth and/or breadth. Remember that this is the Foundation tier, so full marks only equate to C Grade and not A*.

Theme 6 – Development Question 6		Rationale	Expected answer	A01	A02	A03	Total
(a)	Study the graph below.						
	(i)	Complete the sentence underneath by choosing the correct word from the list below.	Credit this response only.	Wealth (1)	1		1
	(ii)	What is the percentage of GNP given as development aid by Sweden?	Accept any answer in range 0.75-0.79	0.77 / 0.78 (1)		1	1
	(iii)	Between which two countries would the UK be placed on the graph?	Both correct for 1 mark. Use one tick only	France and Germany (1)		1	1
	(iv)	Suggest one way in which governments in poorer countries can use development aid to improve the lives of their people.	Credit one way for one mark with elaboration of answer which explains (even in simple terms) how people's lives are improved for one additional mark. Credit valid elaboration (not shown in expected answer) if it demonstrates valid, further understanding.	Health (1) so people live longer (1). Education (1) so more children can read and write (1). Clean water (1) reduces disease (1). Construction projects (1) social services (1) agriculture (1) industrial development so there are more/ better paid jobs (1).	2		2
(b)	Study the data below.						
	(i)	Describe the relationship between a country's GNP and its adult literacy and life expectancy.	Credit up to three valid statements each with one mark.	Literacy (1) and life expectancy higher (1) with higher GNP. slight anomaly Indonesia (1) Quantified (1)		3	
	(ii)	Describe how improvements in health care help a country's development.	Credit one valid statement for one mark with its elaboration for a second mark. Need to show understanding of development (social or economic) for second mark.	Healthier workforce better able to work (1) and contribute to economy (1) Better medicines/ vaccination/ immunisation (1) reduced infant mortality / lower death rate/ improved life expectancy (1)		2	2
(c)	Describe the progress made by sub-Saharan African countries towards meeting one or more of the goals you have studied. Use one or more examples to help your answer.			See levels mark scheme below.	3	2	5
TOTALS				6	4	5	15

Question 6 (c)

Levels of response mark scheme. Work upwards from the lowest level. Award QWC as an integral part of a best fit decision.
Award 0 marks if the answer is incorrect or irrelevant.

Level	Level descriptor
Level 1 0 - 1 mark	Simple statements made in general terms. Limited understanding of MDGs applied to SSA but some merit to answer. No example used or example irrelevant or inaccurate. Communication is basic: there is little or no structure and/or ideas are communicated in brief statements/bullet points.
Level 2 2 - 3 marks	Description of one or more MDG in SSA in some detail. Some understanding but answer lacks depth/detail. Max level if no reference to progress. Information is communicated by brief statements. There is a basic structure. There is reasonable accuracy of spelling, punctuation and grammar.
Level 3 4 - 5 marks	Good knowledge of progress described in detail in at least one MDG in named country or countries in SSA. Specific knowledge of case study material applied to SSA. Communication is clear and logical. Spelling, punctuation and grammar have considerable accuracy.

Expected answer:

The aim here is to see if candidates understand the general lack of progress made in sub-Saharan Africa compared to other regions now that the 2015 deadline for the MDGs has passed. They can illustrate this by referring to any of the MDGs but there needs to be some evaluation, even at a simple level for entry into level 3. Development questions tend not to be answered well at this level so try to be positive and reward those candidates that attempt to and succeed in achieving anything beyond the very general answers that tended to characterise this type of question in the past. Remember that this is the Foundation tier, so full marks only equate to C Grade and not A*.