



GCE MARKING SCHEME

**GEOGRAPHY
AS/Advanced**

JANUARY 2014

INTRODUCTION

The marking schemes which follow were those used by WJEC for the January 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.

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Assessment Objectives Grid for Geography - G1

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)	0	2	3	5	1.3
(b)	8	2		10	1.4
(c)	7	3		10	1.6
	15	7	3	25	
Question 2					
(a)	0	2	3	5	2.5
(b)	8	2		10	2.4
(c)	7	3		10	2.6
	15	7	3	25	
Question 3					
(a)	1	1	5	7	2.3
(b)	2	1	5	8	
(c)	3	2	5	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 G1

CHANGING PHYSICAL ENVIRONMENTS

Q.1 (a) Use *Figure 1* to describe changes in the extent of Arctic sea ice.

[5]

The general pattern shown on the graph is one of decline over time (negative correlation). The values decline from 7.2 in 1979 to 3.6 in 2012. Allow a tolerance of +/- 0.1. The year to year changes show a fluctuating pattern. The rate of decrease speeds up after 2000. Step by step description of annual change equals fluctuation (1 mark) plus (1 mark) for data. Allow (1 mark) for halved from 1979 – 2012. Allow (1 mark) for a comment that accurately describes change with an extra (1 mark) for corroborating information from the resource.

(b) Describe and explain the effect(s) of climate change on *one or more* biomes.

[10]

This question has two elements – knowledge of climate change and an understanding of how this can lead to impacts on biomes.

Answers should display an understanding of the link between climate change and impacts on biomes. Candidates may outline changes in temperature and precipitation in a description of climatic modifications. There may also be comment about the length and intensity of seasons. Climate change may also be examined as increases in extreme weather.

There should also be reference to how changes in climate can cause changes in biomes. This may take the form of changes in the distribution of species such as the introduction of warm water species into the North Sea or comment on the disappearance of species in an area. Candidates may also examine the changing boundaries of biomes e.g. the northward movement of the boundary between the taiga and tundra. Some answers may refer to increased aridity as part of climate change and explain how this can put stress on biomes and result in desertification. There is also the opportunity to comment on the impact of specific extreme weather events on biomes – fire or short-term destruction by cyclones. Other answers may concentrate on the operation of the biome and linkages within it. These may look at how climate change disturbs the food chain. Accept one biome covered in depth or two or more treated with more breadth.

Level 3 8-10 marks	Good knowledge of climate change and the altered biomes. Good understanding of how climate change has influenced biomes. Good development of examples.
Level 2 4-7 marks	Some knowledge of climate change and the altered biomes. Some understanding of how climate change has influenced biomes. Examples are evident and enhance the explanation.
Level 1 0-3 marks	Basic knowledge of climate change and the altered biomes. Basic understanding of how climate change has influenced biomes. Little use of examples.

(c) Outline the strategies that governments can use to address climate change. [10]

The question offers an opportunity to candidates to show their knowledge of the strategies used by governments to overcome the impacts of climate change. The question asks for strategies and requires candidates to look at more than one. This can be achieved in a number of ways – an examination of governments at the same level e.g. an examination of two countries or an examination of governments at different levels – national and local. The strategies examined will vary with selected examples:

Regulation – laws to cut down on the production of greenhouse gases such as the congestion charge.

Relief – provision of aid to those people impacted by the effects of climate change.

Awareness – advertising and publication of reports.

Conservation – heat saving in domestic housing.

Infrastructure – provision of cycle paths, walking routes to reduce use of cars.

Alternatives – encouragement of alternative sources of power – wind, tidal etc.

Adaptation – e.g. adapting coastal defences to sea level rise.

There may be other valid strategies that deserve full credit.

Answers should show detail of the strategies and how they can address climate change.

Level 3 8-10 marks	Good knowledge of strategies. Good understanding of how strategies can address climate change. Good development of examples.
Level 2 4-7 marks	Some knowledge of strategies. Some understanding of how strategies can address climate change. Examples are evident and enhance the explanation.
Level 1 0-3 marks	Basic knowledge of strategies. Basic understanding of how strategies can address climate change. Little use of examples.

Q.2 (a) Use *Figure 2* to describe both the location and number of people affected by flooding.

[5]

There are a number of points that can be made. Most affected areas are close to the Cagayan River (1 mark). Smaller numbers are affected by the Iponan River (1 mark). The highest numbers affected are close to the rivers (1 mark). The numbers affected decrease with distance from the river. There is a cluster of small numbers affected in areas on the northern section of the Cagayan. The population affected is mainly in the north / close to the coast. Answers may comment on anomalies to patterns described. Allow (1 mark) for comment on distribution with an extra (1 mark) for use of information from resource.

(b) Describe and explain the characteristics of *one or more* river regimes.

[10]

There are two elements to this question – a description of the characteristics of selected river regime(s) and an explanation of the regime(s) selected.

In a description of the characteristics of a river regime answers may refer to seasonal variations in discharge picking out summer/autumn/spring/winter as divisions or may refer to changes on a month to month basis. Descriptions may also refer to amounts of discharge – especially if they compare different locations such as Glacial/Mediterranean/UK. Accept well-annotated diagrams as description.

Candidates may also look at short- or long-term characteristics as well as medium. As such they may comment upon variations within a season – the impacts of thunderstorms or periods of unusual drought. They may also look at changes that take place to regimes over time and comment on a decrease or increase in discharge as a result of climate change.

When explaining the characteristics of the regime(s) candidates may refer to physical and/or human factors. When explaining physical reasons for variations, candidates may examine variability in relation to precipitation, temperature, evapotranspiration, soil conditions, water balance, glacial meltwater, snowmelt and vegetation. There may be other valid physical factors that are pertinent to specific examples and these should be given credit. Other factors that influence the variability of discharge are man-made. Candidates may comment on reservoirs, dams, and abstraction for industrial and domestic uses. Accept one developed river regime or two or more river regimes treated with more breadth.

Level 3 8-10 marks	Good knowledge of characteristics of river regime(s). Good explanation of the factors that influence the characteristics of selected regime(s). Good development of examples located or generic.
Level 2 4-7 marks	Some knowledge of characteristics of river regime(s). Some explanation of the factors that influence the characteristics of selected regime(s). Some development of examples located or generic.
Level 1 0-3 marks	Basic knowledge of characteristics of river regime(s). Basic explanation of the factors that influence the characteristics of selected regime(s). Little use of examples.

- (c) **Outline the effectiveness of management strategies used to overcome the impacts of *either* river flooding *or one* tectonic hazard.**

[10]

The focus of the question is 'outline' so expect to see answers that describe the identified strategy. The second part of the question looks at the effectiveness of the strategies and how well they manage the hazard. Answers should display both knowledge of the strategies and an explanation of how they can manage flooding or one tectonic hazard. The strategies used in answers will vary. Accept either generic or detailed strategies for full marks.

Generic approaches may address preparation, planning, land-use planning, adaptation, protection, prevention, aid, etc. The management may refer to how the strategy allows people to avoid the hazard, to absorb the impacts the impacts of the hazard or to alleviate the impacts of the hazard after it has occurred. Popular strategies that may be used are:

Flooding: Specific strategies may include the use of dykes, washlands, arrangements of rooms in housing next to rivers, evacuation, afforestation and specific aid projects etc. There should be reference to examples in both approaches. The responses will normally take the form of a development of the workings of the selected strategies in the management of river floods.

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. There will be a great variety of strategies used depending on the hazard selected and the examples that have been studied. Accept approaches that have a case study structure.

When looking the effectiveness answers may refer to short term/long term, economic/social/environmental comparison of before and after the implementation, comparison with locations that have not implemented strategies, comparison with locations that have implemented different strategies, variations in the magnitude of the hazard. Do not expect extensive comments in the time allowed.

Level 3 8-10 marks	<p>Good knowledge of the strategies. Good explanation of the operation of the strategies and how they overcome impacts. Good evaluative comment. Good development of examples, located or generic.</p>
Level 2 4-7 marks	<p>Some knowledge of the strategies. Some explanation of the operation of the strategies and how they overcome impacts. Some evaluative comment. Some development of examples, located or generic. Lacks balance.</p>
Level 1 0-3 marks	<p>Basic knowledge of the strategies. Basic explanation of the operation of the strategies and how they overcome impacts. Little use of examples.</p>

Q.3 (a) Use Figure 3 to describe how different groups perceive tectonic hazards.

[7]

The resource shows two aspects of tectonic activity on Montserrat. Candidates may refer to the negative elements that are presented such as deaths, migration, abandonment of Plymouth, coverage of the southern half of the island by ash and restricted access. There are positive elements brought about by potential use of geothermal power – cheaper energy, less reliance on imported fuel, potential jobs both in geothermal energy and domestic industry, exports of energy and the potential use of the southern part of the island. There should be comment on both elements present in the resource. The question asks for groups and so to get into Level 3 there must be some recognition of the groups involved. These need not be specific but can be implied from the resource – local industrialists, forced migrants etc.

Level 3 6-7 marks	Good grasp of the reasons for different perceptions. Balance of both positive and negative reasons for perceptions. Identification of groups of people.
Level 2 3-5 marks	Some grasp of the reasons for different perceptions. Well-developed but lacks balance and/or identification of groups.
Level 1 0-2 marks	Basic grasp of reasons for different perceptions.

(b) Describe some strengths and weaknesses of using secondary sources of information in physical geography.

[8]

Candidates may refer to variety of sources of secondary information – GIS, maps, satellite images, newspaper reports, academic articles, official data, internet sites and possibly census information.

As strengths responses may look at ease of access of data, up to date and constantly updated information, the large amounts of data that can be accessed, and accuracy of data that has been collected by professional bodies and which is cheaper than collecting primary data.

As weaknesses responses may refer to reliability of data, availability of data for specific question set, access to official data, data validity problems and data source bias. Data may also be in a different format or units than is required by the researcher. Much secondary data can be several years old.

Level 3 6-8 marks	Good knowledge of one or more strengths/weaknesses. Good understanding of feature related to secondary data.
Level 2 3-5 marks	Some knowledge of one or more strengths/weaknesses. Some understanding of feature related to secondary data. Lacks balance – not related to secondary data or only positive or negative addressed.
Level 1 0-2 marks	Basic knowledge of one strength/weakness.

- (c) **Outline the importance of planning in your investigation into a changing physical environment.**

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

The question requires two elements to be addressed – the elements of planning and a comment on the value of planning. This can be done by looking at the planning process with an overview of evaluation or an examination of the elements and a comment on the value of planning to the investigation process.

Candidates could address:

- a discussion of the need to devise a question, a hypothesis (positive or negative) or investigate an issue – this will give clarity and direction to the study;
- a discussion of a pilot survey – this will allow any issues in the completion of the study to be identified and ironed out;
- a discussion of where, when and how, which might include the construction of recording sheets and a discussion on sampling (the discussion should be about planning, not describing what actually happened). This will allow a structured collection of data and ensure that the correct type and amount of data is collected from the right places;
- a risk assessment, which may involve identifying specific risks, judging the outcome if the risk factor actually materialised and assessing the probability of the risk factor occurring. This will allow the study to be conducted in safety.

Top quality answers should address more than one aspect of planning but do not expect all of the above. For any generic planning of a human investigation award maximum of Level 1.

Level 3 8-10 marks	Good outline of the elements of planning. Good review of the value of the elements of planning.
Level 2 4-7 marks	Either some outline of the elements of planning. Some review of the value of the elements of planning. Or lacks balance – only looks at elements or review of value of planning.
Level 1 0-3 marks	Basic outline of the elements of planning. Basic review of the value of the elements of planning.

Assessment Objectives Grid for Geography - G2

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)		2	3	5	1.3/4
(b)	8	2		10	1.4
(c)	7	3		10	1.5
	15	7	3	25	
Question 2					
(a)		2	3	5	2.4
(b)	8	2		10	2.4
(c)	7	3		10	2.5
	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 percentages of ethnic groups in selected areas of the UK. [5]**

Award (1 mark) for a descriptive point and (1 mark) for an illustrative confirmation of that point, up to 4 marks, with a further (1 mark) for an overview, impression statement or constructive use of figures. Award a maximum of (3 marks) for a description of just one area.

Suggestions

The following suggested comments are organised around London having the greatest variety of ethnic groups. Any valid alternative organisation is acceptable.

- The highest White British group is in Wales at 93% with the lowest being in London, 33.5% lower at 59.5%.
- Other ethnic groups represent the next largest group in London at 13.7% which is three times more than in South West England and nearly four times (3.7 times) more than in Wales.
- London has the largest proportion of Asian or Asian British at 13.2%, six times more than the South West and seven times more than Wales.
- London has the largest percentage, at 10.1%, of Black or Black British; this is 16/17 times more than Wales and 8 times more than the South West.
- Mixed ethnicity only represents 3.5% in London, the lowest proportion here, but this is still three and a half times that of Wales and three (2.7) times that of the South West.

Overview

The following are suggestions for an overview comment:

- London has the greatest diversity of ethnic groups whilst Wales has the greatest homogeneity.
- White British represents the largest ethnic group in all three areas.
- Diversity exists to some extent in all three areas.
- A similar rank order exists in all three areas.

(b) Outline some of the consequences for countries with developed economies of inflows of refugees and asylum seekers. [10]

The consequences can be local, regional and/or national. Answers need to focus on refugees and asylum seekers and some credit should be given to candidates who provide some definition / distinction between them. Answers which only focus on economic migrants should be restricted to Level 1.

Although an attempt has been made to segregate the consequences, there is a considerable amount of overlap and integration between points.

Possible consequences can include:

Economic

- Puts extra economic pressure on social services, social security, NHS, police and education.
- The authorities spend time, effort and resources on sorting out the genuine refugees and asylum seekers from false cases, such as economic migrants.
- Inflows of refugees and asylum seekers can maintain low living standards in already deprived areas.
- From a government economic viewpoint asylum seekers, once granted refugee status, can help the economy as wage rates can remain competitive.
- Many asylum seekers are “lost” in the processing system and find work which keeps wages down, but may be exploited and without a taxation contribution.

Social

- The issue of repatriation is often an emotional one in which human rights lawyers have become involved.
- Asylum seekers need to be located somewhere whilst their application for asylum is processed. This can lead to tensions between the local community who have an asylum centre in their area and the asylum seekers themselves.

Cultural

- Indigenous people may be upset by different habits of the refugees and asylum seekers
- Religious differences and respect for the law in the new homeland may be issues.
- Multicultural benefits of refugees may accrue, for example in food choice and entertainment located in specific areas (Notting Hill Carnival).

Demographic

- Asylum seekers once granted refugee status could apply to have many other members of their family similarly treated and thus increase population by in-migration.
- Where incomers such as refugees and asylum seekers have higher birth rates than the indigenous population this can cause resentment and extra pressure on the NHS and education.
- Refugees and asylum seekers could be good for the demographic makeup of a country which may be entering stage 5 of the DTM, so reduce old-age dependency.
-

Level 3: 8-10 marks	Developed knowledge and understanding of some of the consequences of refugees / asylum seekers. Good development of example(s).
Level 2: 4-7 marks	Some knowledge and understanding of some of the consequences for countries with developed economies of inflows of refugees / asylum seekers. Example(s) enhance the explanation.
Level 1: 0-3 marks	Basic knowledge and understanding of some of the consequences for countries with developed economies of inflows of refugees / asylum seekers. Limited detail. Little use of example(s).

(c) Discuss the impacts of changing gender structures in the population of one or more countries. [10]

The question is on impacts and not causes of gender imbalance. An answer which focuses entirely on causes cannot achieve a Level 3. Some candidates may illustrate their account with population pyramid diagrams. Credit these if accurate and made relevant to the answer. Some credit, up to Level 1 may be given where candidates contextualise their answers with causal information as exemplified below.

Suggested impacts might include the following and give credit for any relevant example not mentioned below:

- Demographic change through time provides different gender ratios between age cohorts. Stage 5 of the demographic transition is where a different gender ratio is very prominent. In this stage there are far more old females than males. The impact on single female old age pensioners who outlive their partners is often isolation and loneliness as well as practical issues of mobility and health care.
- Countries which have government controlled birth policies, such as China, can skew the number of males to females. China's one child policy, introduced in 1979, has led to many younger males than females. The male to female ratio has increased from 1:1.06 to 1:1.19. There are many social impacts in that males find it difficult to find a marriage partner. This can lead to internal migration to large cities and economic stress in the job market and for city planners in attempting to accommodate a greater influx of migrants. Female babies have been reported to have been killed at birth or abandoned to orphanages. Over 90% of all urban children and over 60% of rural children have no brothers or sisters. The concern is that single-child families would produce self-centred "little emperors" and "empresses". The shortage of women may have increased mental health problems and socially disruptive behaviour among men and has left some men unable to marry and have a family. The scarcity of females has resulted in kidnapping and trafficking of women for marriage and increased numbers of commercial sex workers, with a potential resultant rise in human immunodeficiency virus infection and other sexually transmitted diseases. There are fears that these consequences could be a real threat to China's stability in the future. Political consequences are that the Chinese government has recognised some of the social and economic issues and is relaxing the harsh one child policy in the light of these issues particularly in rural areas.
- India has a similar issue where female babies are aborted, killed or abandoned; this is not so much a government policy but a Hindu religious preference for males in their family to perform economic, social and religious functions. Political decisions have been taken to address some of the excesses of this desire for male babies such as banning pregnant women from having scans to discover the sex of their child. This has led to a thriving economic industry in illicit private scanning.
- Migration causes gender imbalance; a good example is Dubai which has 77% male population out of 1.8 million. These are mainly construction workers as well as workers in the tourism sector. The social impact would be loneliness, depression and a more pressured search for a partner.
- The Philippines has an exodus of female workers so leaving an enhanced male dominated population with similar issues to those described above.

Level 3: 8-10 marks	Developed knowledge and understanding of the impacts of changing gender structures in one or more countries. Good development of example(s).
Level 2: 4-7 marks	Some knowledge and understanding of the impacts of changing gender structures in one or more countries. Example(s) are evident.
Level 1: 0-3 marks	Basic knowledge and understanding of the impacts of changing gender structures in one or more countries. Little use of example(s).

Q.2 (a) Use *Figure 2* to describe changes in the High Street from 1967 to 2013. [5]

Suggested changes:

- Local stores have mainly been replaced by national chain stores: e.g. Garman's Chemist has become Boots, Davidson Bakers has become Greggs and Joe's Café has become Costa Coffee.
- Some businesses in 2013 have maintained the same function but simply changed their name since 1967: e.g. Garman's to Boots chemist, Chelsea Girl to Dorothy Perkins women's clothing, Midland to HSBC Bank.
- Some businesses have changed: e.g. Ford's books has become SportsDirect and Henry's Antiques has become McDonald's restaurant.
- Items that didn't exist in 1967 have shops selling them in 2013: e.g. Apple and Carphone Warehouse.
- The charity shop Oxfam is present in the 2013 High Street replacing Boyle's butchers, and represents a different type of retailing not at all in evidence in the 1967 High Street.
- There is an extra bank in 2013; the Halifax Bank, which has replaced a supermarket and is located next to the existing Barclays Bank. This may indicate some clustering of this service.
- Women's clothing had three stores in 1967, but in 2013 only one, Dorothy Perkins, is specialised in women's clothing.
- Debenhams in 2013 occupies a smaller retailing site than did the Pearson's Department Store in 1967.
- In 2013 there are two full department stores whereas in 1967 there was only one as Woolworths was only a variety store.
- In both years there was only one variety store, but the name and location have changed. Woolworths in 1967 was on the south side of the High Street to the extreme east whereas in 2013 Poundland, is also on the south side of the High Street, but to the extreme west.

Any other reasonable suggestions can also be credited.

Award one mark for a descriptive point and one mark for an illustrative / quantitative confirmation of that point from Figure 2.

(b) Outline some of the issues faced in *one or more* CBDs.

[10]

The specification lists the issues as follows:

- access
- pedestrianisation
- entertainment districts
- uniformity of retailing
- office districts
- transport
- maintaining / enhancing a vibrant retail experience in the face of competition from other retail locations away from the CBD and the internet.

Answers may take a lead from question 2(a) on the uniformity of retailing, this is acceptable. Answers will vary with the number of issues discussed and the variety of case studies used.

Answers must consider at least two issues to open up Level 3.

Note: there is a fine line between CBD changes and inner city changes. Often inner city changes have occurred which have extended the CBD into what was the inner city.

Level 3: 8-10 marks	Developed knowledge and understanding of at least two of the issues faced in one or more CBDs. Good development of example(s).
Level 2: 4-7 marks	Either, some knowledge and understanding of some of the issues faced in one or more CBDs. Or, one issue outlined in good detail. Example(s) are evident and enhance the explanation.
Level 1: 0-3 marks	Basic knowledge and understanding of some of the issues faced in one or more CBDs. Just one narrow issue outlined in generic terms. Little use of example(s).

(c) Evaluate the impacts of changes in the rural-urban fringe.

[10]

Some changes that could be described, including the 'what' and 'where', in the rural-urban fringe include:

- Settlement change in physical size, shape and appearance.
- Demographic change in the nature of people living in fringe settlements.
- New suburban accretions eating into the fringe.
- Out-of-town developments in retailing, office parks, leisure and recreation (leisure centres, golf courses, cinemas).
- Improvement in communications: new motorway junctions and ring roads improving accessibility.
- Decline in agricultural land use.
- Diversification in farmland activity: paintballing, quad biking.

The question requires evaluation of the changes. This evaluation could note that these changes may be beneficial to certain members of society, but disadvantageous to others. For example:

- Older people, younger teens and those who cannot drive may find the new developments less accessible.
- Farmers could benefit economically or lose out socially.
- Excessive commuting causes delays and atmospheric pollution as country roads take on more traffic for which they were not designed.
- Conflicts may arise between the new incomers from urban areas and the local folk.
- Loss of wildlife habitat and natural environmental degradation.

Relevant inclusions will depend on the case study or studies used.

To achieve Level 3 the answer should contain some evaluation of changes.

Level 3: 8-10 marks	Developed knowledge and understanding of the impacts of changes in the rural-urban fringe. Some evaluation which may include both positive and negative aspects. Good development of example(s).
Level 2: 4-7 marks	Some knowledge and understanding of the impacts of changes in the rural-urban fringe. Only one change used. Unbalanced. Limited evaluation. Example(s) are evident.
Level 1: 0-3 marks	Basic knowledge and understanding of the impacts / changes in the rural-urban fringe. No attempt at evaluation, only description offered. Little use of example(s).

Q.3 (a) Use *Figure 3* to describe the results of the environmental quality survey. [7]

The following points about locations could be made and an overview comment, such as those below, will lift the answer into Level 3. Credit effective, constructive use of values.

Overview

- Location 1 has a generally poor environmental quality, but not as bad as location 3.
- Location 2 has the best environment.
- Location 3 has entirely negative results so has the poorest environmental quality.

Location 1

- Provides the worst environmental variable score of -5 for provision of open space.
- Has a highly negative score of -4 for graffiti.
- Has some good environmental aspects, however, namely condition of buildings, with a score of 2, condition of pavements also with a score of 2, and volume of traffic with a score of 1.

Location 2

- Received some, high positive scores with a maximum of 5 for both condition of buildings and provision of open space. Condition of pavements received 4, graffiti 3 and litter 2.
- Had only two negative scores out of the seven variables being noise at -3 and volume of traffic at -2. The two negatives could have been linked.

Location 3

- Has a total negative score of 18 out of 35.
- The worst environmental trait is noise, -4, followed by litter and condition of pavements at -3 each.
- Despite having all negative scores, it has a better score for open space, -2 than location 1 at -5.

Environmental characteristics

- Noise is the only characteristic not to vary between negative and positive, it is always negative.
- The least variable, most consistent, score between negative and positive was for volume of traffic which only varied by 3 points from -2 to 1.
- The most variable environmental characteristic was the provision of open space with a full range of 10 points from -5 to 5.

Level 3: 6-7 marks	Developed description of the results of the environmental quality survey. An integrated account using environmental variable scores constructively as well as locations and environmental variables. An overview is evident.
Level 2: 3-5 marks	Some description of the results of the environmental quality survey. Environmental variable scores are quoted and integrated within the description. Limited overview.
Level 1: 0-2 marks	Basic generalised description of the results of the environmental quality survey. Narrow use of data derived from the resource.

(b) Outline the advantages and disadvantages of *one* method of sampling used when studying a human environment. [8]

Candidates may describe sampling techniques from the point of view of their own fieldwork experience, or they may provide generic descriptions and information with short exemplars. Answers may take their lead from the sampled locations in Figure 3. Answers which solely focus on physical environment sampling exemplars are restricted to Level 1.

Answers may display several approaches and advantages and disadvantages could include:

Advantages

- Generic advantages of the concept of sampling.
- Justification of one sampling method being more advantageous than another for a particular purpose.
- Relating the experience of the practical advantages of a sampling technique, e.g. within a questionnaire survey.

Disadvantages

- Generic ideas on the concept of sampling only a limited proportion of the total statistical population in order to make sure that this proportion is a representative sample.
- Using an inappropriate sampling technique for a particular purpose will have inherent disadvantages. For example, generating a random point sample on the map of an area in order to locate points at which to sample traffic. Many redundant random points would be located away from roads, so a systematic or pragmatic sample along roads would be more advantageous. Thus this is a disadvantage of the random sampling technique in this instance.
- Issues with the collection of sampling data such as a systematic street questionnaire when the designated participant refuses to comply.

What follows is a range of information from which answers may draw.

What is sampling?

- Sampling is a 'short-cut' method for investigating a whole population.
- Data is gathered on a small part of the whole 'parent population' or 'sampling frame' and used to inform what the whole picture is like.

Why sample?

- In reality there is simply not enough time, energy, money, labour, equipment or access to suitable sites to measure every single 'item' or site within the 'parent population' or whole 'sampling frame'. Therefore an appropriate sampling strategy is adopted to obtain a representative, and statistically valid, sample of the whole.

Sampling considerations

- Larger sample sizes are more accurate representations of the whole.
- The sample size chosen is a balance between obtaining a statistically valid representation, and the time, energy, money, labour, equipment and access available.
- A sampling strategy made with the minimum of bias is the most statistically valid.
- Most approaches assume that the parent population has a 'normal distribution' where most items or individuals clustered close to the mean, with few extremes.

Sampling techniques

<p>There are four main types of sampling strategy:</p> <ol style="list-style-type: none"> 1. Random 2. Systematic 3. Stratified 4. Pragmatic 	<p>Within these types, there are three methods.</p> <ol style="list-style-type: none"> (a) Point (b) Line (c) Area
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Random Sampling

- Least biased of all sampling techniques: there is no subjectivity - each member of the total population has an equal chance of being selected.
- Can be obtained using random number tables.
- Microsoft Excel has a function to produce random numbers.

Systematic Sampling

- Samples are chosen in an orderly or regular way.
- They are evenly / regularly distributed in a spatial context, e.g. every 2 metres along a transect line.
- They can be at equal / regular intervals in a temporal context, e.g. every half hour or at set times of the day.
- They can be regularly 'numbered', e.g. every 10th house or person.

Stratified sampling

- This method is used when the parent population or sampling frame is made up of sub-sets of known size. These sub-sets make up different proportions of the total, and therefore sampling should be stratified to ensure that results are proportional and representative of the whole.

Pragmatic sampling

- Sensible readjustments must be made if, for whatever reason, one of the above three methods fails to suit. For example, a predetermined sampling site has access problems so a pragmatic alternative is sought.

<p>Level 3: 7-8 marks</p>	<p>Detailed and developed outline of the advantages and disadvantages of one method of sampling in a human environment. Good development of real fieldwork and/or generic example(s).</p>
<p>Level 2: 4-6 marks</p>	<p>Some knowledge and understanding of the advantages and disadvantages of one method of sampling in a human environment. Reality and/or generic elaboration is sketchy.</p>
<p>Level 1: 0-3 marks</p>	<p>Basic knowledge and understanding of the advantages and/or disadvantages of one method of sampling in a human environment. Little use of examples.</p>

- (c) **Outline ways in which you presented data in your investigation into a changing human environment.** [10]

You should state clearly the question that you have investigated.

The range of possible presentation techniques can be found in the specification on page 16.

Two or more ways of presenting data should be described and demonstrated in context, with the specific study stated.

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

Level 3: 8-10 marks	Developed knowledge of at least two ways of data presentation display. Detailed and developed understanding of at least two ways of data presentation display. Good development using the context of the investigation.
Level 2: 4-7 marks	Some knowledge and understanding of two ways of data presentation, or one way thoroughly completed. Some development using the context of the investigation.
Level 1: 0-3 marks	Basic knowledge and understanding of at least one way of data presentation display. Little use of the investigation.

G3a Assessment Objectives Grid

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%)

SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

Summary Descriptor	Marks out of 25	Criteria
Level 5 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.
Level 4 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.
Level 3 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.
Level 2 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.
Level 1 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.

Command Words WJEC A2 Geography

<p>Account</p> <p>Assess</p>	<p>Give reasons for.</p> <p>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.</p>
<p>Classify</p> <p>Discuss</p> <p>Evaluate</p>	<p>Divide into groups or categories.</p> <p>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.</p> <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>
<p>To what extent</p> <p>How far do you agree</p>	<p>Give possible explanations for and against and justify which you tend to favour</p>
<p>Examine</p>	<p>Investigate in detail, offering evidence for or against a point of view or judgement.</p>

GCE GEOGRAPHY
CONTEMPORARY THEMES IN GEOGRAPHY
SECTION A
MARK SCHEME JANUARY 2014

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 candidates answer 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 page 2 to determine an appropriate mark. If in doubt, please consult your team leader.

Theme 1 Extreme Environments

Q.1 Examine the links between the climatic, biotic and soil characteristics of a desert environment. (1.1)[25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the climatic, soil and biotic characteristics of a desert environment;
- (ii) should show an understanding of how these characteristics are linked to give a distinctive environment;
- (iii) should show the ability to examine the links; better candidates should provide a more detailed examination.

Answers may examine the arid nature of deserts, high evaporation rates and the large scale variations in temperature at a diurnal or seasonal level leading to the accumulation of salts in the upper horizons of the soil profile and the lack of vegetation cover. The soil types of desert environments, aridisols, solonchak and solonetz, result not only from the lack of moisture and high evaporation rates, but also from variations in geology, relief and the lack of vegetation cover. The interrelationships may be discussed in terms of the need for special adaptations required by biota to overcome climatic and soil characteristics. The range of climatic, biotic and soil characteristics need to be examined 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.2 Examine the role of different groups in the management of a tundra environment. (1.6) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the strategies designed by different local, national and international groups for the management of a tundra environment;
- (ii) show the ability to examine the role of different groups in designing and implementing the strategies; better candidates should provide a more detailed examination.

When discussing the strategies used to manage a tundra environment, candidates may present a range from conserving the tundra environment, alleviating the impacts of human activity, controlling the use of a tundra environment and monitoring the impacts of human activity. Candidates should 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. Candidates should also show that they understand that strategies are initiated and directed by groups at a local, national and international level, although all of these need not be covered for every strategy. The role of different groups needs to be examined 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 2 Landforms and their Management

Glacial Environments

Q.3 'Examine how glaciers operate as a system. (1.1) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of how glaciers operate as a system with inputs, outputs, throughputs and stores;
- (ii) should show the ability to link this knowledge and understanding of a systems approach to glacier budgets and the geomorphological work done by ice.

The inputs to and outputs from a glacier are not constant, but vary continually over both short and long timescales. The glacier system constantly adjusts to changes in the balance between **accumulation** and **ablation** and this is reflected in the mass balance of a glacier. If accumulation exceeds ablation a glacier gains mass (**positive mass balance**). If there is more ablation than accumulation a glacier has a **negative mass balance**. Glaciers have shown periods of expansion and retreat as climate changes have shifted the net balance to either positive or negative. Glacial landforms can be linked to global events that changed climate. Glaciers can be classified as **cold-based** or **warm-based** depending on whether they are frozen to the underlying bedrock or not. Outside of the Polar Regions most glaciers are warm-based; however large glaciers can be cold-based in their upper regions and warm-based near their margins when they extend across different climatic zones. Slow rates of **accumulation** and **ablation** associated with glaciers in cold, continental climates result in a smaller imbalance between accumulation and ablation and slower ice movement. Glaciers in temperate-maritime climates have greater snowfall in winter and experience more rapid ablation in summer, therefore glacier ice moves more rapidly to maintain the equilibrium slope angle. The way in which glaciers operate as a system needs to be examined 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.4 Either,

Assess the effectiveness of strategies used to manage the impacts of glacial processes on human activity.

Or,

Assess the effectiveness of strategies used to manage the impacts of human activities on glacial environments. (1.6) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the problems arising from the impacts of glacial processes on human activity **or** from the impacts of human activities on glacial environments;
- (ii) should show knowledge and understanding of the strategies put in place to manage these impacts;
- (iii) should show the ability to assess the effectiveness of the above strategies; better candidates should provide a more detailed assessment.

Candidates need to demonstrate their knowledge and understanding of the problems arising from the impacts of glacial processes on human activity **or** the impacts of human activity on glacial environments. There may be a discussion not only of the nature, but also of the seriousness of the impacts. In order to assess the effectiveness of strategies adopted to deal with the impacts, candidates will need to briefly describe the strategies. Strategies will vary depending on the glacial environment chosen. The assessment should involve an evaluation of both the positive and negative aspects of the strategies adopted in relation to the aims of the strategies implemented. The effectiveness of strategies needs to be assessed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Coastal Environments

Q.5 Examine how coasts operate as a system.

(1.1) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the operation of the coastal system with inputs, outputs, throughputs and stores;
- (ii) should show the ability to link this knowledge and understanding of a systems approach to the concept of dynamic equilibrium.

The coastal system is one of **inputs** and **outputs**. Candidates may approach this question by referring to sub-systems: the **cliff system** with *inputs* of the sub-aerial processes of **weathering** and the atmospheric process of wind erosion; a *throughput* of cliff **mass movement** of **falls, slips and slumps** and an *output* of sediment at the base of the cliff which is either deposited or transported by marine processes; the **beach system** has an *input* of sediment from longshore drift, the cliff and offshore, a *throughput* of longshore drift and an *output* of longshore drift and destructive waves carrying sediment offshore or by reference to **sediment cells**. The relationship between inputs and outputs is constantly changing, it is dynamic, and the system is designed to achieve an equilibrium position where inputs equal outputs. To this end erosion, transport and deposition occur giving the concept of **dynamic equilibrium**. The way in which coasts operate as a system needs 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.6 Either,

Assess the effectiveness of strategies used to manage the impacts of coastal processes on human activity.

Or,

Assess the effectiveness of strategies used to manage the impacts of human activities on coastal environments. (1.6) [25]

Candidates:

- (i) should show knowledge and understanding of the problems arising from the impacts of coastal processes on human activity **or** from the impacts of human activities on coastal environments;
- (ii) should show knowledge and understanding of the strategies put in place to manage these impacts;
- (iii) should show the ability to assess of the effectiveness of the above strategies; better candidates should make a more detailed assessment.

Candidates need to demonstrate their knowledge and understanding of the problems arising from the impacts of coastal processes on human activity **or** the impacts of human activity on coastal environments. There may be a discussion not only of the nature, but also of the seriousness of the impacts. In order to assess the effectiveness of strategies adopted to deal with the impacts, candidates will need to briefly describe the strategies. Strategies will vary depending on the coastal environment chosen. The assessment should involve an evaluation of both the positive and negative aspects of the strategies adopted in relation to the aims of the strategies implemented. The effectiveness of strategies needs to be assessed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 3 Climatic Hazards

Q.7 'Hazards associated with low-pressure systems have short-term impacts whereas those associated with high-pressure systems have long-term impacts'. Discuss. (1.5) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the short- and long-term impacts of hazards associated with low-pressure systems;
- (ii) should show knowledge and understanding of the short- and long-term impacts of hazards associated with high-pressure systems;
- (iii) should show the ability to discuss the statement; better candidates should provide a more detailed discussion.

The impact of hazards associated with high-pressure systems, such as heat waves and drought, include the effect on the water table, soil water movement, land degradation and vegetation loss, migration, food supply problems, famine and health. The impacts of hazards associated with high-pressure systems in temperate climatic regions may include impacts on water–resource systems when rivers may be used for water supply, reservoirs emptied and HEP production reduced. The effects on population may include water rationing. These impacts are mainly long-term, although hazards associated with winter anticyclones in temperate regions such as frost and fog plus pollution leading to impacts such as difficult driving conditions and dangers for shipping are more likely to be short-term. Hazards associated with low-pressure systems include high winds, heavy rainfall and storm surges which cause illness, deaths, the salinisation of soils and cessation of production resulting in both short and long-term effects, but candidates are likely to agree with the assertion in general. Some effective discussion may include the occurrence of short-term hazards associated with a high-pressure system such as convectional thunderstorms. There might also be a discussion of the combination of effects such as heavy snowfall associated with low-pressure which will persist if an anticyclone develops. Some interesting debate may include contrasting impacts on countries at different levels of development. The statement needs 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.8 Assess the success of strategies used to reduce the impact of hazards associated with *either* low-pressure or high-pressure systems. (1.6) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the damaging impacts of the climatic hazard selected;
- (ii) should show knowledge and understanding of the strategies employed, but better candidates will show more detailed knowledge of a wider range of strategies;
- (iii) should show the ability to assess the success of the above strategies: better candidates will provide a more detailed assessment.

Within either the tropical or the temperate region, candidates may refer to the impacts of hazards associated with either cyclonic or anticyclonic situations. The effects discussed are likely to be both environmental and human (demographic, economic and social). When discussing the measures taken to reduce the impacts of hazards associated with either low- or high-pressure systems, candidates may present logically sequenced points progressing from monitoring, prediction and warning, immediate response to lessen the impact once it has occurred to long-term planning. Candidates need to assess the success of the measures discussed. Measures may be evaluated on the basis of the extent to which they reduce the impact of an event, by comparison with strategies in place elsewhere to meet a similar hazard event, on the basis of advances in strategy policies and implementation of them compared to those in place prior to the last hazard event; or on an evaluation on the basis of the finances and human resources available to the agencies involved in the formulation and implementation of measures at a local, regional, national or international level. The success of strategies needs to be assessed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 4 Development

Q.9 'Development can be defined in more than one way.' Discuss. (1.1) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the variety of ways in which development can be defined;
- (ii) should show knowledge and understanding of why the definition of development has changed;
- (iii) should show the ability to discuss the statement; better candidates should provide a more detailed discussion.

Expect candidates to discuss how the term 'development' is difficult to define. It can be defined as 'the progressive improvement in standards of living and quality of life for an increasing proportion of the population'. The definition is dynamic, due to changing definitions and changes in the development process itself. In response to this dynamism, the term 'development' has been defined in many different ways: in economic terms, in human terms and increasingly in terms of sustainability. Until the 1970s development was largely equated with economic development, hence the drive towards industrialisation by lesser developed countries. In the least developed countries it became clear that by the end of the 1960s 'that development as economic development was not having the wide ranging effect on the standards and conditions of the majority of individuals in many Third World Countries'. The emphasis in development switched to ideas of equal opportunity of access to basic needs and the elimination of poverty and social deprivation. Hence, in addition to economic progress, the concept of development by 1980 took in social progress and human development. Even before the 1980s, it was evident that growing environmental problems associated with overuse of resources, destruction of the rainforest and global warming were threats to both economic progress and the eradication of poverty – hence in the 1980s and 1990s questions of sustainability became increasingly associated with the development process. The statement needs 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.10 Assess the extent to which the development gap is narrowing. (1.5 & 1.6) [25]

Guidance

Candidates:

- (i) should show knowledge and understanding of the term the 'development gap';
- (ii) should show knowledge and understanding of the reasons for the narrowing of the development gap;
- (iii) should show the ability to assess the extent to which the development gap is narrowing; better candidates will provide a more detailed assessment and may show knowledge and understanding of the reasons for the widening of the gap.

Responses may comment on the continuing gap between rich and poor countries represented in many measures of development, both economic and social. Candidates are likely to make reference to the countries in Brandt's 'South' that have recently benefited from the globalisation of economic activity, as illustrated by the rise of NICs/RICs and oil rich countries resulting in the narrowing of the gap. The counter argument is that the benefits of globalisation are not being passed on to, and have accentuated the problems of, sub-Saharan Africa as well as individual countries in Latin America and Asia, Haiti and Myanmar for example. Expect the explanation to be supported by appropriate exemplification and credit relevant reference to conceptual ideas such as the Rostow model. Discussions surrounding the costs of development such as environmental impacts and sustainable issues are appropriate. The extent to which the development gap has narrowed needs to be assessed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 5 Globalisation

Q.11 Discuss different concepts of globalisation.

(1.1) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the concepts of economic, cultural, political and environmental globalisation.
- (ii) should show the ability to discuss the statement; better candidates should provide a more detailed discussion.

Candidates are likely to provide a broad definition of the term 'globalisation' and outline the evolution of the process. The ultimate origins of globalisation could be dated back to the Roman Empire, but in the modern sense it evolved via colonialism and the growth of world trade and international financial systems. Its true modern origins lie in the 1975 **OPEC** oil price rises, when the new wealth of oil producers was invested in **MEDC** banks and loaned to developing countries and the emerging industrial economies that had cheaper labour costs. Globalisation takes four forms: economic – the growth of TNCs at the expense of national governments; environmental – the creation of global problems that require global solutions; cultural – the increase in Western influence, especially American, over aspects such as music and the media and political – the increase in influence of Western democracies, the diffusion of state power to regional and international organisations such as the EU and UN, and an increase in the role of non-state actors, e.g. non-governmental organisations (NGOs) such as Save the Children. Different concepts of globalisation need to be discussed in a detailed and informed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.12 Examine the effects of political and cultural globalisation.

(1.6) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the effects of political and cultural globalisation;
- (ii) should show the ability to examine these effects; better candidates should provide a more detailed examination.

Globalisation has led to most countries being interlinked in different ways: politically and culturally as well as economically. The effects of political globalisation include the increase in influence of Western democracies, the diffusion of state power to regional and international organisations such as the EU and UN, and an increase in the role of non-state actors, e.g. non-governmental organisations (NGOs) such as Save the Children. 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 pop 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. Some candidates may point to the rise of nationalism and fundamentalism as a response to these trends. The effects of political and cultural globalisation need to be examined 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Theme 6 Emerging Asia

CHINA

Q.13 Describe and suggest reasons for the increasing inequalities between rural and urban areas in China. (1.4) [25]

Guidance

Candidates:

- (i) should describe the increasing inequalities between rural and urban areas in China; better candidates will show more detailed knowledge and understanding;
- (ii) should show the ability to suggest reasons for the increasing inequalities; better candidates will provide more detailed explanations.

Candidates should discuss the increasing inequalities between urban areas and rural areas. Rural education and health facilities are poor – particularly for an aspiring superpower. Villagers often lack any form of social safety net, including pensions or health insurance. Capital-intensive urban development associated with Deng’s Open Door policy, the investment policies of TNCs and changes in the organisation of economic activities in urban areas has created a large productivity gap between the agricultural sector and other sectors in the economy, leading to a growing gap between rural and urban income per capita. As a result millions of people, particularly those in the economically active sector, have migrated from rural to urban areas to fill the jobs generated by the economic explosion, increasing the inequalities further. Both the description and explanation need to be detailed and informed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.14 'The impact of globalisation on China has been positive'. Discuss. (1.5) [25]

Guidance

Candidates:

- (i) should show knowledge and understanding of the positive and negative impacts on China associated with the globalisation of economic activity;
- (ii) should show the ability to discuss these impacts: better candidates should provide a more detailed discussion.

Economic effects include benefits such as the expansion of industries and services, increased international trade and exponential growth in exports and the entry of China into the WTO in 2001, rising incomes and infrastructure improvements. Competition from abroad will help the Chinese to raise levels of efficiency and force the large SOEs (State Owned Enterprises) to either modernise or dismantle. Economic costs include widening regional disparities as economic activity is concentrated in core growth areas along the east coast, labour exploitation, exposure to the influences of westernisation, increased consumerism and the increase in China's 'floating' population. Political impacts may include the expansion of the influence of TNCs, the change in state economic policies and the move to a socialist market economy. Environmental impacts (both negative and positive) may also be discussed.

The discussion should take the form of a discussion of positive impacts compared to negative impacts, but be prepared to credit those candidates who see a spatial difference in effects. The statement needs 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

INDIA

Q.15 Describe and suggest reasons for the increasing inequalities within urban areas in India. (1.4) [25]

Guidance:

Candidates:

- (i) should describe the increasing inequalities within urban areas in India; better candidates will show more detailed knowledge and understanding;
- (ii) should show the ability to suggest reasons for the increasing inequalities; better candidates will provide more detailed explanations.

Candidates should discuss increasing inequalities between the middle classes, with their aspirations for a higher consumption lifestyle, and the poor who are often denied access to secure housing rights, sanitation, safe and secure drinking water, food security, healthcare, freedom from violence and education. Reasons for these growing inequalities include rapid economic growth associated with the globalisation of India's economy, lack of public housing, lack of coordination and urban planning and lack of central and state finance. Both the description and explanation need to be detailed and informed 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

Q.16 'The impact of globalisation on India has been positive'. Discuss. (1.5) [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the positive and negative impacts on India associated with the globalisation of economic activity;
- (ii) should show the ability to discuss these impacts: better candidates will provide a more detailed discussion.

Economic impacts include benefits such as the growth of Indian TNCs, expansion of industries and services, increased international trade and growth in exports, rising incomes and infrastructure improvements. Economic costs include widening social and regional disparities, exposure to the influences of westernisation, increased consumerism and the negative impact of globalisation on India's poor. Environmental impacts (both negative and positive) may also be discussed.

The discussion should take the form of an assessment of positive compared to negative impacts, but be prepared to credit those candidates who see a spatial difference in effects. The statement needs 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, whilst **good (Level 4)** responses should contain good factual knowledge and understanding.

G3b Assessment Objectives Grid

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 on page 2 to determine an appropriate mark. If in doubt, please consult your team leader.

G3b contains ten two part questions marked out of 10 (Part a) and 15 (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	Weak	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	Weak	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 G3

CONTEMPORARY THEMES AND RESEARCH IN GEOGRAPHY

SECTION b : RESEARCH

- (a) **Describe and justify methods of presenting information that could be used in an investigation into (context).** [10]

As with previous examination series there is no need to draw parallels with their own study, but this should be credited if it helps to develop the answer. Methods of presenting information should be appropriate to the topic area under investigation. Candidates should demonstrate their knowledge of methods of presentation and show how they might or might not be appropriate. Any suitable methods (i.e. to the theme) should be credited.

From WJEC list of command words: **Describe:** Identify distinctive features and give descriptive, factual detail. **Justify:** Explain why your choice is better than the possible options.

Expect there to be some description of the method(s) of presenting information, which may be illustrated with diagrams or examples. Where these relate specifically to the investigation credit should be given. Examples described might include graphs (bar, line, scatter, bi-polar), photographs, maps, located symbols, tables and power point presentations. Accept any reasonable and appropriate presentation method. Statistical techniques such as Spearman rank are not a method of presentation.

There should be some comment on the justification of the methods of presentation discussed.

Level 3 (8 - 10 marks)	Good description of appropriate methods of presentation relevant to the topic area. Good justification, e.g. ease of use, clarity, and appropriateness to the data collected or any appropriate argument that explains the choice of presentation method. Answers can access this level without reference to their own study, although if mentioned it should be given credit.
Level 2 (4 - 7 marks)	Some description of appropriate methods of presentation, relevant to the topic area. Some justification, but there may be an imbalance between description and justification.
Level 1 (1 - 3 marks)	Basic description of the methods of presentation. There may be just a list of methods of presentation and there is unlikely to be much, if any, justification. Little or no reference to the topic area.

(b) **Summarise and evaluate the conclusions of your personal research into (context).** [15]

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 need to 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.

The content will depend upon the investigation undertaken, but in their answers candidates should show through their summary, knowledge and understanding of the topic chosen and evaluation of the conclusions of their investigation. Expect some use of supporting evidence to access higher levels.

<p>Level 4 (13 - 15 marks)</p>	<p>Detailed summary of the conclusions of their investigation, with good evidence/support. Responses may have either a variety of conclusions or fewer conclusions with greater depth. Good evaluation of the conclusions.</p>
<p>Level 3 (9 - 12 marks)</p>	<p>Either: good summary of the conclusions of their investigation with some evidence/support. Responses may have either a variety of conclusions or fewer in more depth. Some evaluation. Or: unbalanced – detailed summary or reasoned evaluation.</p>
<p>Level 2 (5 - 8 marks)</p>	<p>Some summary of the conclusions of their investigation with some evidence/support and/or some evaluative comment on the conclusions. Answers with no reference to the context could reach the top of this level.</p>
<p>Level 1 (1 - 4 marks)</p>	<p>Basic conclusions and/or evaluation in relation to the topic.</p>

G4 Assessment Objectives Grid

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.

Level 3 (8 - 10 marks)	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.
Level 2 (4 - 7 marks)	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.
Level 1 (1 - 3 marks)	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.

25 mark questions

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

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 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

SUSTAINABILITY

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.

On all questions, the following terms can be easily added using the on-screen software:

- 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 factors determining water supply in *one* country or region. [10]

Key elements for this question are:

Factors

Relationship to water supply

Evidence

Candidates are likely to use material from *Figures*:

- 3 and 4 from page 5
- 5 and 6 from page 6,
- 7 and 8 from page 7,
- 9 and 10 from pages 8, 13 on page 9, and
- 24 and 25 on page 14.

so have plenty to go at from the Resource Folder. They may of course use their own material, and likely examples are California or the Murray-Darling Basin. Candidates are limited to one country or region so if more than one is used, credit the better or best. Factors, plural, are required so if an answer dwells just one, but is very good, allow marks up to the top of Level 2.

Level 3 (8 - 10 marks)	Two or more supply factors will be given with a reasonable amount of detail given that the command is outline. Their influence on supply will be clear. Extensive evidence will be given to support the majority of points made.
Level 2 (4 - 7 marks)	Either, just one factor will be dealt with very well, or more than one is considered but neither is fully clear. The influence of each factor may be vague or intended to imply. There may be some muddle between supply and demand. Some evidence will be given but several points may have little support.
Level 1 (1 - 3 marks)	Answers at this level may list one or more factors with very little elaboration on how they affect water supply. Support will be very thin or may be missing altogether.

Q.2 For one or more countries, outline how energy demands are changing. [10]

Key elements for this question are:

- Demands
- Changes
- Evidence

It is likely that most answers will draw on information from *Figures* 19 and 20 from page 12, *Figures* 21, 22 and 23 from page 13 and *Figure* 26 from 15. Outline how allows candidates to describe change and requires some explanation. Some may choose a strongly descriptive approach, focusing on quantities, with brief explanation. Others may take a more explanatory route, exploring demands, which incorporates information along the way. Both are equally creditable. Explanatory points may draw information from *Figures* 14 and 15 from page 10, and *Figures* 16, 17 and 18 from page 11. Candidates may use a different country, which is perfectly acceptable. If they are using the Resource Folder and another country, credit the best one. Answers that cover recent changes up to the present can gain full marks, as can those that take current trends and project them into the future. In all likelihood, many candidates will do a mixture of both. Candidates who deal with just one demand in detail can score up to the top of Level 2.

Level 3 (8 - 10 marks)	Two or more demands will be identified along with both some description and explanation about them. Outlines will be clear with a reasonable amount of detail. A good deal of evidence will be used to support points.
Level 2 (4 - 7 marks)	Either one demand covered well, or more than one given with a lack of detail in description and/or clarity of outline. Some supporting evidence is given.
Level 1 (1 - 3 marks)	One or two ways named or very simply described. No, or ultra-simplistic attempt at any description or outline given. Little if any evidence given.

Q.3 Identify alternative energy sources and suggest how they may help meet demand.

[10]

Key elements for this question are:

- Alternative energy sources
- Help with demand
- Evidence

Candidates may use a wide range of information from the Resource Folder here, but *Figures 21, 22* on page 13 concerning nuclear, and *Figures 24 and 25* on page 14 about HEP give a good range of alternative energy resources. Some idea of scale of 'help' may be introduced. Candidates may make sustainable/non-sustainable distinctions, degree of pollution from them, modern or used sources for a period of time in the past or other distinction to get at alternative.

Level 3 (8 - 10 marks)	Clear suggestions of more than one alternative source. A clear account of the source and the extent they help meet demand. Evidence will be given in support of almost all points made.
Level 2 (4 - 7 marks)	Either just one source considered with very good suggestions, or more are covered with less depth. May be imbalance between sources and meeting demand. 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.4 'Constructing dams is the only way to ensure sustainable water supplies.'
How far do you agree?

[25]

Key elements for this question are:

- Knowledge of other water supplies
- Understanding of other benefits/drawbacks of dams
- Sustainability
- Assessment - how far
- Evidence

Having examined factors related to water supplies in Question 1, candidates should have the information they need to make links between these and the information provided on dams to make some assessments. In order to address the 'how far' component, *Figure 25* on page 14 gives lots of starting points to consider dams and *Figure 27* on page 15 gives information that can be linked as associated sustainability points. *Figure 26* on page 15 gives some dimensions of sustainability that can be taken up in their answers on water. No particular answer is expected, but some appreciation that there can be different points of view is necessary for high marks.

Level 5 (22 - 25 marks)	Answers at this level will make fully clear links between dams and water supplies with issues of sustainability introduced. 'How far' will be considered throughout, and different degrees of sustainability identified. Extensive evidence will be provided in support. The answer will be well structured and logical, and expressed in clear language.
Level 4 (17 - 21 marks)	A good answer but with either imbalance between dams and other sources of water supply, or some lack of depth if both are considered equally, or limited consideration of 'how far'. Valid points on sustainability made. Some good evidence will be given. A well-ordered answer with good expression.
Level 3 (10 - 16 marks)	A sound answer, but with either strong imbalance, or lack of depth on most points considered. Sustainability understood but brief at the upper end of the range, more token at the lower end. Consideration of 'how far' will be very limited at the upper end and missing towards the lower end of the range. A little evidence will be given. Minor flaws in organisation and expression are likely.
Level 2 (5 - 9 marks)	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.
Level 1 (1 - 4 marks)	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 and with poor expression.

SECTION B

Q.5 Outline how technology affects food production. How far does the application of technology influence the sustainability of food supplies? [25]

Key elements for this question are:

- Knowledge of technology used in food production
- Quantity, quality, location, distribution (and/or other) issues
- Sustainability
- Assessment – ‘how far’/extent
- 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. Ideally candidates will have some knowledge of food technologies. Some knowledge of food supply chains, amounts produced and required should be shown. Threats to food supplies may be evident. These are likely to be taken up and compared with technology. No particular answer is expected but for high marks candidates should show that different points of view are possible. The assessment should deal with ‘how far’/extent for Level 4 and 5 marks.

Level 5 (22 - 25 marks)	Several types of food technology will be described in detail with clear reasoning throughout. The importance of sustainability will be considered. Assessment of different viewpoints and extent of their validity will be given. 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)	Food production and technologies will be suggested, but some may lack detail, or the reasoning behind them may be unclear or rather brief. The importance of sustainability will be mentioned. Some differences of view will be given with some sound assessment. Some good evidence will be given. A well-ordered answer with good expression.
Level 3 (10 - 16 marks)	There will be some sound suggestions about food technologies but there will be limited detail or reasoning about them. Sustainability may appear (upper end) or be only token (lower end). There may be some different points of view with one favoured more than another at the upper end, but only one viewpoint towards 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 or reasoning to support them. Statements 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 discussion of impacts will be misguided. Poor or no evidence is given. The whole answer will be poorly organised and with poor expression.



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