



GCE MARKING SCHEME

**GEOGRAPHY
AS/Advanced**

SUMMER 2014

INTRODUCTION

The marking schemes which follow were those used by WJEC for the Summer 2014 examination in GCE GEOGRAPHY. They were finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conferences were held shortly after the papers were 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 conferences was to ensure that the marking schemes were 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' conferences, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about these marking schemes.

	Page
G1	1
G2	9
G3A	18
G3B	37
G4	41

Assessment Objectives Grid for Geography - G1

Summer 2014

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)	0	2	3	5	1.5
(b)	8	2		10	1.3
(c)	7	3		10	1.4
	15	7	3	25	
Question 2					
(a)	0	2	3	5	2.5
(b)	8	2		10	2.2
(c)	7	3		10	2.6
	15	7	3	25	
Question 3					
(a)	1	1	5	7	2.2
(b)	2	1	5	8	
(c)	3	2	5	10	
	6	4	15	25	
	36 (48%)	18 (24%)	21 (28%)		

Using the mark bands

The aim is to find the descriptor that conveys most accurately the level attained by the candidate, using the best-fit model. A best-fit approach means that marks should be awarded for a response that most fairly matches different aspects of the descriptor.

GCE GEOGRAPHY G1

MARK SCHEME

SUMMER 2014

- Q.1 (a) Use *Figure 1* to describe the changing distribution of dzuds in Mongolia. [5]**

The maps, 1a and 1b show that there is a change from a more even distribution to one that is concentrated in the north west of the country in 1b. These maps also show that the frequency of dzuds will increase, especially in the north west. There is a decrease in the frequency in the south west. Map 1c allows comment on the link between topography and changing distribution of dzuds. Dzuds increase in frequency in the more mountainous areas of Mongolia. Use of data may include latitude/longitude/direction/scale.

Allow (1 mark) per comment on the changing distribution with (1 mark) for use of data and each linked comment from Figure 1. For example: increase (1 mark), in the north west/latitude/longitude (1 mark), from 0 –1 and 4 – 7 (1 mark), in mountainous area (1 mark), 3000 metres (1 mark).

- (b) Outline the characteristics and cause(s) of *one* short-term climate change. [10]**

Candidates will have been taught a variety of examples so be prepared to accept a flexible definition of short term. Some candidates may approach short term from the view of change that is in the form of 5–7 years and review El Niño whilst others may approach short term from a geological angle and address fluctuations over the last 1000 years. Other approaches may address climate change induced by volcanic activity and recent climate change seen as a result of human induced global warming.

The question contains two elements – the characteristics of the selected short-term climate change and the associated causes. Both of these elements need to be addressed to access Level 3. Descriptions of climate change will vary with the example selected. In the case of El Niño, comment may be made on changing patterns of rainfall, temperature, storm activity and drought. Be prepared to accept answers that examine climatic change with reference to a limited geographical area in this context. Some candidates may focus on change in South America or Peru whilst others may refer to Australia. Those that review climatic change over the past 1000 years may examine the characteristics of the Medieval Warm Period and/or the Little Ice Age. Detail here may look at temperature and precipitation patterns over hundreds of years and thus be more general in character than accounts of more recent change. Comment may refer to changes in seasons, increased snowfall and storm activity. Some answers may address single events such as droughts associated with El Niño events but these need to be linked to overall change. Another valid approach may see recent increases in temperature as a pattern. These answers may provide detail of the changing climate which results from this increase in the form of temperature, precipitation and extreme weather events.

Causes of climate change will need to be appropriate to the example chosen. In the case of El Niño the role of ocean currents and sea temperature will be the most common explanation. The causes of the Little Ice Age and Medieval Warm Period there are a variety of explanations that have been put forward that include sun spot activity, volcanic activity, changing surface albedo, Milankovitch cycles and the changing ocean/atmosphere conveyor in the Atlantic.

Outlines of causes of recent increases in temperature will probably focus on human activity. To access Level 3 there must be a good outline of causes(s) linked to the selected climate change.

<p>Level 3 8-10 marks</p>	<p>Good description of characteristics and outline of causes of short-term climate change. Understanding of process with integrated link to short-term pattern of climate change. Good use of example.</p>
<p>Level 2 4-7 marks</p>	<p>Some description of characteristics and outline of causes of short-term climate change. Some integration of process and consequent short-term climate change. Some use of example. There may be an imbalance between description and explanation.</p>
<p>Level 1 0-3 marks</p>	<p>Basic description of characteristics and outline of causes of short-term climate change. Basic use of example.</p>

(c) Describe and explain two impacts of climate change on society. [10]

This question has two elements – description and explanation. The question looks for two impacts. The material presented as impacts will vary according to the society or societies chosen but there will be some common elements such as economy, work, migration, disease, traditions etc.

Good answers should display depth of knowledge of the link between the effects of climate change and the impacts on selected elements of society. This depth of understanding may come in the form of detailed descriptions of the impacts. Elements of explanation should link focus on why the climate change characteristics has an impact on society. For example answers may refer to sea level change which may cause migration and this could be described in some detail. The explanatory link to society may refer to who is leaving and the resultant impact on society e.g. loss of workforce. The changing climate of the tundra may lead to changes in the cultural workings of the Inuit.

Some approaches can be seen below but be prepared to credit valid alternatives.

- Rising sea level may lead to migrations
- Agriculture may be affected by salinisation of soils
- Patterns of hunting may be altered
- Settlements may be threatened and urbanisation may result
- Reliance on aid and food supplies from outside the area may change diet and ways of life
- Reef damage may lead to changes in tourism and economic problems
- Extreme weather may lead to criminal activity
- Changing climate may lead to changing patterns of disease
- Productivity may decrease
- Drought may cause issues with health and mortality in Africa
- Mortality

Answers may focus on impacts or location.

Level 3 8-10 marks	Good knowledge and understanding of climate change on society. Good explanation of impacts. Good integrated development of examples.
Level 2 4-7 marks	Some knowledge and understanding of climate change on society. Some explanation of impacts. Some use of examples. Maximum Level 2 if response covers only one impact.
Level 1 0-3 marks	Basic knowledge and understanding of climate change on society. Little use of examples.

Q.2 (a) Use Figure 2 to describe variations in earthquake mortality. [5]

The table shows variations in mortality caused by earthquakes in four categories. These variations are also grouped by factors that may have an effect on the magnitude of mortality.

The first part of the table shows variations in relation to levels of development. In response to this candidates may identify that most mortality is found in middle income countries. The table also shows that higher income countries have a higher percentage (%) of events that result in 'no deaths' than 'over 100 deaths'. The opposite is true of low income countries.

The second part shows that higher mortality events have higher magnitude earthquakes.

Award (1 mark) for valid comment with further (1 mark) for evidence from the resource.

Variation can be shown by comparison of data (1 mark) e.g. earthquakes that resulted in no deaths are 70.6% in MICs and/whereas HICs are 22.9%; earthquakes that resulted in no deaths are 70.6% in MICs and lower in HICS at 22.9% (2 marks).

(b) Compare local and regional impacts of one or more tectonic events. [10]

The question involves a number of elements – knowledge of both local and regional impacts plus the ability to compare these impacts. Answers should display an awareness of the differences in scale required in the question. Examiners should be flexible in the interpretation of local and regional.

Answers will probably look at the local element in the form of impacts that are found in the area surrounding the epicentre of an earthquake or the area adjacent to the volcanic eruption. These impacts can be social, economic, demographic and/or physical. Regional impacts examine those that are wider in extent. For instance the economic impacts can have a broader scale – Kobe had an impact in the Eastern Asian region as did the Sendai earthquake and tsunami. The eruption of Eyjafjallajökull had a social and economic impact at a European scale. Be prepared to look at impacts from the view of the aid that is generated in response to hazard – aid came from the USA and other Caribbean countries as a response to the Haitian earthquake.

The comparison element requires candidates to look at similarities and/or differences at the stated scales. This comparison could take the form of an examination of the relative importance of social, economic physical etc. at local and regional scales. Other candidates may compare the scale impacts of different events. Part of the comparison may refer to the reasons for similarities and differences. This could take the form of a comparison of events – Haiti v Christchurch – with a description and reasoning for the comparison. It is important to note however that this approach needs to address both scale elements of the question.

Accept answers that approach the question through an examination of a single case study as well as those that choose to refer to a number of examples to illustrate each element of the question.

Candidates that give a detailed review of the impacts without covering the required scales or comparison should be confined to Level 2.

Level 3 8-10 marks	Good knowledge and understanding of impacts at both scales. Good comparison. Good use of examples.
Level 2 4-7 marks	Either: some knowledge and understanding of impacts at both scales. Or: good knowledge of impacts at one scale. Some comparison. Examples are evident.
Level 1 0-3 marks	Basic knowledge of impacts at both/either scales. Little use of examples.

(c) **Outline *two* strategies used to manage *either* tectonic *or* flood hazards.** [10]

There will be a great variety of strategies used depending on the hazard(s) selected and the examples that have been studied. Credit strategies that address prediction, prevention, preparation, adaptation and land use planning. The focus of the question is outline so expect to see answers that describe the identified strategy and how it manages the hazard. The management may refer to how the strategy allows people to avoid the hazard, to absorb the impacts of the hazard or to alleviate the impacts of the hazard after it has occurred.

Popular strategies that may be used are:

Earthquakes: building engineering, earthquake preparedness, household seismic safety, seismic retrofit, education for citizens, emergency service training, evacuation for tsunamis, land-use plans, aid and earthquake prediction.

Volcanoes: early warning systems, evacuation, emergency plans, education for citizens, emergency service training, building engineering, land-use plans and aid.

Floods: strategies may include the use of dykes, washlands, arrangements of rooms in housing next to rivers, evacuation, afforestation, specific aid projects etc.

Accept approaches that have a case study structure.

Level 3 8-10 marks	Good knowledge and understanding of two strategies. Good understanding of the link between strategies and how they are used to manage the tectonic hazard. Good use of examples.
Level 2 4-7 marks	Some knowledge and understanding of two strategies. Some understanding of the link between strategies and how they are used to manage the tectonic hazard. Good knowledge and understanding of one strategy – lacks balance. Some use of examples.
Level 1 0-3 marks	Basic knowledge of strategies Little use of examples.

Q.3 (a) Use evidence from *Figure 3* to describe *three* potential economic impacts of the River Ouse flooding. [7]

Accept a broad interpretation of economic but do not credit impacts that are firmly in the realms of social, demographic or physical.

The map provides ample opportunity to describe economic impacts which will probably focus on:

- the economic losses caused by damage to housing/ accommodation
- economic loss caused by damage to utilities
- costs of damage to transport systems – repair and increased time of journeys
- loss of heritage leading to tourism decline
- impacts on leisure facilities
- cost of loss of employment
- economic losses caused by flooding of farmland.

Accept other valid **economic** impacts.

To gain full credit these need to be linked to the map using areas that could realistically be flooded.

Level 3 6-7 marks	Three valid economic impacts that are supported with evidence from the map [7]. Three valid economic impacts, two that are supported with evidence from the map [6].
Level 2 3-5 marks	Three valid economic impacts with one supported with evidence from map [5]. Two valid economic impacts both supported with evidence from map [5]. Two valid economic impacts with one supported with evidence from map [4]. Three valid impacts not supported [3]. One valid economic impact supported from map [3].
Level 1 0-2 marks	Less than three valid impacts, not supported from map.

(b) Outline how Ordnance Survey maps can be used in an investigation into changing physical environments. [8]

Candidates could cover a variety of stages in the collection of information. In the planning stage there could be reference to a number of uses – the establishment of the suitability of the area for study, for risk assessment and for the establishment of sampling procedure and sites. Candidates may discuss the information that is available on OS maps such as height, slope, vegetation and the amount of settlement. OS maps can also be used as a base map for recording data. Some candidates may refer to Digimap as basis for collecting information on land use or similar maps that can be used to record information via GIS.

The command is 'outline' so for full credit the response needs only to give a developed description of how the OS map can be used. The quality of the answers will depend upon the nature of the outline which could be one use of OS maps developed in detail or a variety of uses in less detail but giving a broader understanding.

Level 3 6-8 marks	Good knowledge of use(s) of OS maps. Good development of link to investigation.
Level 2 3-5 marks	Some knowledge of use(s) of OS maps. Some development of link to investigation.
Level 1 0-2 marks	Basic knowledge of use(s) of OS maps.

(c) Evaluate the main conclusions of an investigation into a changing physical environment that you have completed. [10]

You should state clearly the question that you have investigated [10]

The content of the answer will vary greatly as individual centres will engage in a wide variety of investigation but the content should have a link to the substance of the specification.

The question is looking for the main conclusions and the better answers will refer to the outcomes of the investigation in relation to the original question, issue or hypothesis set by the candidate or centre. These responses may comment on patterns that were identified, processes that were proved, relationships that were recognised or characteristics that were distinguished. Other valid conclusions should be credited.

The second element of the question requires the candidate to evaluate the conclusions. This evaluation may take a number of formats. Some will develop the assessment of the results in relation to the original hypothesis in detail and this is a valid approach. Others will evaluate the conclusions against the sampling method, collection techniques and accuracy of acquisition and recording. This is also a valid approach.

Level 3 8-10 marks	Good description of conclusions related to identified investigation. Good evaluation of conclusions
Level 2 4-7 marks	Some description of conclusions related to identified investigation. Some evaluation of conclusions.
Level 1 0-3 marks	Basic description of conclusions.

Assessment Objectives Grid for Geography - G2

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)		2	3	5	1.6
(b)	8	2		10	1.6
(c)	7	3		10	1.3
	15	7	3	25	
Question 2					
(a)		2	3	5	2.4
(b)	8	2		10	2.4/5
(c)	7	3		10	2.2
	15	7	3	25	
Question 3					
(a)			7	7	
(b)	4	4		8	
(c)	2		8	10	
	6	4	15	25	
	36	18	21		
	(48%)	(24%)	(28%)		

Using the mark bands

The aim is to find the descriptor that conveys most accurately the level attained by the candidate, using the best-fit model. A best-fit approach means that marks should be awarded for a response that most fairly matches different aspects of the descriptor.

GCE GEOGRAPHY G2

CHANGING HUMAN ENVIRONMENTS

- Q.1 (a) Use *Figure 1* to describe the global pattern of the percentage of women aged 15–49 with HIV. [5]**

Allow 1 mark for a comment about location with an extra mark for information from the resource to support that comment, up to a maximum of 5 marks.

Some suggested responses are given below:

- Sub-Saharan Africa has by far the greatest percentage of women with HIV (1 mark).
- The highest percentage, over 20% (1 mark), is in southern Africa (1 mark).
- The second highest (10 to 19.9%) (1 mark) is located further north, but still in southern Africa (1 mark).
- The third and fourth highest, from 2 to 9.9%, are located in west and east Africa (2 marks).
- Outside Africa (1 mark) the largest percentage of women with HIV is in Russia which has 1 to 1.9% of women with HIV (1 mark).
- The lowest are north Africa, North America, western South America, western Europe and Australasia which have less than 1% of women with HIV (2 marks).
- Most of South-East Asia also has less than 1% (2 marks).
- But some countries, such as China, have no data (2 marks).

Award a maximum of 3 marks for direct lifts and no global pattern e.g. Belize at 20+.

- (b) Outline some consequences of high mortality rates. [10]**

Consequences of high mortality rates include:

- The immediate effect of many deaths on society and economy.
- Action to reduce the high number of deaths.
- Action to redress the balance of the population structure by increasing the younger population.
- Accept consequences of specific mortality rates.
- Any other valid approach.

Some suggested responses are given below.

- (i) Consequences of a high death rate could be where high mortality rates are prevalent: Countries in stages 2 and 3 of the demographic transition, such as Sierra Leone [16/1000] and Central African Republic [16/1000].
- Maintaining a high birth rate to compensate for a relatively high death rate thus maintaining a population in danger of severe resource shortages.
 - Action by governments, NGOs and international aid agencies to help reduce death rates by investing in health structures to help reduce infant mortality; economic structures, such as employment opportunities, leading to greater personal wealth/security and hence well-being; social structures such as pension schemes so better health care could be afforded in later life; environmental structures such as improving sanitation would reduce deaths and education structures such as health and safety information including issues associated with road traffic.

- (ii) Consequences to countries suffering the ravages of HIV/AIDS, such as Lesotho [16], Swaziland [15] could be:
- Social trauma, as family members die young.
 - AIDS can be sex selective increasing the sex ratio differences. If too many men die the community loses an important social and economic stratum of society. Swaziland, for example, is attempting to deal with the issue of HIV/AIDS by maintaining an HIV surveillance programme, promoting condoms by free distribution, screening all donated blood, improving health care for those living with HIV particularly to aid prevention of mother to child transmission and improving women's access to prevention services.
- (iii) Consequences to countries at war: Afghanistan [16] could be:
- The misery and dislocation that war occasions.
 - Refugee creation (Syria to Jordan).
 - International pressure to either increase troop numbers, or reduce them.
- (iv) Consequences to Eastern European countries which have relatively high death rates such as Ukraine [15], Russia [14] and Bulgaria [15] could be:
- Government action to reduce the death rate by improving the health and well-being of society; by improving economic opportunities for employment and increasing pay; by addressing environmental issues such as industrial disease, pollution and injuries, which are major factors causing deaths; by addressing social issues of drug taking, smoking and alcohol consumption; by encouraging births with incentives such as "create a baby day" to redress the balance of high death rates.
- (v) Mortality rates in stage 5 of the demographic transition may be worthy of a 'high' classification as this is when mortality rates begin to increase: such as Germany [10], Italy [10] and Japan [10]. In stages 4/5, health care is much better, leading to longer life expectancies, but consequently, ironically, higher death rates. Consequences could be:
- Stage 5 countries will continue to prolong the lives of their citizens with medical advancement, but at the same time may encourage the demographics of the country to change by allowing younger workers into the country. Also, by various policies, (child benefit, paternity leave, child tax credit), to encourage procreation, thus reducing the impact of an ever ageing population. In so doing the nation's overall death rate will reduce.
 - Providing more care for the elderly.
 - Providing education advice on healthy lifestyle choices regarding smoking, drinking, safe sex, eating, exercise and driving standards.
 - Engaging in the debate about the right to die and euthanasia with more urgency.

(All figures derived from www.prb.org data sheet 2012).

Level 3 8–10 marks	Good knowledge and understanding of at least two consequences of high mortality rates. Good development of example(s).
Level 2 4–7 marks	Some knowledge and understanding of consequences of high mortality rates. Allow one consequence in detail. Example(s) are evident and enhance the outline.
Level 1 0–3 marks	Basic knowledge and understanding of consequences of high mortality rates. Brief consequence(s). Little use of example(s). Maximum level for causes of high mortality rates; some knowledge of mortality.

(c) Contrast the characteristics of two types of migration. [10]

Note - WJEC's list of command words defines contrast as requiring only differences. Do not credit similarities.

Characteristics of migration may include some of the following:

- age selective
- sex selective
- race selective
- religion selective
- wealth selective
- involve few people or millions
- occur over a variety of distances (including "circulation" e.g. commuting)
- can be permanent or temporary
- can be national or international.

Any two types of migration at any scale can qualify as a correct answer with differences between them emphasised thus qualifying for higher credit. Some suggestions of types of migrations which could be used follow, but these suggestions do not preclude other valid examples.

- Voluntary (counter-urbanisation) and forced (refugees from Syria to Jordan).
- Permanent (retirement migration from the UK to Spain) and temporary (student accommodation and overseas employment, perhaps in the diplomatic service).
- Reasons for migrations provide contrasts: economic (Bulgarians to the UK); social (holidays); environmental (fleeing from a tectonic event such as the Soufriere volcano in Montserrat); political (civil wars occasioning many people movements such as the Arab Spring countries); demographic overpopulation leading to resources depletion (many examples in Africa).

Level 3 8–10 marks	Good knowledge and understanding of two types of migrations with contrasts between them emphasised. Good development of examples.
Level 2 4–7 marks	Some knowledge and understanding of two types of migrations. The migrations could be well described, but contrasts are undeveloped. Examples are evident and enhance the contrast.
Level 1 0–3 marks	Basic knowledge and understanding of two types of migrations. Little use of examples.

Q.2 (a) Use Figure 2 to describe changes in retail space in use in the UK. [5]

Award 1 mark for a statement and 1 mark for illustrative confirmation from the graph, up to a maximum of 5 marks.

Some suggested responses are given below:

Changes over time

- Out of town retailing growth declined fairly steadily, with a blip in 2006, from 6% growth in 2001 until no growth in 2009. Thus there was continuous, but declining growth until 2009. After 2009 it had a resurgence to 1% growth in 2010, but never demonstrated negative growth during the eleven years.
- Town centre retailing has been dominated by negative growth (decline) throughout the eleven years with the exception of a 0.5% increase in 2003 and a 1% increase in 2007.

Changes between the two graphs

- Throughout 2001 to 2011, out of town growth has in every year been higher.
- In 2011 town centre retailing staged a recovery, still a decline, but only of 2.5%, up from a decline of 4.5% the previous year whereas out of town retailing demonstrated a constant positive growth of 1% during the last two years of the graph.

Award a maximum of 3 marks for a direct lift from the graph.

(b) Outline the impacts of changes in the rural-urban fringe. [10]

A variety of approaches may be expected, all of which are valid.

- Answers that entirely focus on the impact of changes within the fringe.
- Answers that focus entirely on how fringe changes have had an impact elsewhere away from the fringe, in the CBD for example.
- Answers which combine the above two approaches in various proportions.

The question asks for **impacts** and a review of changes themselves would not be sufficient for Level 3.

Some suggested changes and impacts in the rural-urban fringe.

- Settlement change in physical size, shape and appearance impact on the environment as physical ecosystems change to human ones.
- Demographic change in numbers and the nature of people living in fringe settlements may impact by inducing tension between different groups; locals and newcomers, young and old.
- New suburban accretions eating into the fringe impact on the scenic quality and perceived attractiveness of a rural landscape.
- Out of town developments in retailing, office parks, leisure and recreation (leisure centres, golf courses, cinemas) impact by creating a busier environment with more journeys on narrow rural roads with safety issues and associated traffic congestion and vehicle pollution.

- Improvement in communications: new motorway junctions and ring roads improve accessibility but degrade the existing agricultural and/or forest environment.
- Decline in agricultural land use impacts by creating derelict and abandoned farms which some perceive as unsightly whilst other celebrate the newly colonising biodiversity which follows.
- Diversification in farmland activity: paintballing and quad biking impact by occasioning more noise and disturbance in the fringe area.

Some suggested changes in the rural-urban fringe having an impact on CBDs.

- Economic decline. As CBDs lost many retail, entertainment, shopping and office businesses to out of town developments a “dead heart” was recognised: empty shops, some dereliction, unkempt and untidy and a preponderance of charity shops.
- Redevelopment and/or reinvigoration of CBDs to stem or reverse the decline. Large, complete redevelopments of city centre retailing sites such as Birmingham’s newer Bullring, Bristol’s Cabot Centre and Cardiff’s St. David’s 2.
- Environmental improvements have been great with large expansions of traffic free areas, street repaving, fancy lighting, flowers, fountains, hanging baskets etc. Street entertainment is being provided to draw in custom. Park and ride schemes have been introduced and late night shopping.
- Apartments are often included in CBD redevelopment schemes which draw back residents to city centres and hence more and convenient custom for retailers.

Level 3 8–10 marks	Good knowledge and understanding of the impacts of changes in the rural-urban fringe within the fringe or elsewhere. Good development of example(s).
Level 2 4–7 marks	Some knowledge and understanding of the impacts of changes in the rural-urban fringe within the fringe or elsewhere. Example(s) are evident and enhance the explanation.
Level 1 0–3 marks	Basic knowledge and understanding of the impacts of changes in the rural-urban fringe, within the fringe or elsewhere. Little use of example(s).

(c) **Explain why different groups of people live in different areas within settlements.** [10]

Some suggested responses for urban settlements are given below.

Economic

- Filtering out from the inner city to the suburbs with increasing wealth.
- Gentrification and redevelopment attracts the more wealthy and single toward the centre.
- Student districts emerge due to the location of inner city universities and the enormous growth in student numbers.

Social

- Family life cycle: with single persons nearer the urban centre, families further out.
- The more wealthy and aspirational may be drawn to locate within the catchment area of what is perceived to be a suitable school.

Cultural

- Colour/race/ethnicity differences often occasion segregated living areas for social, religious and cultural security.

Political

- Planning decisions by national and local government, such as where infrastructure and housing types are located. The location of council housing for example.

Environmental

- People wishing to reduce their journey-to-work costs and time may wish to live nearer the inner city to be closer to business, shops and entertainment.
- Alternatively some people will prefer to live towards the rural-urban fringe to be closer to the countryside and fringe facilities.
- Land at higher altitudes may attract the wealthier.
- Low lying land has traditionally attracted the less wealthy.
- The prevailing wind may impact on land use.
- Scenic views, at the coast for example, may have a land use influence.

Answers incorporating 'social segregation' in rural settlements are acceptable.

Some suggested responses may include:

- 'Townie' newcomers v traditional rural folk.
- Wealth often conditions the type of dwelling and its location within a rural settlement. Newer housing accretions may be occupied by a variety of different types of people: second homers, council tenants, housing association tenants, exclusive private 'walled' estates.
- Communication routes can often pull settlements out along these routes with the more accessible route attracting better types of housing. The existence of a station can attract 'starter homes' for commuters.
- Valleys, hills and scenic views can all influence where different housing types may locate.
- Industrial villages may focus cheaper housing near the industry, mineral extraction, for example.

Do not credit migration solely between settlements.

Level 3 8–10 marks	Good knowledge and understanding of why different groups of people live in different areas within settlements. Good development of example(s).
Level 2 4–7 marks	Some knowledge and understanding of why different groups of people live in different areas within settlements. Example(s) are evident.
Level 1 0–3 marks	Basic knowledge and understanding of why different groups of people live in different areas within settlements. Little use of example(s).

Q.3 (a) Use Figures 3a and 3b to describe the advantages of interpreting land use from the aerial photograph rather than from the map. [7]

The aerial photograph shows far more land use detail than the map. The only real benefit of the map is that it names some features and picks out the water areas very well. There is no credit, however, for mentioning the advantages of the map. Answers only need to cover the advantages of aerial photographs, but some reference to the map is necessary in order to justify those advantages.

Some suggested responses are given below.

Advantages of using the aerial photograph rather than the map:

- Individual fields can be seen in the NE and East perhaps to enable recognition of either pasture or arable land. The map shows field boundaries, but with no indication of different land uses between fields.
- Land uses can easily be distinguished, such as housing in the NW, perhaps industrial buildings across the centre and a dock with an exit to the sea or river in the SW. There is car parking to the south of the dock, with circular storage tanks and a possible power station with cooling tower to the SE. Land uses cannot be so easily distinguished from the map.
- Individual street patterns can be established. In the residential areas there are more rectangular roads in the NW corner indicating perhaps an older development than the more curved and haphazard residential road pattern to the east of the rectangular pattern. It is far more difficult to distinguish individual streets on the map at this scale.
- Individual buildings can be seen, such as those to the north of the dock which could be warehouses.
- Individual buildings can be approximately sized by using the scale. The green roofed building to the south of the dock is approximately 450m long by 110m wide.
- Roads can be clearly distinguished and their importance can be seen by their width: a dual carriageway runs west to east in the middle of the photograph.

Level 3 6–7 marks	Good description of the advantages of using the aerial photograph rather than the map to interpret land use. Specific references to both the photograph and the map are evident.
Level 2 3–5 marks	Some description of the advantages of using the aerial photograph rather than the map to interpret land use. Generalised references to the photograph and/or map.
Level 1 0–2 marks	Basic description of the advantages of using the aerial photograph rather than the map to interpret land use. Little, if any reference to the resource.

- (b) **Outline how a questionnaire survey may be undertaken in an investigation within the area shown in Figure 3a.** [8]

“Candidates should have been introduced to questionnaires including the necessity to compose valid and meaningful questions that answer the question or research the issue. The importance of piloting questions and sampling frameworks should be studied.” (Specification page 16)

Candidates should assume that the questionnaire will be on a topic by which responses can be collected somewhere within the area of Figure 3a; for example, within the dock area, an industrial area, a housing estate or rural-urban fringe. Answers which fail to make any overt or implied connection with Figure 3a cannot achieve Level 3.

Some answers may include questionnaire examples conducted outside the area shown by Figure 3a, such as their own fieldwork investigation within a CBD; such a response cannot achieve a Level 3.

Answers may comprise some of the following elements.

- A valid question, hypothesis, statement or issue which forms the core reason for gaining the information.
- Risk assessment.
- A pilot survey to check on the validity of the questions.
- The number of respondents that are required for a valid statistical outcome.
- Bias avoidance
- Sampling frameworks.
- The age, sex and ethnicity of respondents (sampling).
- Questions should be written with alternative answers and tick-boxes for speed and ease of collection and subsequent analysis of data. Examples of questions would be a useful inclusion.
- Where, when and how to conduct the survey; face to face, door to door, by post?
- How the weather may impact on the results.
- How the time of day, day of the week and/or season may affect results.

Level 3 7–8 marks	Good knowledge and understanding used to outline how a questionnaire survey may be used in an investigation within the area shown in Figure 3a .
Level 2 4–6 marks	Some knowledge and understanding used to outline how a questionnaire survey may be used in an investigation within the area shown in Figure 3a . Good description of the generic questionnaire process. No overt or implied connection with Figure 3a . Provides a competent questionnaire example which is not represented in Figure 3a .
Level 1 0–3 marks	Basic knowledge and understanding used to outline how a questionnaire survey may be used in an investigation within the area shown in Figure 3a . Basic generic description of the questionnaire method. No overt or implied connection with Figure 3a . Provides a basic questionnaire example which is not represented in Figure 3a .

- (c) **Outline the conclusions of your investigation into a changing human environment.** [10]

You should state clearly the question that you have investigated.

Marking will depend on the quality of response and must be adjusted to suit individual studies presented.

An outline of what the investigation set out to achieve would be expected with a review of whether or not the initial hypothesis, question and/or issue had been realised.

Some candidates may incorporate an evaluation as part of their conclusion, as this is listed as part of stage 5 (conclusion and evaluation) in WJEC's document 'the Enquiry Approach which can be applied to G1, G2 and G3B' which can be found on the GCE Geography web page.

Level 3 8–10 marks	Good knowledge and understanding of the conclusions. Very good development using the context of the investigation.
Level 2 4–7 marks	Some knowledge and detailed understanding of the conclusions using the context of the investigation.
Level 1 0–3 marks	Basic knowledge and understanding of the conclusions. Basic development using generic and generalised responses.

Assessment Objectives Grid for Geography G3

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
G3 A Themes 1-3	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3 A Themes 4-6	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3B (a) (b)	3 6 (geographical concepts)	3 3 (apply understanding and evaluation of techniques)	4 6 (use a range of skills & techniques)	10 15
	35 46%	20 27%	20 27%	75 (100%)

Command Words WJEC A2 Geography

Account	Give reasons for.
Assess	This is an evaluative question - weigh up the importance of the subject. This means that there are a number of possible explanations/outcomes. You need to give the main ones and then say which you tend to favour.
Classify	Divide into groups or categories.
Discuss	Usually you are expected to build up an argument about an issue and to present <u>more than one side</u> of the evidence with supporting examples. This creates a written debate identifying both positive and negative points and then you must reach a conclusion from the debate. You should both describe and explain. Try to create a balanced answer and summarise your view at the end.
Evaluate	<p>Evaluate requires an overall statement of the overall quality or value of the feature/issues being considered. You need to <u>state a viewpoint</u>, after consideration of the evidence. In both cases your own judgement/opinion is wanted. Although an opinion cannot be marked incorrect, credit is given for the justification of the position you've taken up. It is usually best not to adopt an extreme viewpoint; a balanced answer is best.</p> <p>With assess and evaluate, particularly in G4, there are many occasions where there are two sides to an argument and evidence should be put forward for both sides, or that certain strategies or actions may have beneficial outcomes but also costs attached to them.</p> <p>Opinions and conclusions should be presented clearly and supported with appropriate evidence and sound argument.</p>
To what extent	Give possible explanations for and against and justify which you tend to favour
How far do you agree	
Examine	Investigate in detail, offering evidence for or against a point of view or judgement.

G3A

SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

Summary Descriptor	Marks out of 25	Criteria
Very good	21- 25	<ul style="list-style-type: none"> • A response that demonstrates a high order of conceptual understanding and an appreciation of the holistic nature of Geography within the context of the question. • Critical analysis, synthesis and assessment of the connections between the different elements of the subject. • Wide-ranging, thorough and accurate knowledge. • Detailed and possibly original exemplification. • Well-directed and well-annotated sketch maps/diagrams. • A well-structured, coherent and logical response. • Complex ideas expressed clearly with few, if any, errors in grammar, punctuation and spelling.
Good	16 - 20	<ul style="list-style-type: none"> • A confident grasp of relevant concepts and principles. • Sound analysis, synthesis and assessment of some of the connections between the different elements of the subject. • Good factual knowledge and understanding. • Appropriate exemplification. • Appropriate, basically accurate annotated sketch maps/diagrams. • The response is clear, coherent and appropriately structured. • The quality of English is consistently sound. <p><u>At the lower end</u></p> <ul style="list-style-type: none"> • Arguments may not be fully developed. • Some lack of balance. • Minor flaws in logical ordering or linguistic expression. • Diagrams not well-integrated.
Average	11 - 15	<ul style="list-style-type: none"> • A reasonable grasp of relevant concepts and principles. • Arguments are partial with points limited in range, depth and development with only limited linkage. • A secure, straightforward base of knowledge and understanding. • Examples are superficial and may be variable. • Limited use of basic diagrams. • There may be some loss in coherence. • Language is correct but simplistic. <p><u>At the lower end</u></p> <ul style="list-style-type: none"> • An unfocused or potentially relevant response. • Weaknesses in structure and expression.
Marginal	6 - 10	<ul style="list-style-type: none"> • Some grasp of concepts and principles is evident, but there may be inaccuracies and misconceptions. • Arguments are weakly presented and most points are generalised or of partial relevance to the question with little or no linkage. • Some knowledge and understanding, but it is limited in scope. • There is limited use of examples. • Sketch maps/diagrams contain inaccuracies. • The response lacks fluency. • Expression may be poor and there are basic errors in the spelling of geographical terms. <p><u>At the lower end</u></p> <ul style="list-style-type: none"> • Understanding of the question is weak.
Weak	1 - 5	<ul style="list-style-type: none"> • There is minimal understanding of subject material. • Organisation of material is poor and although occasional relevant points are made, much is irrelevant. • The response demonstrates poor knowledge and understanding and contains errors. • Little use of examples or if evident they are irrelevant to the question. • The response may be incomplete or difficult to follow. • The answer is poorly written and contains basic errors in the spelling of geographical terms.

GCE GEOGRAPHY
CONTEMPORARY THEMES IN GEOGRAPHY G3
SECTION A

INFORMATION FOR EXAMINERS

Mark the answers according to the level descriptors in the generic mark scheme and when determining the mark and taking everything into account, allocate it on the principle of 'best fit'. The mark awarded should be the one that most fairly reflects the achievement against the level descriptor. It is not necessary for every single aspect of a level descriptor to be met for the mark awarded.

If a candidate answers in a way that is not anticipated by the mark scheme, but has an acceptable answer to the question set, please use the generic mark scheme to determine an appropriate mark. If in doubt, please consult your team leader.

Theme 1 Extreme Environments

Q.1 Assess the effectiveness of strategies used to manage human activity in desert environments. (1.3) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of human activity in desert environments;
- ii. should show knowledge and understanding of strategies used to manage human activity in desert environments;
- iii. should show the ability to assess the effectiveness of strategies.

Indicative content

In relation to desert environments, candidates may examine the threats posed by population growth, agriculture, tourism and mineral exploitation. They may refer to the negative impacts on a variety of elements of the desert environment. Comment could be made on the role of agriculture in desertification at a continental scale, the pollution of soils and ecosystems by mineral exploitation such as that in Australia or the damage caused by off-roading in Dubai. Do not expect all these for full marks. When discussing the strategies used to manage human activity, candidates may present a range from conserving the desert environment, alleviating the impacts of human activity, controlling the use of desert environments and monitoring the impacts of human activity. Candidates may display a grasp of a number of these, but do not expect all to be considered as candidates may choose to use examples that enable only a limited number of strategies to be discussed. The assessment may come in the form of comparisons in place elsewhere to manage human impact or on the basis of the extent to which they reduce the impact of different forms of human activity. Where the strategies are only described and there is minimal assessment, the answer is unbalanced and unlikely to reach beyond the **average** category. Expect the effectiveness of strategies to be assessed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category and examples to be well integrated in the answer. **Average (Level 3)** responses should be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.2 Examine the characteristics that make the tundra environment extreme.
(1.4) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the climatic, biotic and soil characteristics of the tundra environment that make it extreme;
- ii. should show the ability to examine the inter-relationships between climatic, biotic and soil characteristics that make the tundra environment extreme.

Indicative content

Expect candidates to examine the climatically stressed arctic and/or alpine tundra environment with short and cool growing seasons. Latitudinal tundra occurs in the Arctic and to a much lesser extent in the Antarctic, where the environments are characterised by cool, short growing seasons. Altitudinal tundra occurs under a similar climatic regime. After temperature, the second most-important environmental factor affecting most tundra communities is moisture. However, there are important environmental differences between these two tundras, with the alpine type being subject to much larger variations of daily temperature during the growing season, as well as more intense inputs of solar radiation during the day. In contrast, arctic tundra can experience continuous exposure to the sun's rays, with 24-hour days for an extended period during the growing season. The interrelationships may be discussed in terms of the need for special adaptations required by biota to overcome climatic and soil constraints. Where only the tundra climate is mentioned, the answer is unbalanced and unlikely to reach beyond the **average** category. Expect the range of climatic, biotic and soil characteristics to be linked and discussed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category and examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Theme 2 Landforms and their Management

Glacial Environments

Q.3 Describe, and assess the role of, depositional processes in the development of one or more glacial landforms.

(1.3) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the processes of deposition operating in a glacial environment and the resultant landforms;
- ii. should show the ability to assess the role of depositional processes in the development of one or more glacial landforms.

Indicative content

Expect candidates to examine the production of one or more depositional landforms that are the result of predominantly glacial or fluvioglacial processes. Candidates may describe the processes and examine the production of landforms that are the result of predominantly glacial processes (lodgement till, drumlins, erratics, moraines) or landforms that may be the result of fluvioglacial deposition (eskers, kames, kame terraces, outwash plains, kettle holes). The focus of the essay is the relationship between process and landform. Some candidates may look at deposition alone whilst others may look at the relative influence of deposition compared to erosion. Either approach is acceptable and open to maximum credit. Candidates who focus on a set of landforms that are essentially erosional can only reach the top of **good (Level 4)** as long as the reference to deposition as an influence on their development is central to the discussion. Expect the role of depositional processes to be assessed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category and examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.4 Describe the landforms and examine the processes associated with deglaciation. (1.4) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the landforms and processes associated with deglaciation;
- ii. should show the ability to examine the processes associated with deglaciation.

Indicative content

Expect candidates to describe the landforms and examine the processes associated with deglaciation. Candidates could examine the production of landforms that may pass through a series of process changes from glacial to periglacial into present day conditions. Relevant geomorphological processes could include mass movement processes (modifying valley profiles largely created by glacial erosion), fluvial processes (resulting in the infilling at the head of ribbon lakes), or weathering processes (breaking down glacial and fluvio-glacial deposits). Processes and landforms associated with deglaciation include periglacial processes and landforms. On areas of low relief important periglacial processes are frost heaving and thrusting and associated periglacial landforms are pingos and patterned ground. On slopes important periglacial process are freeze-thaw weathering and solifluction and associated periglacial landforms are blockfields, scree slopes and solifluction lobes and benches. Expect the landforms to be described and processes to be examined in a detailed and balanced way for candidates to reach the **very good (Level 5)** category and examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Coastal Environments

Q.5 Describe, and assess the role of, depositional processes in the development of one or more coastal landforms.

(1.3) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the processes of deposition operating in a coastal environment and the resultant landforms;
- ii. should show the ability to assess the role of depositional processes in the development of coastal landforms.

Indicative content

Expect candidates to examine the production of one or more coastal landforms that are the result of depositional processes. Candidates could examine the production of landforms that are the result of predominantly marine depositional processes (beaches, spits, barrier beaches, tombolos, cusped forelands, sand dunes) or marine and fluvial depositional processes (saltmarshes, deltas) or examine the relative importance of sea level changes to deposition (estuaries). Some candidates may look at deposition alone whilst others may look at the relative influence of deposition compared to erosion. Either approach is acceptable and open to maximum credit. Candidates who focus on a set of landforms that are essentially erosional can only reach the top of **good (Level 4)** as long as the reference to deposition as an influence on their development is central to the discussion. Expect the role of depositional processes to be assessed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category and examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.6 Assess the importance of geology in the development of coastal landforms.

(1.4) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the effect of the character of individual rocks and lithology (hardness, mineral composition, solubility) on the development of coastal landforms;
- ii. should show knowledge and understanding of the effect of geological structure (bedding, dip, faulting, and joints) on the development of coastal landforms;
- iii. should show the ability to assess the importance of geology on the development of the coastal landforms discussed.

Indicative content

Expect answers to deal with at least two landforms or a stretch of coast. Some candidates may structure the whole answer around two or more selected landforms, but it is permissible for a broader approach to be taken with reference being made to a number of landforms by way of illustration. The influence of geology on landforms can readily be examined in a coastal environment as follows: discordant and concordant coastlines; differential erosion of coastlines; features of coastal erosion – cliff profiles; caves, arches, blowholes; marine transportation – nature of load carried which provides the ‘tools’ for erosion; marine deposition – pebble – gravel – sand – alluvium – mud sequence in a beach or spit sequence. Expect the role of geology to be assessed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category, with reference being made to other factors that influence the development of coastal landforms besides geology such as differences in energy levels and human intervention. Expect examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Theme 3 Climatic Hazards

Q.7 Describe and explain the global patterns of surface pressure and winds. (1.1) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the global patterns of surface pressure and winds;
- ii. should show knowledge and understanding of the reasons for these patterns.

Indicative content

Expect candidates to demonstrate their knowledge and understanding of global atmospheric circulation and its influence on the formation and location of global patterns of surface pressure and winds. Solar energy (insolation) 'powers the atmospheric system and the energy circulations within it' – the amount of solar energy (heat budget) received varies with latitude. The tropics have an energy surplus as they gain more from insolation than is lost by radiation, but the higher temperate and polar latitudes have an energy deficiency, losing more by radiation than is gained by insolation. This imbalance in energy distribution sets up a transfer of heat energy from the tropics to higher latitudes. This global transfer of energy is the basis of global atmospheric circulations which give rise to the low and high pressure belts and the planetary wind systems associated with the Earth's major convection cells – the Hadley, Ferrel and Polar Cells. Expect candidates to demonstrate a broad knowledge and understanding of the link between global atmospheric circulation and the distribution of surface pressure and winds, with surface winds blowing from high pressure to low pressure, but deflected by the Coriolis force. The main features are – low pressure, ascending air around the Tropics, associated with North-easterly and South-easterly **Trade Winds**, feeding into the ITCZ; **Sub-Tropical Highs**: these are the descending limbs of the **Hadley Cells**, large convective cells in both hemispheres with **Mid-Latitude Westerlies** generated between high pressure at 30° and low pressure at 60° N and S. The **Polar Easterlies** blow from high pressure areas at the Poles towards areas of low pressure at 60° N and S. Expect answers to provide a detailed description and clear explanations of global patterns of pressure and surface winds to get into the **very good (Level 5)** category of assessment. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.8 Discuss the effects on human activity of hazards associated with high-pressure systems.

(1.5) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the hazards associated with high-pressure systems;
- ii. should show knowledge and understanding of a range of effects on human activity of high-pressure hazards; better candidates may differentiate between the short-term and long-term effects of high-pressure hazards;
- iii. should show the ability to discuss the effects.

Indicative content

Expect candidates to refer to hazards associated with high-pressure systems in either a temperate or tropical region. The hazards associated with high-pressure systems in tropical regions include drought, a falling water table, loss of vegetation, wild fires, soil erosion and desertification. The hazards associated with high-pressure systems in temperate regions in summer are drought, falling water tables and the loss of vegetation and winter hazards may include frost and fog, with air pollution intensifying the fog conditions.

The effects on human activity are demographic, economic and social and can be categorised as both direct and indirect. In tropical regions there may be reference to demographic effects at both time scales such as deaths and long-term migration. Economic effects may analyse losses in the short term such as reduced crop and livestock production, unemployment and increased food prices and costs in the long term, such as reduced tax revenues. Social effects may include observations on health (malnutrition, water rationing, increased fire hazards) and bereavement. There may also be consideration of the effects on the physical environment such as salinisation that impact human activity.

In temperate regions there may be reference to economic effects such as reduced crop and livestock production, the consequences for farmers and businesses, increased food prices, unemployment and reduced tax revenues during summer droughts and the effect on shipping and other forms of transportation of winter fog and frost. Social effects may include observations on health (water rationing, increased fire hazards in summer and atmospheric pollution and difficult driving conditions in winter) and disruption to schools. There may also be consideration of the effects on the physical environment such as ground subsidence that impact human activity.

The discussion may take a number of different approaches; an assessment of which effects are the most important, demographic, social or environmental; an assessment of whether short- or long-term effects are the most significant or an evaluation of the effects in different areas, MEDC/LEDC. Expect answers to provide exemplified detail of the effects of hazards associated with high-pressure systems together with some discussion of these to get into the **very good (Level 5)** category of assessment.

Average (Level 3) responses will be characterised by secure, but generalised, content, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 4 Development

Q.9 Describe how and explain why development patterns are changing.

(1.4) [25]

Guidance

Candidates:

- i. should show a knowledge and understanding of why changes are taking place;
- ii. should show an understanding of the effect of the above on patterns of development.

Indicative content

Expect candidates to make reference to the factors responsible for change including changing definitions and concepts of development, economic forces, changing external relationships and changing internal conditions which will influence a particular country's or world region's position in the global development spectrum. Expect reference also to the effect of the changes identified on accepted patterns of development such as the North/South divide and LEDC/MEDC divisions. The emergence of South East Asian NICs and the BRIC countries (Brazil, Russia, India and China) may be used as a good illustration of the effect of economic change on changes in pattern. Candidates may demonstrate their knowledge and understanding that individual countries have changed considerably. In terms of economic change some countries have declined or stagnated, some have developed slowly and some have developed beyond all expectations. The term *differentiation* is sometimes used to describe such changes. The 'Third World' or LEDCs can no longer be viewed as a homogenous block as different types of Third World/LEDC economies have emerged (NIC, RIC, OPEC, BRIC, CIVETS, MINT). In addition the Second World has collapsed and many First World countries are experiencing financial difficulties (PIIGS). Economic growth is also occurring among low-income countries in Africa and new middle-income countries include Ghana and Zambia with the African continent increasingly attracting more foreign direct investment which is projected to rise to \$150bn by 2015. Globalisation is the process by which it is now easier for companies and other organisations to operate internationally. The operations of TNCs (FDI), computer and transport technologies that have opened up the flow of information and communications together with the role of the WTO and trade blocs (such as NAFTA encouraging greater economic co-operation between Mexico, Canada and the USA) have enabled this to happen. All nations are open to outside influences of trade, multi-national operations and these external relationships have strongly influenced the development process. Expect answers to provide a clear description of changes in development patterns together with sound explanatory comment to get into the **very good (Level 5)** category of assessment. Expect examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.10 Making the world more equal is hindered by the operation of trade blocs.’ Discuss.

1. (1.5) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the way in which trade blocs hinder the closing of the development gap;
- ii. should show the ability to discuss the extent to which other factors such as Third World debt, social constraints and cultural barriers are responsible.

Indicative content

Candidates are likely to agree broadly with the viewpoint that a major obstacle to development is the operation of trade blocs, which greatly benefit each member of the bloc but work to the detriment of countries outside the bloc as they face quotas or tariffs that make it difficult to sell the commodities they have to offer, undermining their economic development. Within blocs (EU, NAFTA), regulations often make it possible for producers, particularly of food crops, to generate huge surpluses. The surpluses are then sold, below cost price, on world markets (dumping). Countries outside the blocs find that the commodities being ‘dumped’ are the ones they have to sell, and below the price that would give them any profit. So their only means to economic development is undermined. Candidates may however argue that other factors such as indebtedness hinder the closing of the development. Countries that were at a low level of development in the past were loaned money through the World Bank and International Monetary Fund. Money that was generated firstly had to be spent on paying interest on the loan before repaying the debt, and reinvestment in the economy was impossible. Such countries became caught in a poverty trap. They became the Heavily Indebted Poor Countries (HIPC). Special arrangements to relieve this debt have been developed by richer nations, such as the Multilateral Debt Relief Initiative (MDRI) but many believe this is still not enough to allow real development to take place. Social constraints and cultural factors also act as a barrier to development. However a more critical viewpoint may be that trade blocs may help to make the world more equal (for example countries within a trading bloc such as ASEAN) or that other social and political factors operate to reduce the development gap such as debt agreements, aid and fairer trade for a variety of motives including alleviating international tension, hunger reduction and a sense of fairness. Expect the statement to be discussed in a detailed and balanced way for candidates to reach the **very good (Level 5)** category. Expect examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Theme 5 Globalisation

Q.11 Describe how and explain why companies globalise and shift locations. (1.2 & 1.3) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of the operations of TNCs;
- ii. should show knowledge and understanding of the reasons for these operations.

Indicative content

Candidates may begin with a definition of TNCs. The UN defines TNCs as corporations that 'possess and control means of production or services outside the country in which they were established'. Their size is measured by revenues, market capitalisation and, sometimes, employees. Most of the world's largest companies are American and include both manufacturing (General Electric) and service industries (Wal-Mart Stores). Significantly, the headquarters of TNCs are concentrated in the Brandt's 'North', but increasingly in Brandt's 'South'. A description of the globalisation and shifting locations of companies may include reference to the decentralisation that has occurred as a result of investment by TNCs in the three generations of NICs. NICs have created large companies of their own which are locating factories in developed countries such as Britain. Location factors influencing the global shift include the availability of a large, disciplined and skilled workforce, suitable infrastructure, political stability, government incentives and a large domestic market. When examining the reasons for such changes candidates are likely to focus on the economic (Product life cycle and NIDL, consumer demand in MEDCs), technological changes (improvements in transport, use of the internet, tele-sales) and political changes (trading blocs and role of international organisations). Expect answers to provide a clear description of how companies have globalised together with developed explanatory comment to get into the **very good (Level 5)** category of assessment. Expect examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.12 Examine the causes and effects of *cultural* globalisation.

(1.6) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of some of the causes of cultural globalisation;
- ii. should show knowledge and understanding of the effects of cultural globalisation;
- iii. should show the ability to examine the causes and effects of cultural globalisation.

Indicative content

Candidates are expected to argue that globalisation has led to most countries being interlinked culturally. At the heart of much of the rise of cultural globalisation has been the massive expansion of the entertainment and communications industry fuelled, in particular, by the spread of television. Analysts point to the way new technologies and their exploitation such as commercial air travel, satellite television, mass telecommunications and the internet have created a world where billions now consume identical cultural products – such as music, soap opera and sporting events – and employ cultural practices they would never otherwise have encountered – such as foreign food preparations and foreign words and phrases. The internet is central to this new development, but also the spread of similar products often styled by TNCs (resulting in a product and lifestyle monoculture) and shared amongst people from many nations and cultural backgrounds. The effects of cultural globalisation include the lack of local cultural diversity, the loss of cultural identity and the development of a homogenised, westernised consumer culture with greater cultural integration. However the case for reduced cultural diversity is not a clear-cut one, some interesting and complex changes in the geography of consumption are taking place at regional and local scales, such as the McDonalds' menus in India remaining entirely vegetarian. Some candidates may also point to the rise of nationalism and fundamentalism as a reaction to cultural uniformity. Expect answers to provide an examination of the causes and effects of cultural globalisation to get into the **very good (Level 5)** category of assessment. Expect examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Theme 6 Emerging Asia

CHINA

Q.13 Describe and account for variations in economic growth in China between coastal areas and the interior.

(1.2) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of spatial variations in economic growth in China;
- ii. should show knowledge and understanding of the reasons for these variations.

Indicative content

Candidates are expected to outline the concentration of economic growth in the **Special Economic Zones (SEZs)** and **Open Cities** created in China since 1979. The PRC has established special economic zones in Shenzhen, Zhuhai and Shantou in Guangdong Province, Xiamen in Fujian province and designated the entire province of Hainan a special economic zone. These offer reduced restrictions on land, labour, wages, taxes and planning regulations to overseas firms, especially those involved in hi-tech industries. The SEZs were deliberately located far from the centre of political power in Beijing, minimising political influences. More specifically, the original four zones were sited in coastal areas of Guangdong and Fujian that had a long history of contact with the outside world through outmigration, and at the same time were near Hong Kong, Macao, and Taiwan. The choice of Shenzhen was especially strategic because it is situated near Hong Kong, the key area from which to learn capitalist modes of economic growth. The growth in economic activity in these locations has been reinforced by high levels of rural-urban migration, infrastructure improvements and the investment policies of TNCs. The result has been the emergence and dominance of economic activity in coastal areas, which have received most internal investment as well as having imported capital, technology and entrepreneurial skills, at the expense of the interior. Candidates may, however, make reference to the Western China Development project, created in 2000 to help the western provinces to catch up with coastal areas – the main components of the strategy include the development of transport, hydropower plants, energy, and telecommunications, enticement of foreign investment, increased efforts on ecological protection, promotion of education and retention of talent flowing to richer provinces. Expect **very good (Level 5)** answers to provide a clear description of spatial variations in economic growth and developed explanatory comment and to support their answers with specific illustrative detail (possibly including a sketch map) and examples. **Average (Level 3)** responses will be characterised by secure but generalised content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.14 'Achieving a balance between economic growth and sustainable development in China is problematic.' Discuss.

(1.6) [25]

Guidance

Candidates:

- i. should show some knowledge and understanding of the different ways in which economic growth in China is compromising sustainable development;
- ii. should show the ability to discuss the extent to which economic growth and sustainable development can both be achieved.

Indicative content

Expect candidates to mention that the relationship between the environment and economic growth is complex and poses something of a conundrum. As a country develops it uses more energy and mineral resources to support manufacturing. More offices, transport and houses all use natural resources. Most human activity, domestic and industrial, produces waste which has to be disposed of and in turn affects air quality. The optimistic view suggests that the range of demands on the environment can be managed in order to ensure a sustainable future. As a country becomes more developed it can develop the technology to use resources more sustainably and efficiently. Theoretically, the more wealthy a country the more it can afford environmental protection and could limit its environmental and ecological footprint. There is a growing environmental awareness among grassroots organisations and communities in China, but serious concern for environmental sustainability within the Politburo is still overridden by the desire for economic growth. Despite that, the Government response to Rio and Kyoto suggested some recognition of the need for sustainability and the Chinese signed the Kyoto Protocol in 1998, less than a year after it was set up. This was also intended to establish China as a leader of developing nations. Environmental concerns are being taken seriously, but bureaucratic problems and some corruption inhibit national policies being put into practice in local communities. Recent progress has been made by Chinese manufacturers to develop solar, wind and clean coal technology. This recent trend contradicts the conventional picture of China's poor environmental image. China's new premier, Li Keqiang, has vowed to tackle pollution and has pledged that his government will 'show even greater resolve', but has failed to provide details. For **very good (Level 5)** responses, expect a detailed and balanced discussion with well integrated examples. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

INDIA

Q.15 Describe and account for changes in India's economy.

(1.2) [25]

Guidance

Candidates:

- i. should show knowledge and understanding of changes in India's economy;
- ii. should show knowledge and understanding of the reasons for these changes.

Indicative content

Expect candidates to identify the changes in manufacturing industries, service and financial industries and in agriculture since the political changes in 1991. Rapid economic growth in India has been due to the expansion of the service sector rather than to the growth of manufacturing. India's large service industry accounts for 57.2% of the country's GDP while the industrial and agricultural sectors contribute 28.6% and 14.6% respectively. Candidates are most likely to argue that India's rural economy is still very important with some developments in agribusiness in some states due to technological developments (Green Revolution) and political reform. Agribusinesses play an increasingly significant role in agricultural exports. Manufacturing change includes the growth of modern steel, pharmaceuticals, textiles, clothing, and a substantial high-tech electronics sector e.g. mobile phones. The services sector includes financial services, software services, accounting services and entertainment industries like Bollywood. The growth of service industries includes call centres, back office jobs, outsourcing from Europe / US and an extensive financial and banking sector which supports the rapidly expanding Indian economy. India has a wide and sophisticated banking network. The sector also has a number of national and state level financial institutions and a well-established stock market. The Indian capital markets are rapidly moving towards a modern market including derivative trading and internet based trading. Reasons for the rapid expansion in the service sector include lower labour costs, a large English speaking workforce, a highly skilled and educated workforce and ICT skills shortages in some developed countries. Technological factors have also played a significant role, particularly the speed and distance over which communications and movement can now take place due to computer, transport and communication technologies. The growth in manufacturing is due largely to the growth in the urban middleclass, educated population who have become consumers themselves, providing a large market for new consumer goods. Expect **very good (Level 5)** answers to provide a detailed description of economic changes together with developed explanatory comment and specific illustrative detail and examples. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Q.16 'Achieving a balance between economic growth and sustainable development in India is problematic.' Discuss.

(1.6) [25]

Guidance

Candidates:

- i. should show some knowledge and understanding of the different ways in which economic growth in India is compromising sustainable development;
- ii. should show the ability to discuss the extent to which economic growth and sustainable development can both be achieved.

Indicative content

Expect candidates to mention that the relationship between the environment and economic growth is complex and poses something of a conundrum. As a country develops it uses more energy and mineral resources to support manufacturing. More offices, transport and houses all use natural resources. Most human activity, domestic and industrial, produces waste which has to be disposed of and in turn affects air quality. The optimistic view suggests that the range of demands on the environment can be managed in order to ensure a sustainable future. As a country becomes more developed it can develop the technology to use resources more sustainably and efficiently. Theoretically, the more wealthy a country the more it can afford environmental protection and could limit its environmental and ecological footprint. Environmental issues have been creeping up the political agenda in India, but the challenges of addressing poverty *as well as* managing the environment sustainably are huge. After the UN Conference on the Human Environment 1972, environmental issues were included in the national 5-year Plans. In the 1980s a Ministry of Environment and Forests was created and now there are numerous autonomous agencies, offices, institutions set up by national and state governments. There is a will to have environmental improvement, but often this conflicts with other demands and, in common with most other countries, often puts government departments at odds with each other. India faces many of the same environmental issues as developing countries. It is challenged by the need to meet the demands of industrialisation for development while understanding the necessity for environmental sustainability. The rates of urban and rural change make it hard to ensure that the best environmental decisions are taken. India's democracy can hinder progress. The sheer scale of the environmental challenges is daunting, yet progress is being made at national and grassroots levels. For **very good (Level 5)** responses, expect a detailed and balanced discussion and examples to be well integrated in the answer. **Average (Level 3)** responses will be characterised by secure, but generalised, content and **good (Level 4)** responses by good factual knowledge and understanding.

Assessment Objectives Grid for Geography G3B

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
G3 A	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3 A	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3B (a) (b)	3 6 (geographical concepts)	3 3 (apply understanding and evaluation of techniques)	4 6 (use a range of skills & techniques)	25
	35 46%	20 27%	20 27%	75 (100%)

INFORMATION FOR EXAMINERS

Mark the answers according to the level descriptors in the mark bands and when determining the mark and taking everything into account, allocate it on the principle of 'best fit'. The mark awarded should be the one that most fairly reflects the achievement against the level descriptor. It is not necessary for every single aspect of a level descriptor to be met for the mark awarded.

If candidates answer in a way that is not anticipated by the mark scheme, but provide an acceptable answer to the question set, please use the generic mark scheme to determine an appropriate mark. If in doubt, please consult your team leader.

Generic Mark Scheme for G3B

G3B contains 10 two-part questions marked out of 10 marks (Part a) and 15 marks (Part b).

Part (a) is marked in three levels.

Level	Description of quality	Marks Range	Characteristics of level (It is not necessary to meet all of the characteristics to be placed in a level)
3	Very good Good	8-10	Very good knowledge and understanding used critically which is applied to aspect(s) of research enquiry examined. The work is obviously based on research and uses it to provide good supporting evidence. A clear, coherent mini-essay that is grammatically correct. May include well-annotated maps and/or diagrams to support answer. Allow full marks for thorough description.
2	Average	4-7	Good knowledge and understanding with some critical appreciation of the aspect(s) of research enquiry examined. A clear structured mini-essay that uses good quality of written communication but argues points soundly rather than strongly. Appropriate diagrams and/or maps not always fully labelled.
1	Basic	1-3	Some limited knowledge and understanding of aspect(s) of research enquiry examined but some points may be partial and lack exemplar support from research. "All I know" rather than an answer to the question. Language is variable; lacking paragraphs and may have weak grammar and syntax.

Part (b) is marked in four levels.

Level	Description of quality	Marks Range	Characteristics of level (It is not necessary to meet all of the characteristics to be placed in a level)
4	Excellent Very Good	13-15	Very good knowledge of the topic studied and a critical awareness of the route to enquiry and findings as applied to the topic in question. Provides very good support from own research. Written in a sound coherent essay style which is grammatically correct with a sequence of ideas that enable the question to be answered fully. Concludes in relation to the question. May include well-annotated maps and/or diagrams to support answer.
3	Good	9-12	Good knowledge of the topic with some gaps. Understanding of the route to enquiry and findings is present with some critical awareness, but this may be sound rather than strong. A clearly structured essay that uses good quality of written communication. Appropriate diagrams and/or maps not always fully labelled.
2	Average Marginal	5-8	Knowledge and understanding present but some points may be partial and lack exemplar support from research theme studied or may only be of potential relevance to the research topic. Language is straightforward and will possibly lack paragraphing. Perhaps going off on a tangent with an "all I know" answer.
1	Basic	1-4	Some knowledge and understanding but with gaps and misconceptions that indicate an inability to understand the question. Evidence that the research was superficial. Only limited support from research. Language is variable and slips occur.

GCE GEOGRAPHY G3B

SECTION B: RESEARCH

CONTEMPORARY THEMES AND RESEARCH IN GEOGRAPHY

- (a) Evaluate the methods that could be used to acquire appropriate information about (context). [10]

As in previous examination series there is no need for candidates to draw parallels with their own study, but this should be credited if it helps to develop the answer. Methods of acquiring information should be appropriate to the topic under investigation. Candidates should demonstrate their knowledge of methods of acquiring information and evaluate their appropriateness to the topic under investigation. Any suitable methods (i.e. to the theme) should be credited.

Expect there to be a range of methods of acquiring information, both primary and secondary, which may be illustrated or supported with examples, e.g. names of websites, maps, questionnaires, environmental surveys and sampling strategy(ies). Where these relate specifically to the investigation credit should be given.

From the WJEC list of command words: **Evaluate**: candidates are expected to give an overall quality or value to the feature/issue being considered. You may state a viewpoint, after consideration of the evidence..... a judgment/opinion is wanted. Although an opinion cannot be marked incorrect, credit is given for the justification of the position taken up..... a balanced answer is best.

Level 3 (8–10 marks)	Good understanding of the methods used to acquire information in the context of the selected research area. Good evaluation that includes some appreciation of strengths and weaknesses of the methods used. Candidates may state a viewpoint or make a judgment of the methods used. Candidates can access this level without reference to their own investigation, although if mentioned it should be given credit.
Level 2 (4–7 marks)	Some understanding of the methods used to acquire information, which may be either , generic in nature, or incomplete or unbalanced in coverage. Some evaluation which may include comments for and against (strengths and weaknesses) of the methods used. Maximum Level 2 if only one method is evaluated
Level 1 (1–3 marks)	Basic description of the methods used to acquire information. There may be just a list of the methods used and there is unlikely to be much, if any, evaluation.

- (b) **Outline the findings of your investigation into (context) and assess the methods of analysis you used.** [15]

You should state clearly the title of your research enquiry.

The content will depend upon the investigation undertaken, but answers should show knowledge and understanding of the chosen topic. In their answers candidates should demonstrate their ability to communicate the strengths and weaknesses of the methods chosen and relate these to their findings, ideally with some supporting evidence. Candidates could assess both methods of analysis and presentation.

There may be some description of methods of analysis and presenting information, which may be qualitative and/or quantitative and illustrated with diagrams or examples. Examples described **might** include, graphs (bar, line, scatter, pie, bi-polar, logarithmic), photographs, maps, located symbols (maybe proportional), tables and field sketches, Chi-squared, Spearman's Rank, Mann Whitney and Standard Deviation.

There should be some attempt to link the methods of analysis being assessed to the findings of the investigation, with some supporting evidence.

From the WJEC list of command words: **Assess**: This is an evaluative question – weigh up the importance of the subject. This means there are a number of possible explanations/arguments/outcomes. Candidates need to give the main ones and say which they tend to favour.

<p>Level 4 (13–15 marks)</p>	<p>Detailed outline of the findings of their investigation, with good evidence/support. Sound, balanced assessment of the methods of analysis used and linked to the findings outlined; the range of the methods of analysis is appropriate.</p>
<p>Level 3 (9–12 marks)</p>	<p>Good outline the findings of their investigation, with some evidence/support. Some assessment of the methods of analysis used with some links to the findings outlined; some outline of the methods of analysis used in their investigation which are either a range of appropriate methods or fewer, in more depth. Answers which provide detailed outline of the methods of analysis used could access this level.</p>
<p>Level 2 (5–8 marks)</p>	<p>Some outline of findings of their investigation with some evidence/support. Some assessment of the suitability of the methods of analysis under consideration; some outline of the methods of analysis used in their investigation. Answers with no reference to the context could reach the top of this level.</p>
<p>Level 1 (1–4 marks)</p>	<p>Basic findings and/or a basic description of the analytical methods used.</p>

Assessment Objectives Grid for Geography G4

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

GENERIC MARK SCHEME

These descriptors give an outline of the qualities expected of answers at each level. These descriptors are written into the mark scheme for the examination, and may be modified beyond these descriptors to accommodate the demands of individual questions. Mark the answers according to these level descriptors and when determining the mark and taking everything into account allocate it on the principle of 'best fit'. The mark awarded should be the one that most fairly reflects the achievement against the level descriptor. It is not necessary for every single aspect of a level descriptor to be met for the mark awarded.

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.

<p>Level 3 (8 - 10 marks)</p>	<p>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.</p>
<p>Level 2 (4 - 7 marks)</p>	<p>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.</p>
<p>Level 1 (1 - 3 marks)</p>	<p>In answers at this level there will only be the beginnings of an answer to the question, and 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.</p>

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 early parts are attempted, answers can gain a maximum mark of the top of Level 3.

Level 5 (22 - 25 marks)	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 to 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.
Level 4 (17 - 21 marks)	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.
Level 3 (10 - 16 marks)	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.
Level 2 (5 - 9 marks)	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.
Level 1 (1 - 4 marks)	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.

GCE Geography G4

If a candidate answers in a way that is not anticipated by the mark scheme, but has an acceptable answer to the question set, please use the generic mark scheme on pages 3 and 4 to determine an appropriate mark. If in any doubt, please consult 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.

Further annotations required about elements specific to each question are noted in the indicative content that follows.

SECTION A

Q.1 Outline the physical factors affecting food production in *one or more* areas.

[10]

Annotations for this question:

- Physical factors described
- Effect on food production
- Evidence

It is likely that most answers will draw material from *Figures* 12, 13 and 14 from pages 12 and 13, and *Figure* 15 from pages 14 and 15. There should be scope for candidates to introduce material from their own studies. As other factors appear in the Resource Folder, some candidates may be tempted to stray into other factors. The command is 'outline' which means there should be description along with some explanation, but the depth of explanation need not be exhaustive. Evidence should be given to support lines of reasoning.

Level 3 (8 - 10 marks)	Two or more factors will be clearly described with some clarity of summary explanation for each. Evidence will be given in support of almost all points made.
Level 2 (4 - 7 marks)	Either one factor only outlined well, or more than one is presented but there is either a lack of clarity in description or any summary explanation attempted. Some supporting evidence is given.
Level 1 (1 - 3 marks)	One or two factors may be named or very simply outlined. No, or ultra-simplistic attempt at any description or summary explanation given. Little, if any evidence given.

Q.2 Explain some of the ways in which food production may be increased.

[10]

Annotations for this question:

- Ways described
- Explanation of increase
- Evidence

Candidates are likely to use information from *Figure* 16 on page 16 and *Figure* 17 from pages 18 and 19 to help with their answers. The Resource Folder gives some information but candidates will need to use their understanding of the topic to make the explanation clear. More than one way needs to be considered. Evidence should be given to support points made.

Level 3 (8 - 10 marks)	Clear explanations of two or more ways in which food production may be increased are given with some degree of depth. Evidence will be given in support of almost all points made.
Level 2 (4 - 7 marks)	Either just one way is explained clearly, or more than one way is approached but explanation given is clearly incomplete. Some supporting evidence is given.
Level 1 (1 - 3 marks)	Answers may present some potentially relevant material, but lack clarity or are ultra-simplistic. Little, if any evidence given.

Q.3 Outline reasons why some cities are growing in areal extent.**[10]**

Annotations for this question:

- Reasons
- Growth in areal extent
- Evidence

Candidates are likely to use material from *Figures 1 and 3* from page 4, *Figure 4* on page 5, *Figures 5 and 6* from page 6 and 7, *Figures 8 and 9* from pages 9 and 10 and *Figure 11* from page 11. They may well provide further information from their own studies. Population growth, household structure, lower density housing, outward movements of residence and businesses and increased mobility, amongst others, are likely to feature but the most important part of the answer is the clarity with which this is related to a growth in areal extent. The Resource Folder goes a good way to providing support information, but candidates will need a sound conceptual framework to provide good explanations. Explanations should be well supported either from the resource Folder or other sources.

Level 3 (8 - 10 marks)	A clear explanation of two or more reasons is given. The focus is clearly on growth of areal extent. Evidence is given to support most points made.
Level 2 (4 - 7 marks)	Either one reason is explained well with any other unclear or two or more reasons are suggested but are not complete. Some of the focus will be on areal extent. Some evidence will be given in support.
Level 1 (1 - 3 marks)	One or more reasons may be given but the link to growth in areal extent is never clear or left for the reader to work out. Little if any evidence given.

Q.4 ‘Allowing cities to expand conflicts with maintaining sustainable food supplies.’

To what extent is this true?

[25]

Annotations for this question:

- Knowledge of city growth and areal extent
- Links to requirements for food and land needed
- Clear understanding of sustainability issues
- Assessment and addressing “to what extent”
- Support and evidence

Having examined cities growing in areal extent in Question 3, and having some information on how much they are growing, and having looked at physical factors affecting food production in Question 1, and having gained some insight into ways food production may be increased in the future in Question 2, candidates should have rehearsed the material they need to tackle this assessment. The range of evidence used, the quality of discussion, and the degree “to what extent” is considered is the focus of the answer that will distinguish good answers here. Candidates who introduce other threats to bring out the importance (or lack of it) of areal extent should be rewarded well. To achieve this, candidates will need to organise their thoughts and express them clearly.

<p>Level 5 (22 - 25 marks)</p>	<p>Answers at this level will make fully clear links between the growth in areal extent and food supplies with issues of sustainability introduced. “To what extent” will be clearly considered, 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.</p>
<p>Level 4 (17 - 21 marks)</p>	<p>A good answer but with either imbalance between areal extent and food supplies, or some lack of depth if both are considered equally, or limited consideration of “to what extent” of the truth of the statement. Valid points on sustainability made. Some good evidence will be given. A well-ordered answer with good expression.</p>
<p>Level 3 (10 - 16 marks)</p>	<p>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 more token at the lower end. Consideration of “to what extent” 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.</p>
<p>Level 2 (5 - 9 marks)</p>	<p>Some valid points raised, but 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</p>
<p>Level 1 (1 - 4 marks)</p>	<p>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.</p>

SECTION B

Q.5 Describe some of the problems associated with supplying energy. How far can managing energy demand sustainably help overcome problems of energy supply? [25]

Annotations for this question:

- Knowledge of energy supplies and associated problems
- Understanding of attempts at demand management
- Clear understanding of sustainability issues
- Assessment and addressing “how far”
- Support and evidence

There will be little in the Resource Folder to help in answering this question, but if any material from the Resource Folder is used, there is no penalty for doing so. There are two commands in the question. The first is intended to be less demanding and requires candidates to describe problems associated with the supply of energy. There is such a range it is impossible to outline all, but CO² emissions with carbon based fuels, methane from HEP dams, radioactivity from nuclear power stations and diverting land from food production to biofuels are examples of what can be expected. On this type of question, some candidates launch straight into the evaluative part but incorporate the problems as they answer. This is acceptable and should not be a reason to reduce credit.

The second demand is of an evaluative nature, and requires some appreciation of different points of view linked to sustainability, and is more taxing. Here the relationship between problems and their management will be important. As ever, evidence to support arguments should be given.

Level 5 (22 - 25 marks)	Several problems associated with the supply of energy will be described in detail either separately or introduced throughout. Different strategies of management 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.
Level 4 (17 - 21 marks)	Several problems associated with the supply of energy will be suggested, but some may lack detail, or may be unclear or rather brief. Some strategies of management will be introduced, with some appreciation of sustainability. Some good evidence will be given. A well-ordered answer with good expression.
Level 3 (10 - 16 marks)	There will be some suggestions about problems associated with the supply of energy but there will be limited detail about them. There may be some discussion of management and sustainability at the upper end of the range, with one or the other neglected at the lower end. A little evidence will be given. Minor flaws in organisation and expression are likely.
Level 2 (5 - 9 marks)	Suggestions made may be sketchy with very little detail to them. Management ideas will be simplistic. Evidence will be poorly linked to the answer. Frequent problems with structure and expression will be present.
Level 1 (1 - 4 marks)	Any suggestions made will be very generalised and lack detail and/or reasoning. Any attempts at assessment will be misguided. Poor or no evidence is given. The whole answer will be poorly organised, with poor expression.



WJEC
245 Western Avenue
Cardiff CF5 2YX
Tel No 029 2026 5000
Fax 029 2057 5994
E-mail: exams@wjec.co.uk
website: www.wjec.co.uk