Geography - G2

	Knowledge and Understanding	Application	Skills	Total	Key Question
Question 1					
(a)		**2**	**3**	**5**	**1.1**
(b)	**8**	**2**		**10**	**1.2**
(c)	**7**	**3**		**10**	**1.6**
	15	**7**	**3**	**25**	
Question 2					
(a)		**2**	**3**	**5**	**2.2**
(b)	**8**	**2**		**10**	**2.2**
(c)	**7**	**3**		**10**	**2.2**
	15	**7**	**3**	**25**	
Question 3					
(a)			**7**	**7**	
(b)	**4**	**4**		**8**	
(c)	**2**		**8**	**10**	
	6	**4**	**15**	**25**	
	36 **(48%)**	**18** **(24%)**	**21** **(28%)**		

Using the mark bands

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

GCE GEOGRAPHY G2

MARK SCHEME - JANUARY 2013

Q.1 (a) Use information from *Figure 1* to describe changes in world population. **[5]**

Suggested changes

In summary there are **four** phases of growth with **three** main changes between them:

- Phase 1: limited growth, a stable population – world population was mainly **stable**, but with **very slow** growth from the beginning of human history (over 5000 years) to 1800.
- Phase 2: exponential growth – world population then grew **exponentially** (at an ever increasing rate) taking less and less time to add extra billions. It took over **5000 thousand years** to 1800, for the world to reach 1 billion people. The second and third billion, however, took **shorter times** of 130 and 30 years respectively.
- Phase 3: steady growth – from the fourth billion onwards world population has continued to grow, but at a **much steadier rate** than previously. The latest billion to be added in 2011 only took 12 years, and this was the same time as the previous billion took.
- Phase 4: declining growth – into the future, the length of time to add a billion is set to increase from 12 to 13 years showing a **slowing down** of the growth of world population.

Allow one mark for a comment about population change with an extra mark for information from the resource to support that comment, up to the maximum of 5 marks. Award max 3 for direct lift of information from Figure 1. Allow other valid approaches.

(b) Explain why birth rates differ in Stages 2 and 4 of the demographic transition. **[10]**

There is likely to be confusion between stages, particularly as populations change rather rapidly and statistics constantly go out of date. So below are the major birth-rate characteristics for all stages. Correct reasons may be given, but any exemplar country provided may be inaccurate today. For example a candidate may give reasons for a stage 2 country, but provide a stage 3 example. Similarly, some stage 4 information may be provided, but the country quoted is currently in stage 5, but used to be in stage 4. As long as the reasons and supporting figures are correct a named country may be incorrect today, but this would not preclude a mark in Level 3.

Birth rate: the annual number of births per 1,000 total population.

Some responses may include statistics such as these below to illustrate their case studies and should be credited.

Stage 2: e.g. Niger 48; Chad 45.
Stage 3: Mexico 19; Argentina 19.
Stage 4: UK 13; Canada 11.
Stage 5: Germany 8; Japan 8; Italy 9.

For information:

- the average worldwide birth rate is 20
- the average for developed countries is 11
- the average for developing countries is 22
- the average for developing countries, excluding China, is 25
- the average for the least developed countries is 35.

Reasons for a relatively high BR in stage 2:
- Children needed to help on the farm.
- Children needed as a pension.
- Children needed as a health-care service.
- More children needed to replace those who die young (high infant mortality e.g. Mali 116).
- Contraception not widely available.
- Contraception not culturally accepted.
- Lack of education regarding family planning (high school fees).

Stage 3 countries would have lower BRs because of the following developments which begin in stage 2:
- Establishment of medical centres with health checks and vaccinations against malaria and diarrhoea reducing infant mortality.
- Contraceptive advice available at health centres.
- Education is more affordable with fewer children in the family.

For example, the total population of India is 1.25 billion with a BR of 23, in Kerala the BR is 14, and fertility has dropped from 7 to 3 due to:
- Sterilisation of women.
- Health care.
- Contraceptive advice:
- Education on family planning.
- High (90%) literacy rate amongst women.
- Education gives women confidence to take control of their own live.
- Economic changes bring stability to society such as a minimum wage, owning property, the establishment of trade unions to argue for workers' rights.

Stage 4 and 5 countries have low BRs; some factors encouraging this include the following:
- The baby boomers (1946-1954) have just reached pension age: by 2021 20% of the population of the UK will be pensioners. Pensioners tend not to have many babies.
- Infant mortality is low, (e.g. UK 4.5), so very little need to replace those who die young.
- The introduction of the pill and other efficient contraceptives since the 1960s has enabled choices about babies to be made.
- Many women have chosen to follow a career, delay marriage and delay a family so giving less time to produce many babies.
- People can choose a more materialistic lifestyle instead of having babies.

Some stage 5 countries have low, but increasing, BRs in stage 5; e.g. UK and France, now 13, was lower. This is due to:
- In-migration of the baby-producing age ranges.
- Government incentives to produce babies to counteract an ageing population (e.g. extending both maternity and paternity leave, maternity grants, child allowance, family tax credit, child trust fund).

(Figures from www.prb.org data sheet 2011.)

Level 3 8-10 marks	Developed knowledge and detailed understanding of why birth rates differ in stages 2 and 4 of the demographic transition. Good balance between the stages. Examples are evident and enhance the explanation.
Level 2 4-7 marks	Some knowledge and understanding of why birth rates differ in stages 2 and 4 of the demographic transition. Some imbalance between the stages. Some use of examples.
Level 1 0-3 marks	Basic knowledge of differing birth rates in stages 2 and 4 of the demographic transition. Only one stage attempted. Little use of examples.

(c) Outline the challenges faced by countries in Stage 5 of the demographic transition. [10]

Challenges may be:
- demographic
- economic
- social/political
- environmental

Suggested challenges:
- Birth rates may be falling; steady or increasing dependent upon the example chosen and governments may select to tackle the relevant issue.
- Not enough young workers to pay taxes to look after the old.
- The economy will stagnate with not enough vigorous, innovative, willing young workers.
- Industries catering for the youth market will decline.
- Immigration of different ethnic groups may cause social tension.
- The cost of health services becomes unsustainably high.
- Providing sufficient housing for a more 'diffuse' population and social structure becomes problematical.
- Death rates are increasing: UK [9], Germany [10], Italy [10], and Japan [9]. Eastern European countries in particular have relatively high death rates such as Ukraine [15], Russia [14], Bulgaria [15].

Candidates may consider solutions to challenges which are themselves challenges:
- Government incentives to encourage births (e.g. Child Trust Fund).
- Encourage immigration.
- Increase industrial productivity.
- Raise the retirement age.
- Increase taxes to pay for pensions and health care of the old.
- Change planning legislation to make it easier to build houses.
- Increase health education providing advice on healthy lifestyle choices regarding smoking, drinking, safe sex, eating and exercise.

(All figures derived from www.prb.org data sheet 2011.)

Level 3 8-10 marks	Developed knowledge and detailed understanding of the challenges faced by country(ies) in Stage 5 of the demographic transition. Good development of example(s).
Level 2 4-7 marks	Some knowledge and understanding of the challenges faced by country(ies) in Stage 5 of the demographic transition. Some use of example(s).
Level 1 0-3 marks	Basic knowledge of the challenges faced by country(ies) in Stage 5 of the demographic transition. Little use of example(s).

Q.2 (a) Describe the differences between the two types of residential area shown in *Figures 2a* and *2b*. [5]

Possible differences could include:

	Figure 2a	Figure 2b
1	Terraced housing.	Two semi-detached houses.
2	Brick work is exposed, not rendered.	Walls are rendered and painted white.
3	No gardens.	Well kept gardens.
4	Windows are in different styles, but all look to be replacement windows.	Windows are possibly replacement, but leaded.
5	No garages, cars parked on the road.	Single garages.
6	Entrance doors can be seen, opening onto the street.	Doors are not visible, perhaps on the side of the houses.
7	Not uniform in appearance: windows and doors are different with one house having a newer, sandy coloured, façade.	The two houses are very uniform in appearance, but the gardens are different and the garage doors are a different colour.
8	High housing density.	Lower housing density.
9	Probably in an inner city.	Suburban.
10	Normally rented.	Normally privately owned.
11	Possibly students.	Probably family or elderly.
12	Lower environmental quality.	Higher environmental quality.

Award 1 mark for one paired difference up to a maximum of 5.

Those that simply list the characteristics of the two areas are likely to be self-penalising, as the differences between them are not given, so should not be awarded more than 3 marks. Credit should not be given for similarities.

(b) Explain why different social and cultural areas develop within urban settlements. [10]

For a variety of reasons people like to live in environments with similar types of people to themselves. Often migration occurs as people seek locations within the city to achieve this goal.

Suggestions which candidates may give as to why different social and cultural areas develop and are maintained within urban settlements follow:

Economic

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

Social

- Family life cycle, i.e. single person lives nearer the urban centre, families are further out.

Cultural

- Colour/race/ethnicity induced migrations occur often to inner city areas for social, religious and cultural security.

Environmental

- People wishing to reduce their journey to work costs and time migrate towards the inner areas to be closer to business, shops and entertainment.
- Some people will migrate towards the fringe to be closer to the countryside and fringe facilities.

Level 3 8-10 marks	Developed knowledge and detailed understanding of why different social and cultural areas develop within urban settlements. Example(s) are evident and enhance the explanation.
Level 2 4-7 marks	Some knowledge and understanding of why different social and cultural areas develop within urban settlements. Unbalanced and narrowly focused on fewer points. Some use of example(s).
Level 1 0-3 marks	Basic knowledge of different social and cultural areas within urban settlements. Little use of example(s).

(c) Outline reasons for counterurbanisation. [10]

Counterurbanisation - the movement of both people and business from urban to non-urban areas.

Push factors of an expensive, congested, dirty and polluted city with more crime and poorer educational opportunity.

Economic

- Decline in manufacturing industry in the inner city so people have lost jobs and move to newer located industry in the fringe and countryside.
- Filtering out from the inner city to the fringe and countryside with increasing wealth.

Social

- Student districts emerge due to the location of inner city universities and the high growth in student numbers. This can be a trigger for the indigenous inhabitants to move out to the fringe and countryside.
- Family life cycle: single person nearer the urban centre, families further out, possibly to fringe and countryside.
- Crime in an urban environment can be perceived as more common than in the fringe or countryside.

Cultural

- Colour/race/ethnicity induced migrations occur often to inner city areas for social, religious and cultural security. The influx of an 'alien' cultural influence can upset the indigenous population who feel 'alienated' so decide to move away, possibly to the fringe and countryside.

Environmental

- Noise, smell, and dilapidated, run-down, facilities and built environment could play a part in dislodging people from an urban environment.

Pull factors of a more pleasant environment with more open space, more affordable land and fresh air which is safer for children in terms of traffic and crime.

Perceptions of life in the countryside influence counterurbanisation.

- The traditional rural settlement perception is that there is a good community spirit and a close-knit community where people are very sociable and meet regularly in a socially cohesive and amicable way to enjoy village functions.
- There is less crime in general and less vandalism in particular.
- It is peaceful, tranquil and quiet.
- There is little of any type of pollution.
- Any schools in the vicinity provide good education.
- Houses and gardens are large and people living here are, on average, wealthier.

Transport improvements have increased the accessibility of rural areas and have attracted an influx of jobs and people.

Employment opportunities have increased tremendously in the fringe and non-remote rural areas with the influx of manufacturing and quaternary industry and in particular the service industries of leisure, tourism and retailing.

Wealth. Many people, including the newly retired, are investing their growing wealth in more 'pleasant' properties in the fringe and countryside.

Simple reverse (inverse) comments should not be double credited. Trade depth for breadth.

Level 3 8-10 marks	Developed knowledge and detailed understanding of reasons for counter-urbanisation. Example(s) are evident and enhance the explanation.
Level 2 4-7 marks	Some knowledge and understanding of reasons for counter-urbanisation. Some use of example(s).
Level 1 0-3 marks	Basic knowledge of reasons for counter-urbanisation. Little use of example(s).

Q.3 (a) Use information from *Figure 3* to describe the pattern of pedestrian flow in the CBD of a city in the north of England. [7]

Suggestions

- The general pattern of pedestrian flow is a concentric one of roughly a square or rectangle shape.
- The outer isoline represents 25 pedestrians and the inner isoline represents 150 pedestrians, a difference of greater than 125.
- The highest activity of pedestrian flow is very small, about 25 metres east – west.
- The highest activity of pedestrian flow coincides with the location of the major shops, one of which is Halfords.
- The rate of flow changes more slowly in an east – west direction than in a north – south direction (interpreted as more rectangular/square).
- The rate of decrease in pedestrian flows is greatest going north from the centre.
- The rates along North Gate (and other identified roads) are similar along the lengths of the roads.
- The area of the indoor market is an area of relatively little change.
- Some streets have significant change along the length e.g. Town Hall street.
- The survey area of pedestrian flow is approximately 300 metres whereas the most extreme distance is from the south – west to north – east at approximately 550 metres.

No comparisons are required, just sufficiently supported descriptive points regarding the pattern of pedestrian flow displayed. No additional credit given for explanation.

Level 3 6-7 marks	Developed description of the pattern of pedestrian flow incorporating selective use of relevant dimensions, scale and locations.
Level 2 3-5 marks	Some description of the pattern of pedestrian flow with some incorporation of dimensions, scale and locations.
Level 1 0-2 marks	Basic description of the pattern of pedestrian flow with little or no incorporation of relevant dimensions, scale and locations.

(b) Evaluate *two* ways of representing data on maps *other than* isolines. [8]

'Candidates will be required to demonstrate that they are able to use and interpret choropleth, dot, isoline, flow and located statistical maps, histograms, scatter graphs, line graphs, frequency curves, long and cross sections and pie graphs.' (Specification page 16)

Mapping techniques

Choropleth maps
- These contain areas of different shading which is graduated to represent the strength of the data. The highest value is the densest shading, or most striking colour, and then each subsequent lower value is represented by progressively lighter shading or paler colour.
- They give a false impression of abrupt change at the boundary of areas.
- Any variations within areas are obscured, so smaller areas are better than larger ones.

Dot maps
- These give a good visual impression of distribution and density.
- They suffer from the fact that large numbers of dots are hard to count so precision in the presentation of data is lost.
- Like choropleth maps, spreading dots equally within areas may mask variations within each area.

Flow line maps
- These give a good visual impression of movement, either with the density of single lines giving the impression, or the width of lines or arrows being in proportion to the flow.
- Flow line maps can be difficult to interpret if too many movements are placed on one map.

Located proportional symbols
- These may comprise line graphs, bar charts/ histograms, pie graphs and pictograms and are an excellent way to save time when looking at a distribution: instead of looking at a symbol then looking at a map to which the information in the symbol relates, just one look at the map is required. Proportional symbols can be very effective using a range of symbols in striking colours.
    - Too much colour and variation can become confusing, however.

Real examples of where such techniques have been used or seen by candidates could illustrate the answer, such as choropleth maps for population density.

Level 3 7-8 marks	Detailed and developed knowledge and understanding used to evaluate two different ways of representing data on maps.
Level 2 4-6 marks	Some knowledge and understanding used to evaluate two different ways of representing data on maps. There may be an imbalance between the two ways. Some evaluation.
Level 1 0-3 marks	Basic knowledge used to describe two different ways of representing data on maps. Evaluation is absent. Any illustrations are small, imprecise and inaccurate.

(c) Outline the methods of data collection used in your investigation into a changing human environment. [10]

You should state clearly the question that you have investigated.

The expectation is that the response would give a variety of ways that information has been gathered. However, one intensive outline of one method, such as a questionnaire would be acceptable for a Level 3 mark.

A research investigation would not require the elements involved in primary fieldwork collection, but would require an intensive outline of the secondary resources used, including the names of websites and data derived.

Primary data collection

- May involve personal observation in the field such as environmental quality surveys, traffic counts and questionnaires.
- Primary data can be regarded as being derived from websites in its raw form as a table of statistics or a map; then the figures in the table are subjected to statistical manipulation and the map is simplified and/or annotated.

Secondary data collection

- This can be acquired from published sources such as books, directories, maps, journals, newspapers and websites. Names of websites and what data were derived are required for the more intensive outline.

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

Credit highly any valuable, positive and geographically appropriate comments **within the context** of a valid geographical enquiry.

Credit with caution simplistic, self evident, generalised and vague comments.

Level 3 8-10 marks	Developed knowledge and detailed understanding of the methods of data collection. Very good development using the context of the investigation.
Level 2 4-7 marks	Some knowledge and detailed understanding of the methods of data collection. Some development using the context of the investigation.
Level 1 0-3 marks	Basic knowledge of the methods of data collection. Basic development using generic and generalised concepts of data collection.

G3 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%)**

Command Words WJEC A2 Geography

Account	**Give reasons for.**
Assess	This is an evaluative question - weigh up the importance of the subject. This means that there are a number of possible explanations/outcomes. You need to give the main ones and then say which you tend to favour.
Classify	Divide into groups or categories.
Discuss	Usually you are expected to build up an argument about an issue and to present more than one side of the evidence with supporting examples. This creates a written debate identifying both positive and negative points and then you must **reach a conclusion** from the debate. You should both describe and explain. Try to create a balanced answer and summarise your view at the end.
Evaluate	Evaluate requires and overall statement of the overall quality or value of the feature/issues being considered. You need to state a viewpoint, 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. 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. Opinions and conclusions should be presented clearly and supported with appropriate evidence and sound argument.
To what extent	Give possible explanations for and against and justify which you tend to favour
How far do you agree	
Examine	Investigate in detail, offering evidence for or against a point of view or judgement.

SECTION A

MARK BANDS: CONTEMPORARY THEMES IN GEOGRAPHY

Summary Descriptor	Marks out of 25	Criteria
Level 5 Very good	**21- 25**	• 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**	• 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. <u>At the lower end</u> • 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**	• 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. <u>At the lower end</u> • An unfocused or potentially relevant response. • Weaknesses in structure and expression
Level 2 Marginal	**6 - 10**	• 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. <u>At the lower end</u> • Understanding of the question is weak.
Level 1 Weak	**1 - 5**	• 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.