



GCE MARKING SCHEME

**GEOGRAPHY
AS/Advanced**

JANUARY 2012

INTRODUCTION

The marking schemes which follow were those used by WJEC for the January 2012 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 G1

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)	0	2	3	5	1.1
(b)	8	2		10	1.3
(c)	7	3		10	1.4
	15	7	3	25	
Question 2					
(a)	0	2	3	5	2.4
(b)	8	2		10	2.4
(c)	7	3		10	2.5
	15	7	3	25	
Question 3					
(a)	1	1	5	7	2.1
(b)	2	1	5	8	
(c)	3	2	5	10	
	6	4	15	25	

GEOGRAPHY - G1

CHANGING PHYSICAL ENVIRONMENTS

- Q.1 (a) **Use *Figure 1* to compare the precipitation and temperature characteristics of the tropical rainforest and grassland biomes.** [5]

Tropical rainforest has higher amounts of rainfall; grassland has smaller range of rainfall. Tropical rainforest has a smaller range of temperatures; grassland survives at lower temperatures.

Allow one mark for comparative comment with a possible two extra for data from the graph – could quote data for both biomes to back up the comparative comment. Data could include comparison of range of temperatures: highest temperatures (1 mark); lowest temperatures (1 mark) with the same for rainfall. Allow comparison of data for 1 mark e.g. grassland starts at -9°C whereas tropical rainforest start at $13 - 14^{\circ}\text{C}$.

Award a maximum of 4 marks for lift of figures. To achieve 5 marks some comparison is required. Answers need to address both temperature and precipitation.

- (b) **Explain how human activities have caused recent climate change.** [10]

There are two elements to this question: human activities and the processes leading to climate change. Some candidates may focus more on one element than the other which is acceptable.

This question allows candidates to demonstrate knowledge of recent climate change and above all the role of human activity in that change. Candidates could discuss the factors that have resulted in the enhanced greenhouse effect such as increased production of CO_2 , methane and other greenhouse gases, the removal of carbon sinks, intensification of agriculture etc. Answers may detail the operation of the **enhanced** greenhouse effect and link this to human activity. There is also the opportunity to credit comment on the nature of recent climate change such as increased temperatures, shifting climate belts and extreme weather events.

Take care not to credit reference to other changes such as sea-level rise, glacier retreat etc. These are symptoms of climate change.

Some candidates may view human activity as strategies to halt recent climate change. The evidence for the reversal of climate change is very limited but some candidates may put up a spirited argument that could get to Level 2.

Examples **may** include: methods of human activity; changing climate; location; detail of atmospheric processes.

Level 3 8–10 marks	Developed and linked knowledge and understanding of human impact on recent climate change. Knowledge of climate change / activities. Development of examples.
Level 2 4–7 marks	Some knowledge and understanding of human impact on recent climate change. Some knowledge of climate change / activities. Examples are evident and enhance the explanation. Maximum level if only one element addressed.
Level 1 0–3marks	Basic knowledge and understanding of human impact on recent climate change. Basic knowledge of climate change / activities. Little use of examples.

(c) Outline two impacts of climate change on society. [10]

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

Good answers should display depth of knowledge of the link between the effects of climate change and the impacts on selected elements of society. This depth of understanding may come in the form of detailed descriptions of the impacts or contain some elements of explanation – although these are not required to gain access to Level 3. Do not give credit to answers that examine the cause of climate change.

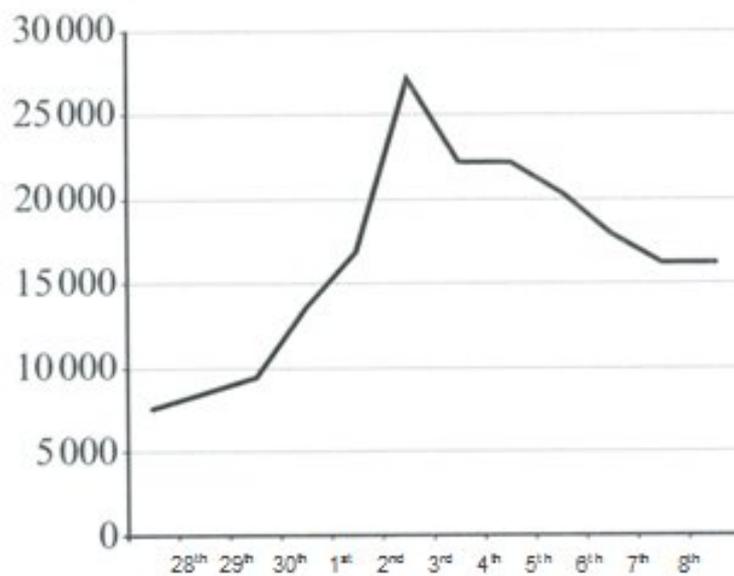
Some approaches can be seen below but be prepared to credit valid alternatives.

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

Accept a location based approach which outlines a range of factors and /or impacts. To gain Level 3 in this approach there must be an ability to link the factors to an identifiable major impact.

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

Q.2 (a) Use Figure 2 to describe the flood hydrograph at Taunsa. [5]



There is a:

- steady increase to 29th / 30th - from 7 – 9
- fast increase 30th / 31st - from 9 - 17
- most rapid increase to 1st / 2nd - from 17 – 27
- steep fall on 2nd / 3rd - from 27 – 22
- level rate 3rd / 4th - 22
- steady decrease 4th / 7th - 16
- level rate 7th / 8th - 16
- and is flashy.

Award 1 mark for each valid comment up to a maximum of 5 marks, although an extra mark for extraction of data from the hydrograph can be allowed.

(b) Explain how two human factors affect the shape of flood hydrographs.

[10]

There are two elements to this question: the operation of the factors and the impacts on the hydrograph.

Candidates may refer to a variety of factors but will need to develop an explanation of the processes that impact on the hydrograph. Popular choices for the factors may include the following factors.

- Urbanisation
- Deforestation
- Intensification of agriculture
- Afforestation
- Hard engineering
- Land drainage
- Extraction from, or addition of water to, rivers
- Other valid methods

Candidates must display an understanding of how the selected human factor impacts on the hydrograph. They could do this through:

- *either* a systems analysis of the passage of water through the system
- *or* through a description of how water movement is altered by the human factor.

Accept answers that comment on the production of a flashy response and/or a steady response.

Development may take the form of valid exemplar material.

Level 3 8–10 marks	Developed knowledge of human intervention in drainage basin hydrology. Developed and linked knowledge and understanding of impacts of humans on drainage basin hydrology and hydrographs.
Level 2 4–7 marks	Some knowledge of human intervention in drainage basin hydrology. Some knowledge and understanding of impacts of humans on drainage basin hydrology and hydrographs. Maximum level 2 if response covers only one element.
Level 1 0–3marks	Basic knowledge of human intervention in drainage basin hydrology. Basic knowledge and understanding of impacts of humans on drainage basin hydrology and hydrographs.

(c) Outline the physical impacts of flooding within *one or more* drainage basins. [10]

Answers may focus on physical impacts in either/or a human or natural context. Impacts in a natural context may address the formation of flood plains, ox bow lakes, sediment transport and deposition, natural vegetation, coastal landforms etc.

Alternatively answers may look at the physical impacts of flooding on buildings, infrastructure, methods of transport, drainage systems, flood defences etc. Avoid crediting responses that develop this approach by focusing further on economic, social and demographic factors.

Some answers may approach this question by outlining how flooding has led to drainage basin management causing changes to the physical characteristics of the drainage basin e.g. stream straightening, levees and afforestation.

Answers could analyse the processes by which flooding causes the selected impacts to establish the link between process and outcome. Depth of analysis will reflect the case study approach – it could be more developed with few cases studies or less developed with more studies.

Level 3 8–10 marks	Developed and linked knowledge and understanding of physical impacts and processes that cause them. Good development of examples.
Level 2 4–7 marks	Some knowledge and understanding of physical impacts and processes that cause them. Some use of examples.
Level 1 0–3marks	Basic knowledge and understanding of physical impacts and processes that cause them. Little use of examples.

Q.3 (a) Use Figure 3 to describe the distribution of earthquake hazard zones in India. [7]

Candidates could examine the overall pattern and comment upon the greater hazard in the north and north east in particular. Anomalies are seen in Gujarat, Maharashtra and the Andaman Islands. Areas of lesser hazard are seen in 4 regions. These can be named from the states / cities on the map or described using compass directions and the scale provided.

Answers could be organised around hazard zones i.e. zone 5 is in the north east etc.

Level 3 6–7 marks	Shows clear and detailed identification and description of distribution of earthquake hazard. Addresses more than one hazard zone. Extensive use of resource.
Level 2 3–5 marks	Shows some ability to identify and describe distribution of earthquake hazard. Uses some information from resource.
Level 1 0–2marks	Limited ability to identify and describe distribution of earthquake hazard. Limited use of resource.

(b) Describe the strengths and weaknesses of this type of map in the investigation of changing physical environments. [8]

The strengths of this type of map allows for:

- an easy presentation technique
- a good visual impression of **patterns**
- **easier spotting of** geographical trends.

The weaknesses are however that:

- it gives a false impression of abrupt change at the boundaries
- variations within each area are hidden, particularly if a wide data range is used
- reading exact data figures from the map is not possible
- the key does not provide specific information about the strength of the earthquake or the amount of damage
- it lacks detail on information such as size of population, preparedness etc. that can be applied to its use in further investigation.

Level 3 6–8 marks	Good knowledge of strengths and weaknesses but some may be developed in more detail. Developed description.
Level 2 3–5 marks	Some knowledge of strengths and weaknesses. May lack balance – either good knowledge of strengths or weaknesses. Some description.
Level 1 0–2marks	Limited knowledge of strengths and weaknesses. Basic description.

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

You should state clearly the question that you have investigated.

The content of the answer will vary considerably as there will be a wide range of investigations. Answers should discuss the main conclusions which could vary from a small number to more in less detail. They should be related to the original question set but could review identified patterns, relationships, changes over time, proof of processes operating and characteristics of the subject under investigation.

A detailed description of the outcomes is sufficient to reach the top of Level 3. Alternatively there may be less detail about conclusions but some discussion of the outcomes that may review their validity or examine areas for further investigation.

Level 3 8–10 marks	Developed description or clear and integrated discussion of main conclusions.
Level 2 4–7 marks	Some description or some discussion of main conclusions.
Level 1 0–3marks	Basic description of main conclusions.

Assessment Objectives Grid for G2

	AO1 Knowledge and Understanding	AO2 Application	AO3 Skills	Total	Key Question
Question 1					
(a)	0	2	3	5	1.4
(b)	8	2	0	10	1.3
(c)	7	3	0	10	1.6
	15	7	3	25	
Question 2					
(a)	0	2	3	5	2.1
(b)	8	2	0	10	2.3
(c)	7	3	0	10	2.6
	15	7	3	25	
Question 3					
(a)	0	0	7	7	1.4/2.2
(b)	4	4	0	8	
(c)	2	0	8	10	
	6	4	15		
	36 (48%)	18 (24%)	21 (28%)	75 (100%)	

GEOGRAPHY – G2

CHANGING HUMAN ENVIRONMENTS

The Assessment of Quality of Written Communication at AS

Opportunities for assessment of quality of written communication are found within each of the Assessment Objectives and thus within all questions that demand continuous prose that are marked out of ten.

For each of the ten mark questions in G1 and G2, the following criteria for quality of written communication should be applied to the levels of assessment.

Mark Band Criteria for the Assessment of Quality of Written Communication for 10 mark questions at AS.

Level 1	<ul style="list-style-type: none">• Information is randomly organised and lacks clarity.• Statements are brief and bald and the language is simplistic with limited use of geographical vocabulary.• Spelling, punctuation and grammar are weak with errors that may be intrusive.
Level 2	<ul style="list-style-type: none">• Information is relatively clear but points and arguments are not always direct or logically developed.• The use of geographical vocabulary is variable and prose style may lack precision or accuracy.• There are some errors of spelling, punctuation and grammar that may make the meaning unclear.
Level 3	<ul style="list-style-type: none">• Information is organised clearly and coherently and arguments are logically developed and tightly structured.• Candidate writes in continuous prose using relevant and accurate geographical vocabulary.• There are relatively few errors of spelling, punctuation and grammar.

GEOGRAPHY – G2

CHANGING HUMAN ENVIRONMENTS

- Q.1 (a) Use *Figure 1* to describe the issues outlined in the newspaper article about migration. [5]

Look for the following issues:

- rapid increase in the costs of benefits
- dealing with numbers awaiting deportation
- swamping of deportation system
- increased costs falling on the taxpayers.

Award one mark for issue and one mark for elaboration, with a further mark for a final issue or elaboration up to a maximum of 5. Maximum 2 marks for direct lift. Do not respond to candidates' individual views/perceptions of the issues.

Elaboration may include extended issues as to the type of costs involved, such as employment of staff in detention centres and at the UK Border Agency as well as the cost and time of lawyers and charities involved in asylum seeker work and possibility of biased reporting.

- (b) Outline *two ways* in which migration changes the population characteristics of an area. [10]

This is an open question and there could be a number of approaches. Ways can be interpreted as the process of change and the characteristics of change. Population characteristics may include the following and reference to destination and / or source. Accept a range of scales from local to international.

Demographic

- Total **numbers** of people which may either increase or decrease which may lead to over- or under-population.
- The **gender** ratio: where a migration is dominated by either male (construction workers from India to Dubai) or females (Philippine females out-migrating to MEDCs).
- **Age structure**: such as retirement migration.

Social structure

- The unwelcoming attitudes of the host community when a non-indigenous group enters an area bringing different social customs and habits. Many examples exist involving, for example, Jews, Poles, Mexicans and Turks.
- Multicultural influences and social mixing between religions and races.

Any two distinct changes in demographic characteristics need to be explained with elaborative detail from migration case studies. A single migration or a multitude of migrations may be used.

Other aspects of migration characteristics, such as economic and environmental, should be credited fully if a connection with demographic change has been made. If no link with demographic change has been made then the mark limit is level 2.

Level 3: 8–10 marks	Developed knowledge and detailed understanding of ways in which population characteristics are changed by migration. Good development of examples.
Level 2: 4–7 marks	Some knowledge and understanding of ways in which population characteristics are changed by migration. Example(s) are evident and enhance the explanation.
Level 1: 0–3 marks	Basic knowledge and understanding of ways in which population characteristics are changed by migration. Little use of example(s).

(c) Discuss policies to address the demographic challenge of high mortality rates. [10]

The term high may be interpreted in several ways: really high, i.e. Zambia 20/1000 (2010) or relatively high in comparison with birth rates, i.e. Ukraine DR 15/ BR 11.

Currently countries in stages 2 and 3 of the demographic transition will have a variety of policies to reduce deaths mainly focusing on improving health, sanitation, education and social structure. Even health and safety issues perhaps associated with road traffic may feature.

Stage 5 countries will continue to prolong the lives of their citizens with medical advancement, but at the same time may encourage the demographics of the country to change by allowing younger workers into the country. Also countries, through various policies, to encourage procreation, will thus reduce the impact of an ever ageing population. In so doing the nation's overall death rate will reduce. Other policies might include making abortion illegal, regulation of birth control, family allowances, state support for mothers, restricting the roles of women.

AIDS is in the specification and candidates may focus on ways of reducing deaths from AIDS. Such a response can achieve full credit. An example of a case study of Swaziland is provided below.

- HIV surveillance was introduced in 1992, when 3.9% of pregnant people were HIV positive.
- Condom use promoted by free distribution.
- Screening of all donated blood.
- Improvements to health care for those living with HIV and particularly to aid prevention of mother to child transmission.
- Improvements to women's access to prevention services.
- Early diagnosis established by scaling up testing services. Swaziland has an increasing number of sites (40 plus) providing voluntary counselling and testing (VCT); by 2008 the government aimed to have 40% of adults aged 15 to 49 tested for HIV.
- Behaviour change encouraged by communication distributed through national media, in schools and in workplaces. Adverts on billboards, radio and the printed press with slogans such as, "Because tomorrow is mine" and "I want to finish my education. Sex can wait" have been set up.
- In 2001 King Mswati III reinstated a custom that banned all girls under 18 from sexual activity for five years, and required any man who has sex with a virgin to pay a cow to the girl's family. All girls were made to wear tassels to display their virginity.
- The government is providing free nationwide [antiretroviral treatment](#) (ARVs).

Statistics and case study knowledge would be expected for Level 3. The command word, discuss, is not an evaluation, and although the relative success of such policies may be mentioned, this is not a requirement for a Level 3 answer. Answers that lack links to mortality are likely to be self-penalising.

Level 3: 8–10 marks	Developed knowledge and detailed understanding of specific policies to tackle the demographic challenge of high mortality rates. Good development of example(s).
Level 2: 4–7 marks	Some knowledge and understanding of policies to tackle the demographic challenge of high mortality rates. Example(s) are evident and enhance the discussion.
Level 1: 0–3 marks	Basic knowledge and understanding of policies to tackle the demographic challenge of high mortality rates. Little use of example(s).

Q.2 (a) Use *Figures 2a and 2b* to describe the settlement hierarchy in North Cambridgeshire. [5]

The idea is to combine the two figures to classify the settlements into a hierarchy similar to the one suggested below.

If we match the classification triangle with reality we are **probably** looking at a 3 / 4 level hierarchy:

- large town: March, Wisbech
- small town: Chatteris, Whittlesey
- village: large – Doddington, small – Christchurch, Murrow, Newton
- hamlet: Fitton End, Ramsey Mereside, Stonea.

The village category could usefully be split into large and small villages as above, but this is not necessary to achieve full marks.

Allow up to 3 marks for information similar to that given in the bullets and a further 2 marks for developed information provided, such as understanding of hierarchy, population information and the service provision in a selection of settlements.

(b) Describe and explain the regeneration of an area within an urban settlement. [10]

This question consists of two elements – description and explanation and one may be treated in more depth than the other. Explanations can include policies of regeneration.

Any area: CBD / inner city / suburban examples are acceptable. Multiple examples of areas and settlements are equally valid.

CBDs have had to reinvent themselves to come to terms with many changes.

- **Economic**
 - People have more disposable income and a shopaholic society has developed.
 - CBDs have changed from suiting a society with needs to a society with wants.
- **Social**
 - Younger people are delaying settling down with a partner and family and are spending money on entertainment, so CBDs have responded by creating entertainment sectors with lots of bars, clubs, cafes etc.
- **Environment**
 - CBDs have improved their environment with pedestrianisation, flowers, trees and fountains as people expect a more pleasant shopping experience to suit their greater disposable income.
- **Out-of-town developments**
 - CBDs have had to compete vigorously with out-of-town developments.
- **Inner city redevelopments**
 - Re-urbanisation and studentification have provided a larger purchasing power within walking distance of the CBD.
- **Internet**
 - CBDs have to compete with internet shopping so have to encourage people with a much more pleasurable experience than clicking a mouse button!

Inner cities have been similarly regenerated for several reasons:

- **The decline of manufacturing industry** for reasons of competition from abroad and cheaper more accessible locations out of town thus leaving abandoned and derelict factories.
- **Decline of traditional dock areas** with associated industry due to larger bulk carriers and the trend away from manufacturing in the national economy.
- **Out migration of the younger dynamic sector** of the community leaving behind an older less skilled and employable community.
- **The influx of migrant communities** has encouraged much social and some structural changes in catering for a different ethnic community.
- **The process of re-urbanisation** where the demand for city living has expanded from dynamic young professionals.
- **The vast rise in student numbers** has encouraged inner city universities to expand their accommodation provision.

Although reasons have been segregated above into CBD and inner city, several reasons are linked.

Suburban regeneration schemes may include the renewal of old housing estates.

Expect explanation similar to that above with description and case study material. Those responses with no explanation should not go beyond Level 2.

Level 3: 8–10	Developed description of the regeneration of an area(s) within an urban settlement(s). Detailed knowledge and understanding of the reasons for the regeneration of an area(s) within an urban settlement(s). Good development of example(s).
Level 2: 4–7 marks	Some description of the regeneration of an area(s) within an urban settlement(s). Some knowledge and understanding of reasons for the regeneration of an area(s) within an urban settlement(s). Example(s) are evident to enhance the answer. Only addresses one element of the question
Level 1: 0–3 marks	Basic description of the regeneration of an area(s) within an urban settlement(s). Basic knowledge and understanding of reasons for the regeneration of an area(s) within an urban settlement(s). Little use of example(s).

(c) Outline ways in which housing is changing in rural areas. [10]

This is an open question and there could be a number of approaches. Ways can be interpreted as the process of change, the characteristics of change and residential demographics.

Answers can be approached through a variety of structures e.g.

- by distance from an urban area
- by size of settlement / residential unit / development
- social and demographic
- ownership characteristics
- quality of the built environment.

Suggestions

Rural–urban fringe and rural settlements

Housing in the rural–urban fringe and rural areas is changing as more of it is being built as a consequence of counter-urbanisation. Villages are being engulfed by modern housing estates to serve commuters. Such houses are usually different from the local established housing. Often new housing estates take no regard for traditional building styles and look very much the same as in the suburbs of towns; hence the term ‘suburbanised’ villages. More wealthy people can afford to purchase larger detached properties which may often be purpose built or undergo much renovation, again changing the style of a house from its traditional character (satellite dishes, different window styles). Barn conversions, planning restrictions, traveller communities and provision of social housing may also be included.

Remote rural settlements

Abandonment by locals is often occurring as they sell up at inflated prices to second homers: this also leads to the younger locals leaving as house prices become unaffordable. Much of the housing stock could be taken over by ‘outsiders’, ‘second homers’ who may spend a lot of money ‘beautifying’ their newly acquired property. Other homes may be left derelict in areas due to location or be in areas not so scenically attractive for tourism.

Support from examples/case study material and place detail will enhance the answer.

Credit breadth and / or depth; responses may cover some ways in greater detail than the others which is acceptable.

Level 3: 8–10 marks	Developed knowledge and detailed understanding of the ways in which housing is changing in rural areas. Good development of example(s).
Level 2: 4–7 marks	Some knowledge and understanding of the way(s) in which housing is changing in rural areas. Example(s) are evident and enhance the explanation. Only one way is covered.
Level 1: 0–3 marks	Basic knowledge and understanding of the way(s) in which housing is changing in rural areas. Little use of example(s).

Q.3 (a) Use information from *Figure 3* to describe the predicted population structure of Russia in 2050. [7]

Those that demonstrate some knowledge of the overall shape of the population structure pyramid supported facts and figures would achieve a Level 3 answer.

The overall shape could be described as convex; a regressive pyramid; there are more old people than children, i.e. ageing, top heavy structure.

There are a variety of points which could be made. Some suggestions appear below, but these are not exhaustive. Award marks for equally valid points.

- Below 30 each age range has less than 6 million and the gender ratio is relatively even with, for example, in the 0–4 year olds more boys (approx 2.6m) than girls (approx 2.4m).
- Gender Ratio appears very even up until 49, with for example, approximately 3.2m each at 45–49.
- Numbers begin to increase above thirty reaching a peak of 3.5m females and 3.7m males at 45.
- A reduction in numbers then occurs with a minimum of 2.8m females and 3.7m males at 50–54.
- A massive rise in numbers then occurs reaching a peak at 60–64 with 4.9m females and 4.2m males, a total of 9.1 million.
- By 75–79 females are very dominant: 1.7m males to 3.4m females: 1.8m more females: i.e. double.
- Females continue to dominate the older age ranges, for example 1.3m 90–94 year olds compared with 300,000 males.

Level 3: 6–7 marks	Developed description linked overtly to the population pyramid data by selective use of precise, relevant facts and figures.
Level 2: 3–5 marks	Some description, but the use of the population pyramid data is patchy and underdeveloped.
Level 1: 0–2 marks	Basic description with no, or very vague, references to the population pyramid data.

(b) Describe *two* different ways of representing population data on maps.

[8]

Ways can be interpreted as the process of construction of the maps and / or how the data depicts population characteristics on the maps.

The following are a selection of mapping techniques used to handle a wide variety of population data.

- Choropleth
- Dot
- Isoline
- Located symbols (bar charts, pictograms, pie graphs)
- Flow-line
- Topological
- Proportional symbols
- Digital

Population data could include migration statistics as well as total population, male, female, age, birth rate, death rate, ethnic composition, density, infant mortality, total fertility rate, movement.

Temporal and /or spatial mapping are both possibilities.

Credit breadth and / or depth; responses may cover one way in greater detail than the other which is acceptable. There must be some link to representation on maps to achieve more than Level 1.

Level 3: 7–8 marks	Detailed and developed description of two different ways of mapping population data. Good development of examples.
Level 2: 4–6 marks	Some description of two different ways of mapping population data; or lacks balance - detailed description of one way. Examples are evident and enhance the answer.
Level 1: 0–3 marks	Basic description of way(s) of mapping population data. Little use of examples.

(c) Outline the conclusions of your investigation into a changing human environment.

[10]

You should state clearly the question that you have investigated.

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

From the WJEC document on stages in the enquiry process, conclusions are included in the 'conclusion and evaluation stage' as:

5. Conclusion and Evaluation

- Summarise the conclusions you have been able to reach about each of your sub-questions. Your conclusions must be effective and acceptable, linking directly back to the questions.
- Evaluate the methods of data collection and sampling techniques used.
- Comment on the strengths and weaknesses of the study as a whole and the importance of obtaining accurate and reliable data.
- Suggest further research that could be carried out and/or questions to be answered.

Thus an outline of what the investigation set out to achieve would be expected with a detailed review of whether or not the initial hypothesis, question and/or issue had been realised. Some candidates may incorporate an evaluation as part of their conclusion, which is acceptable.

Level 3: 8–10 marks	Developed knowledge and detailed understanding of the conclusion to the investigation. Good development using the context of the investigation.
Level 2: 4–7 marks	Some knowledge of the conclusion to the investigation. Some development using the context of the investigation. Perhaps a good evaluation without conclusion.
Level 1: 0–3 marks	Basic knowledge of the conclusion to the investigation and/or a weak evaluation. Little use of the investigation.

Assessment Objectives Grid for G3

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)	3	3	4	10
G3B (b)	6 (geographical concepts)	3 (apply understanding and evaluation of techniques)	6 (use a range of skills & techniques)	15
	35 46%	20 27%	20 27%	75 (100%)

GEOGRAPHY - G3A

MARK BANDS - SECTION A: CONTEMPORARY THEMES IN GEOGRAPHY

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

GEOGRAPHY – G3A
CONTEMPORARY THEMES AND RESEARCH IN GEOGRAPHY
SECTION A
CONTEMPORARY THEMES

INFORMATION FOR EXAMINERS

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 characteristics that make desert environments extreme. [25]

Guidance:

Candidates:

- (i) should show knowledge of the physical characteristics of desert environments to include the main climatic, soil and biotic characteristics;
- (ii) should show an understanding of how these physical characteristics interrelate to give a distinctive environment;
- (iii) should link the physical characteristics to the concept of extreme.

Answers may examine the arid nature of deserts, high evaporation rates, the large scale variations in temperature at a diurnal or seasonal level, the accumulation of salts in the upper horizons of the soil profile, aeolian elements etc. The interrelationships may be discussed in terms of the need for special adaptations required by biota to overcome climatic and soil characteristics. The concept of extreme may take this further and answers could relate extreme to purely physical characteristics or try to link extreme to human characteristics. Examples should be well integrated in the answer. In order to reach the **very good** band, in addition to sound factual content of the characteristics that make desert environments extreme, there needs to be an examination of these.

Q.2 Assess the impacts of the economic exploitation of extreme environments. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of how economic exploitation (including mineral exploitation, agriculture and tourism) impacts on desert and/or tundra environments; better candidates may discuss the positive as well as the negative impacts of economic exploitation;
- (ii) better candidates will assess the impacts throughout, whereas the average candidate may only assess the impacts in passing or perhaps briefly in their conclusion.

Impacts that may be identified include those from tourism, agriculture and mineral exploitation. It is not expected that all of these are considered in the context of both desert *and* tundra. Expect examples to be well integrated in the answer. The approach to the question may be either regional (desert and tundra) or thematic by looking at the different forms of economic exploitation individually. (Note that the specification mentions only alpine tundra, but the *Teachers' Guide* refers to both alpine and arctic tundra). The assessment could come in the form of comparisons between desert and tundra environments or take the form of an assessment of costs compared to benefits, but be prepared to credit those candidates who see a spatial difference in impacts. In order to reach the **very good** band, in addition to sound factual content of the impacts associated with the economic exploitation of extreme environments, there needs to be an assessment of these.

Theme 2: Landforms and their Management

Glacial Environments

Q.3 Examine how glaciers operate as a system. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of how glaciers operate as a system with inputs, outputs, throughputs and stores;
- (ii) should 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. There is much more erosion under warm-based glaciers compared with cold-based glaciers. In order to reach the **very good** band there needs to be an examination of how glaciers operate as a system.

Q.4 Examine how management strategies in glacial environments provide protection from the impacts of glacial processes. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the problems arising from the impact of glacial processes (on human activity);
- (ii) should show knowledge and understanding of the strategies put in place to manage these impacts; better candidates should show more detailed knowledge and understanding.

Candidates need to demonstrate their knowledge and understanding of the problems arising from the impacts of glacial processes on human activity. There may be a discussion not only of the nature, but also of the seriousness of the impacts. Candidates will need to describe and explain the strategies put in place to provide protection from these impacts. Strategies will vary depending on the glacial environment chosen. Methods include prevention or control measures in the form of soft (e.g. planting trees) and/or hard engineering (e.g. avalanche barriers). The command to 'examine' does not require evaluative comment, although this approach may be taken. However, the strategies 'examined' need to be described and explained in detail in order to reach the **very good** band.

Coastal Environments

Q.5 Examine how coasts operate as a system.

[25]

Guidance:

Candidates:

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

The coastal system is one of **inputs** and **outputs**. There are two 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. 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**. In order to reach the **very good** band there needs to be an examination of how the coastal system operates.

Q.6 Examine how management strategies in coastal environments provide protection from the impacts of coastal processes.

[25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the problems arising from the impact of coastal processes (on human activity);
- (ii) should show knowledge and understanding of the strategies put in place to manage these impacts; better candidates should show more detailed knowledge and understanding.

Candidates need to demonstrate their knowledge and understanding of the problems arising from the impacts of coastal processes on human activity. There may be a discussion not only of the nature, but also of the seriousness of the impacts. Candidates will need to describe and explain the strategies put in place to provide protection from these impacts. Strategies will vary depending on the coastal environment chosen. Strategies include hard engineering methods such as sea walls, rock armour, groynes, gabions and revetments and soft engineering methods such as beach replenishment. The command to 'examine' does not require evaluative comment, although this approach may be taken. However, the strategies 'examined' do need to be described and explained in detail in order to reach the **very good** band.

Theme 3: Climatic Hazards

Q.7 Explain the formation of high-pressure systems and describe their associated hazards. [25]

Guidance:

Candidates:

- (i) should **either** show knowledge and understanding of the formation of large high-pressure systems associated with descending air in the tropics as part of the global pattern of atmospheric circulation;
- (ii) **or** should show knowledge and understanding of the formation of high-pressure systems downstream of a ridge in the upper westerlies in temperate latitudes;
- (iii) should provide a description of the hazards associated with high-pressure systems; better candidates will show a more detailed knowledge and understanding.

Candidates will either refer to the formation of anticyclones in temperate regions or tropical formation in tropical regions. In the case of the tropical climatic region the coverage may well use the monsoonal climate for the formation of high pressure systems during the cooler dry season. The second part of the answer involves a description of the hazards associated with high-pressure systems. In the tropics the hazards associated with high-pressure systems are **low rainfall, high evaporation rates and drought**. These trigger secondary hazards of a **falling water table, loss of vegetation, wild fires, soil erosion** and associated **desertification**. These hazards are associated with anticyclonic conditions which are due to the continued persistence of the sub-tropical high pressure over continental areas limiting the ITCZ zone to lower latitudes (nearer the Equator) than is normal for the time of the year.

In temperate climates the hazards associated with high-pressure systems include **drought** in summer and **frost and fog** in winter. They may trigger secondary hazards in summer of **falling water tables** and **loss of vegetation** and **temperature inversion** with air pollution intensifying the fog conditions in winter. These conditions are associated with a persistent, stationary anticyclone which in summer is usually associated with the extension into higher latitudes of the sub-tropical high pressure. In winter the conditions are usually associated with the extension of the continental high pressure towards the coastal margin of the land masses. For those candidates who refer to anticyclones in temperate latitudes, reference to seasonal differences in hazard conditions should be expected. Expect a very detailed explanation and description in order to achieve the **very good** category.

Q.8 Discuss the effects on human activity of hazards associated with low-pressure systems. [25]

Guidance

Candidates:

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

There may be reference to demographic effects at both time scales such as deaths and long-term migration. Economic effects may analyse losses in the short term, such as cessation of production and costs of damage in the long term, such as the effects on economic activity and infrastructure. Social effects may include observations on health, homelessness and bereavement. There may also be consideration of the effects on the physical environment such as landslides, deforestation and salinisation.

Candidates may take a number of different approaches: an assessment of which effects are the most important, demographic, social or environmental; an assessment of whether short-term or long-term effects are the most significant or an evaluation of the effects in different areas, MEDC/LEDC.

In order to reach the **very good** band, in addition to sound factual content of the impacts associated with low-pressure systems, there needs to be a discussion of these.

Theme 4: Development

Q.9 Examine how the globalisation of economic activity has led to differences in development. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the differences that exist in levels of world development;
- (ii) should show knowledge and understanding of how the globalisation of economic activity has led to these differences.

The opportunity to develop and the rate at which development has been taking place have been much influenced by globalisation of the world economy. The largest aspect of this has been **outsourcing** manufacturing from developed countries into other parts of the world. This has in turn encouraged home-grown manufacturing in areas surrounding the focus of this activity. Tertiary activity has moved out also. Much of this has been low-level call centre work, but there are higher end activities, such as software design, that have also moved. Greater economic integration, such as between Mexico and the USA has stimulated development. Huge reserves of money generated by newly industrialised economies have made capital available to stimulate the establishment of new economic activities. The increased scale of the world economy has stimulated the extraction of raw materials and energy sources, increasing their prices, and injecting income into economies that have previously shown little sign of beginning to grow. Two significant groups of countries are **oil rich nations** and **newly industrialised countries**. The emergence of South East Asian NICs, BRIC countries (Brazil, Russia, India and China) and CIVETS countries (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa) may be used as a good illustration of the effect of the globalisation of economic activity on world development patterns. Candidates may examine regional as well as global differences in development. The recognition that development levels in many sub-Saharan African countries have deteriorated, as they have been 'left out' of the globalisation movement, is worthy of good credit. In order to reach the **very good** band, there needs to be an examination of how globalisation has led to differences in development.

Q.10 'Trade, not aid, is the solution to closing the development gap.' Discuss. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of trade and aid as strategies implemented to close the development gap;
- (ii) should show knowledge and understanding of the effectiveness of trade and aid as strategies to close the development gap; better candidates will provide a more detailed discussion.

Candidates need to discuss the role of trade and aid as strategies to close the development gap. In terms of trade a distinction may be made between 'free' and 'fair trade'. In terms of aid a distinction may be made between 'top down' and 'bottom up' strategies. In order to reach the very good band, discussion should involve the degree of success of both trade and aid. Evaluative comment should make reference to both the positive (improved human development indicators and economic growth rates) and negative effects on development (inequality, corruption and environmental deterioration) of the initiatives discussed and may make reference to FDI and initiatives for debt reduction as alternative strategies.

Theme 5: Globalisation

Q.11 'The disadvantages of being a NIC outweigh the benefits.' Discuss. [25]

Guidance

Candidates:

- (i) should show knowledge and understanding of the advantages and disadvantages of being a NIC; better candidates will show a more detailed knowledge and understanding;
- (ii) should discuss the disadvantages of being a NIC compared to the benefits.

Economic benefits for NICs include the expansion of industries and services, increased international trade, rising incomes and infrastructure improvements. Economic disadvantages include widening regional disparities as economic activity is concentrated in core growth areas. Social benefits include an expansion of employment opportunities, but disadvantages include labour exploitation, altered social structures, exposure to the influences of westernisation, increased consumerism, a loss of traditional society and social dualism in cities. Environmental benefits may include reference to aided habitat preservation and national park developments. Environmental disadvantages may include the over-exploitation of resources by TNCs, increased congestion in core regions, various kinds of pollution, loss of open space and habitats and environmental degradation. Political impacts may include the expansion of the influence of TNCs and an associated reduction in the powers of government. The discussion should take the form of an assessment of disadvantages compared to benefits, but be prepared to credit those candidates who see a spatial difference in impacts. In order to reach the **very good** band, in addition to sound factual content of disadvantages and benefits based firmly on case study material of one or more NICs, there needs to be a discussion of these.

Q.12 Examine the environmental effects of globalisation. [25]

Guidance

Candidates:

- (i) should show knowledge and understanding of the environmental effects of globalisation on MEDCs and LEDCs (including NICs);
- (ii) should examine both the positive and negative environmental effects of globalisation.

Globalisation has had negative environmental effects in both MEDCs and LEDCs, associated with the decline of traditional industry in MEDCs and its growth in LEDCs. Globalisation has also had positive environmental effects associated with the installation of new infrastructure, also the development of tourism can lead to renovation of heritage sites and establishment of national parks in LEDCs and the decline in traditional economic activity can lead to the renovation of heritage sites in MEDCs.

An examination of the environmental effects of globalisation may include the following: negative environmental effects such as increased congestion and pollution, although pollution controls are stricter in MEDCs; in LEDCs localised growth may lead to problems associated with rapid urbanisation such as the growth of spontaneous housing and associated problems; environmental enhancement such as landscaping associated with a declining economic region is more a feature of MEDCs; in MEDCs increased incomes may lead to environmental improvements.

A descriptive approach is unlikely to get beyond the **average** category. Some candidates may develop only a few points in depth whilst others will range more widely, but at less depth. Expect points to be supported by exemplification. In order to reach the **very good** band there needs to be an examination element together with specific detail of environmental effects.

Theme 6: Emerging Asia

CHINA

Q.13 Examine the factors responsible for the growth of China's economy. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the factors that have led to recent changes in the Chinese economy;
- (ii) better candidates will show the ability to examine the different factors discussed.

Candidates may identify how the economy of China has grown in the last thirty years, with the decline of many old manufacturing industries owned by the state (SOEs) with mainly strategic SOEs left, such as steel, petrochemicals and cars; the transfer of SOEs to private ownership leading to increased efficiency and modernised production; the crucial role of FDI with foreign firms located in SEZs; the concentration of new industry in coastal cities and SEZs; the growth of new industries – all kinds of modern technology – and the growth of export markets based on low labour costs; rural–urban migration especially to east coast cities and the growth of many new small manufacturing firms – TVEs – in towns and cities. Candidates also need to identify factors responsible for these changes that may include the failure of Mao's socialist policies to create wealth and industrial prosperity, the realisation that China was being left behind in the global community, the need to modernise industry rapidly with the aim to get transfer of technology from foreign firms through FDI, the Open Door policy of Deng in 1978 and the need for resources e.g. oil and minerals for industrial development.

Expect good answers to show clear understanding of the processes involved and to support their answers with specific illustrative detail and examples. To reach the **very good** category of response, expect an examination of the factors discussed.

Q.14 'The positive impacts of globalisation on China outweigh the negative impacts.' Discuss. [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 assess these effects: better candidates should make a reasoned assessment of the impacts throughout, whereas the average candidate may only make their assessment in passing or perhaps briefly in their conclusion.

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.

The discussion should take the form of an assessment of costs compared to benefits, but be prepared to credit those candidates who see a spatial difference in effects. In order to reach the **very good** band, in addition to sound factual content of the impacts on China associated with the globalisation of economic activity, the discussion needs to be largely balanced.

INDIA

Q.15 Examine the factors responsible for the growth of India's economy. [25]

Guidance:

Candidates:

- (i) should show knowledge and understanding of the factors that have led to recent changes in India's economy;
- (ii) better candidates will show the ability to examine the different factors discussed.

Candidates may identify the growth of manufacturing industries, service and financial industries and in agriculture. Economic change includes the growth of modern steel, pharmaceuticals, textiles, clothing, and a substantial high-tech electronics sector e.g. mobile phones and the growth of service industries – call centres, back office jobs, outsourcing from Europe / US and the growth of entertainment industries – Bollywood. The factors responsible for this growth include economic change (the emergence and investment policies of transnationals together with the growth in Indian firms and also of an urban middleclass, educated population who have become consumers themselves, providing a large market for new consumer goods), technological factors (the speed and distance over which communications and movement can now take place due to computer, transport and communication technologies) and political change (the role of governments in encouraging outside investment e.g. the development of SEZs to attract FDI in Mumbai and Gopalpur). Candidates are most likely to argue that India's rural economy is still very important and has changed little, although there has been some developments in agribusiness in some states due to technological developments (Green Revolution) and political reform.

Expect good answers to show clear understanding of the processes involved to be supported with specific illustrative detail and examples. To reach the **very good** category of response there must be an examination of the factors discussed.

Q.16 'The positive impacts of globalisation on India outweigh the negative impacts.' Discuss. [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 assess these effects: better candidates make a reasoned assessment of the impacts throughout, whereas the average candidate may only make their assessment in passing or perhaps briefly in their conclusion.

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.

The discussion should take the form of an assessment of costs compared to benefits, but be prepared to credit those candidates who see a spatial difference in effects. In order to reach the **very good** band, in addition to sound factual content of the impacts associated with the globalisation of economic activity, the discussion needs to be largely balanced.

Assessment Objectives Grid - G3

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
G3A	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3A	13 (extend geographical ideas, concepts & processes)	7 (evaluations & connections between aspects of Geography)	5 (reach conclusions & communicate findings)	25
G3B (a) G3B (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%

Generic Mark Scheme for G3B

G3B contains 10 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 a 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 a good quality of written communication. Appropriate diagrams and/or maps but 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.

GEOGRAPHY – G3B

CONTEMPORARY THEMES AND RESEARCH IN GEOGRAPHY

SECTION B: RESEARCH

- (a) **Examine different data sources that could be used in an investigation into (context).**

[10]

There is no requirement to draw parallels with their own study, but this should be credited if it helps to develop the answer. Candidates should demonstrate their knowledge of a range of data sources that could be used. Any suitable relevant source that is appropriate to the topic is acceptable; expect primary and/or secondary sources. (Secondary sources should be acknowledged by candidates.)

The term '**examine**' from the WJEC list of command words states: investigate in detail, offering evidence for or against a point of view or judgement. Thus some comment on the following elements about the sources could include: the reliability of sources; rigour associated with the data sources examined, including reference to the source; possible bias; importance of this in gaining reliable data.

Level 3 (8-10 marks)	Answers contain a detailed/thorough examination of a range of sources that could be used in the context of the selected research area; offer judgements about the sources. Answers can access this level without reference to their own study; where included it should be given credit.
Level 2 (4-7 marks)	Answers at this level are likely to develop an examination of data sources, giving either a greater variety of sources or fewer sources in greater detail. Candidates may provide some discussion or judgement about the sources.
Level 1 (1-3 marks)	Answers provide a straightforward description of data sources, with little or no discussion or judgement.

- (b) **Summarise the main conclusions of your investigation into (context) and suggest ways in which your investigation could be improved.**

[15]

The content will depend on the investigation undertaken, but in their answers candidates should summarise the conclusions drawn from their personal research and identify ways in which their investigation could be improved.

Mention might be made to how it can be related to e.g. possible theory, further application of geographical knowledge related to the topic, planning, data collection, data presentation, data analysis and a broader, more in-depth understanding/empathy with the issues they have investigated.

The term '**summarise**' means briefly bring together the main features.

<p>Level 4 (13-15 marks)</p>	<p>Answers contain a reasoned summary of the conclusions of their investigation. Expect responses to give either a variety of conclusions or greater depth if fewer conclusions. Answers contain a detailed discussion of ways in which the investigation can be further improved. At this level answers need to be largely balanced between conclusions and improvements.</p>
<p>Level 3 (9-12 marks)</p>	<p>At this level answers may be unbalanced between conclusions and improvements.</p> <p>Answers may contain either a clear summary of the conclusions or improvements of their investigation. Expect responses to give either a variety of conclusions / improvements or greater depth if fewer conclusions / improvements.</p>
<p>Level 2 (5-8 marks)</p>	<p>Answers contain a generalised description of the conclusions / improvements of their investigation. If no mention is made of appropriate context, award a maximum of 8 marks.</p>
<p>Level 1 (1-4 marks)</p>	<p>Basic description of conclusions and / or improvements.</p>

Assessment Objectives Grid for G4

Question	AO1 Knowledge & Understanding	AO2 Application	AO3 Skills	Total
1	4 (concepts of place, space and diversity)	3 (interpreting & unfamiliar context)	3 (analyse and synthesise information)	10
2	3 (select physical and/or environmental processes underpinning concepts, examples)	4 (analyse and synthesise information)	3 (use a range of sources, maps and images)	10
3	3 (human and environmental processes)	3 (identify and analyse connections)	4 (select appropriate information)	10
4	7 (interdependence, people-environment interactions)	11 (interpreting and evaluating information)	7 (synthesise information, reach conclusions, and communicate findings)	25
5	7 (extend geographical ideas, concepts and processes)	11 (consider new ideas and developments)	7 (investigate questions and issues, communicate findings)	25
	24 (30%)	32 (40%)	24 (30%)	80 (100%)

GEOGRAPHY – G4

Generic Mark Scheme

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

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

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 2 & 3 to determine an appropriate mark. If in 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 these will all be addressed soundly.
Level 2 (4 - 7 marks)	Answers in level 2 are likely to have one of the following weaknesses; (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)	At this level there may only be the beginnings of an answer to the question, and answers are likely to 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 in support of 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 extensive support 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, 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 evidence 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 supporting evidence. Structure and expression may have flaws.
Level 2 (5 - 9 marks)	Answers at this level will be mainly explanatory, with evidence of some of the comparable qualities expected at Level 3 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 be explained. 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.

GEOGRAPHY – G4

SUSTAINABILITY

SECTION A

If a candidate answers in a way that is not anticipated by the mark scheme, but provides an acceptable answer to the question set, please use the generic mark scheme on pages 2 and 3 to determine an appropriate mark. If in any doubt, please consult your team leader.

Q.1 Outline how transport presents problems in *one or more* cities. [10]

Transport - nature, aspects, features likely to give rise to problems

Problems - detail of their nature

Support - detail from specific cities

Figure 7, on areal extent, *Figure 8*, on transport, and *Figures 9 and 10* on pollution, should provide useful material. Candidates may have extended this or have studied other cities or know of other transport concerns. Answers are likely to consider commuting at peak hours, congestion, accidents and air pollution. Credit other problems that have been identified from these or other cities.

Level 3 (8 - 10 marks)	At least two problems are outlined in extensive detail or a wider range of problems is covered in some detail. The answer is supported by evidence for almost all points made.
Level 2 (4 - 7 marks)	At least one problem is outlined clearly or a range of problems is presented with incomplete or partial clarity. Some supporting evidence is given.
Level 1 (1 - 3 marks)	One or more problems may be introduced but the outline is superficial, quite incomplete or misguided. Any supporting evidence is generalised or may not be present.

Q.2 Describe how cities can overcome problems related to transport.

[10]

Solution - naming/identifying strategy

Overcome - description of how it works

Support - place specific city detail

Figure 17 has solutions specific to the three cities that are the focus of the Resource Folder. In many of the earlier parts of the folder, there are references to possible solutions that may well be included here. Candidates may well include material from classroom studies, although this is not necessary for full marks. It is anticipated that candidates may address problems with transport or those caused by transport. Credit will go to good answers that deal with solutions combining both of these. Candidates should attempt more than one problem, but some attempts described may seek to overcome more than one problem, and such answers can be credited up to full marks.

Level 3 (8 - 10 marks)	Attempts to overcome at least two problems with transport or caused by transport are clearly described and explained. There is extensive evidence presented to support most points that are made.
Level 2 (4 - 7 marks)	There will be sound material on one way in which cities are tackling a transport-related problem, with less detail presented on any others, or there is a range of attempts all lacking full clarity. At this level answers may lack clarity and/or provide limited support.
Level 1 (1 - 3 marks)	There may be mention of attempts to solve one or more problems, but they may be quite unclear or may have no expressed link to transport.

Q.3 Explain why the demand for energy varies between cities.

[10]

Demand - nature of demand

Energy - explanation of how/extent of demand and variation caused

Support - detail of different places giving variation

Figure 1 has the general background to the cities, *Figures 2 to 5* shows growth rates, and rather more directly, *Figures 11 to 16* cover a wide range of information on the need for and consumption of energy.

Level 3 (8 - 10 marks)	For at least two cities there is considerable detail on the needs for energy and how these are translated into demand. How and why the selected cities differ is made very clear. There is extensive evidence presented to support almost all explanations.
Level 2 (4 - 7 marks)	Answers at this level may be quite good on the demands for energy in different cities but fail to address variation, or may identify variation but explain the demands poorly. Many answers at this level will do a little of each, but be incomplete in answering the question fully. Some supporting evidence is given for several points.
Level 1 (1 - 3 marks)	Answers at this level may show a little understanding of energy but do little to address variation. Less common are answers that comment on variation but do little to explain any demand. Any supporting evidence is generalised or may not be present.

Q.4 Most of the world's cities continue to increase in population and grow in area. To what extent is such growth sustainable? [25]

Population - detail of increases

Area - detail on growth

Sustainability - implications for present/future

Extent - seriousness of implications, absolute/relative

Support - place specific/organisational evidence

Figures 2 to 5 give direct information on population growth; *Figure 6* raises issues over density and *Figure 7* shows present areal extent. Much of the remaining content of the Resource Folder has material that can be made relevant to sustainability. *Figure 1* gives the economic context of each city. Population and extent are linked to transport issues raised in *Figures 8 to 10*. *Figure 11* onward to *Figure 16* all contain points that could be made relevant here. *Figure 17*, in effect, gives starters on sustainability. It is reasonable that candidates, having prepared for G4, will have a conceptual framework to help organise this information to evaluate sustainability. Good answers will link population and areal growth to other issues raised in the Resource Folder, consider sustainability, and bring out points that deal with the extent of sustainability.

<p>Level 5 (22 - 25 marks)</p>	<p>Answers at this level will make fully clear links between both growth in population and areal extent with issues of sustainability. 'To what extent' 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.</p>
<p>Level 4 (17 - 21 marks)</p>	<p>A good answer but with either, an imbalance between growth in population and areal extent, or a lack of depth if both are considered equally, or a limited consideration of 'to what extent'. Valid points on sustainability made. Some good evidence will be given. A well-ordered answer with good expression.</p>
<p>Level 3 (10 - 16 marks)</p>	<p>An answer sound in places, but with either strong imbalance, or lack of depth on most points considered. Sustainability understood, but with little if any consideration of 'to what extent'. A little evidence will be given. Minor flaws in organisation and expression are likely.</p>
<p>Level 2 (5 - 9 marks)</p>	<p>Some valid points raised, but limited and shallow. Sustainability may be mentioned but understanding may be weak and simplistic. Evidence will be poorly linked to the answer. Frequent problems with structure and expression will be present.</p>
<p>Level 1 (1 - 4 marks)</p>	<p>Isolated points that could be relevant to the answer are made, but are largely up to the reader to work out. The word 'sustainability' may be included, but little understanding of it is shown. Poor or no evidence is given. The whole answer will be poorly organised with weak expression.</p>

SECTION B

Q.5 Outline ways in which the demand for water is increasing. To what extent can water supply be managed sustainably? [25]

Demand - how way/trend causing increase

Management - strategy/plan to control supply

Sustainability - implications for present/future

Extent - seriousness of implications, absolute/relative

Support - place specific/organisational evidence

The main source of information will come from G4 2.2 and 2.3. The assessment part depends on work done on G4 2.4. Candidates may be able to draw on their knowledge of 1.4 from G1 as a basis to suggest how water supplies may change. Ways in which water demand may change has the command word 'outline', so good answers may not dwell on increases in demand. High level answers will be more substantial on the assessment part. The focus of the high-level credit should be on management, sustainability and extent.

Level 5 (22 - 25 marks)	At least two ways in which increases in demand for water may occur will be outlined in some detail with clear reasoning throughout. The management and sustainability of water supply will be assessed throughout much of the answer. 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)	At least one increase in demand for water will be clear and well reasoned, but others suggested may lack detail or the reasoning behind them may be unclear or rather brief. Management and sustainability will be assessed with some substance in part of the answer. Some good evidence will be given. A well-ordered answer with good expression.
Level 3 (10 - 16 marks)	There will be some suggestions about the way the demand for water supply is increasing but there will be limited detail or reasoning behind them. Management and sustainability may be introduced, but assessment will be very limited. 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 behind them. Management and or sustainability may be mentioned but any assessment made will have no support. 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 any detail and/or reasoning. Any discussion of management or sustainability will be misguided. Poor or no evidence is given. The whole answer will be poorly organised with weak expression.



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