Mark Scheme (Results)

Summer 2019

Pearson Edexcel GCSE
In Geography Spec A (1GA0) Paper 02

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

GCSE Geography A - Paper 2 Mark scheme

Question 1 – Changing cities

Question number	Answer	Mark
1(a) (i)	**A** White (British) Incorrect responses: **B** No evidence of Pakistani in the borough of Sutton **C** No evidence of Black in the borough of Sutton **D** No evidence of White (other) in the borough of Sutton	**(1)**

Question number	Answer	Mark
1(a) (ii)	**C** Brent Incorrect responses: **A** The largest ethnic group in Haringey is White (other) **B** The largest ethnic group in Havering is White (British) **D** The largest ethnic groups in Tower Hamlets are Bangladeshi and White (British)	**(1)**

Question number	Answer	Mark
1(a)(iii)	Award 1 mark for suggesting a weakness, and a further 1 mark for an appropriate extension, up to a maximum 2 marks. Only shows the largest ethnic group in each ward (1) ignoring minority groups / doesn't show information about other ethnicities (1). Assumes the whole ward has the same value (1) ignoring variations (1). Abrupt changes in boundaries (1) realistically would merge (1). Interval/class sizes need to be carefully chosen (1) otherwise over simplification / generalisations will be made (1). Map does not show exact numbers of people/data (1) making it hard to draw comparisons between different areas (1). No scale on the map (1) so it is difficult to get an idea of spatial variations across London (1). It is unclear which ethnic group is represented by the white patch to the west of Tower Hamlets (1) which means that the map could be incorrectly interpreted (1). Difficult to determine exact percentages / map is difficult to read (1) as the colour scheme is unclear / shadings merge within a category (1) **Do not accept 'it is not accurate'** **Accept any other appropriate response**	**(2)**

Question number	Answer	Mark
1(b) (i)	**A** 14,000 Incorrect responses: **B** 18,500 is not the correct calculation of 32,500 (Birmingham) minus 18.500 (Stoke-on-Trent). **C** 25,000 is not the correct calculation of 32,500 (Birmingham) minus 18.500 (Stoke-on-Trent). **D** 32,500 is not the correct calculation of 32,500 (Birmingham) minus 18.500 (Stoke-on-Trent).	**(1)**

Question number	Answer	Mark
1(b)(ii)	Award 1 mark for suggesting one reason, and a further 1 mark for further explanation, up to a maximum 3 marks. Some cities have a very large population (1) which means that there will be a greater range of jobs available (1) which means that there are more people who are highly paid (1) Cities like Birmingham might have more trade / shops than other cities (1) leading to a higher level of employment (1) which means that the mean annual earnings are going to be higher (1) Some cities might have fewer factories (1) because of deindustrialisation (1) which has resulted in fewer jobs available (1) Factories have closed down (1) and the former factor workers find it difficult to get a new job (1) as they lack the skills needed by tertiary sector activities (1) Cities such as Leeds and Stoke might have a large population of newcomers (1) that do low paid jobs (1) because they do not have the qualifications/skills for higher paid employment (1) There have been uneven levels of development across the UK / some cities might have received more investment compared to other cities (1) which means that there might mores new businesses opening (1) leading to more highly paid job opportunities (1). Some cities have better rail/road/transport connections (1) which encourage inward investment (1) because it means that products can imported/exported more easily around the country (1) Different types of jobs are available in different cities (1) so cities with more quaternary/tertiary jobs attract skilled workers (1) which means that the mean annual earnings are going to be higher (1) **Accept any other appropriate response**	**(3)**

Question number	Answer	Mark
1(c)	The location of the city compared to nearby / surrounding (human and physical) features (1).	
	Accept any other appropriate response	**(1)**

Question number	Answer	Mark
1(d)	Award 1 mark for any of the following, up to maximum of 2 marks:	
	Undercover (1)	
	Greater choice (1)	
	Larger shops (1)	
	Cheaper products (1)	
	Greater range of other services/entertainment/restaurants available (1)	
	Car parking (1)	
	Public transport links / accessible (1)	
	Pedestrianised (1)	
	Land values are lower (1)	
	Less congestion/busy (1)	
	Better/cleaner air quality (1)	
	Shops in close proximity of each other (1)	
	Longer opening hours (1)	
	Accept any other appropriate response	**(2)**

Question number	Answer	Mark
1(e)	Award 1 mark for the identification of a strategy, and 1 mark for explanation about how this makes urban living more sustainable, up to a maximum of 2 marks each. Designated bus lanes (1) which will mean that buses will get around the city faster than cars (1) Development of green transport / gas-powered buses (1) which means that less carbon emissions are entering the atmosphere (1) Car clubs / car sharing schemes / 2+ lanes (1) reduce the number of vehicles on the road (1) Cycle lanes / cycle hire schemes (1) encourage people to bike around the city rather than using cars (1) Improved bus network (1) which reduces the number of private vehicles on the road (1) Development of trams (1) which reduces the number of private vehicles on the road (1) Investment in rail/underground/Metro (1) which reduces the number of private vehicles on the road (1) Park and ride schemes (1) which reduces the number of private vehicles on the road (1) Congestion charges (1) which means motorists are going to be deterred from driving into the CBD / which raises income for further sustainable development (1) **Accept any other appropriate response**	**(4)**

Question number	Answer	Mark
1(f) (i)	1,200,000	**(1)**

Question number	Answer	Mark
1(f) (iii)	Award 1 mark for identifying a possible reason for Abidjan's rapid population growth, and a further 1 mark for explanation of why this has happened, up to a maximum of 2 marks each. Rural to urban migration (1) with details of a possible push or pull factor e.g. lack of healthcare in the countryside / better paid jobs in the city (1) – or reverse, e.g. more jobs are available in the city (1) so people move there from the countryside (1)	

	Internal/national migration (1) with details of a push or pull factor about why people might have moved from one part of the country to another (1).	
	international migration (1) with details of why people might have moved from a different country to The Ivory Coast (1).	
	High rate of natural increase (1) with details of why death rates are falling or why birth rates are rising (1)	
	High/increasing birth rates (1) with a reason e.g. lack of contraception (1)	
	Low/falling death rates/increased life expectancy (1) with a reasons e.g. better medical care	
	Government investment / industrialisation / FDI into the city (rather than countryside (1) which has created a growth in job opportunities (1)	
	Accept any other appropriate response	
		(4)

Question number	Indicative content
1(g)	**AO2 (4 marks)/AO3 (4 marks)**
	AO2
	• Water shortages and increased instances of disease as a result from drinking dirty water.
	• Over-extraction of water supplies is unsustainable and will lead to even greater problems in the future.
	• Housing shortages which result in the growth of squatter settlements.
	• Many houses in squatter settlements lack facilities such as electricity, clean running water and sewage/rubbish disposal.
	• Increased division between 'rich' and 'poor' increases social tension within the city.
	• Difficult for the government to provide sufficient housing, services and healthcare for the growing population.
	• Growth in informal employment and unemployment due to job shortages.
	• Incraesed air pollution as a result of more vehicles on the road.
	• Increased challenges linked to waste pollution and disposal.
	AO3
	• New and improved methods of supplying clean drinking water cannot keep pace with the rapidly growing population due to lack of funds / poor existing infrastructure.
	• Over-extraction of water can have secondary impacts; the surrounding land may become unstable and subsidence may occur, damaging buildings and existing infrastructure.

		• Inhabitants of squatter settlements often live in poor conditions / near to rubbish dumps. This increases their chances of catching serious illnesses which places additional strain on the country's services. • The increasing gap between 'rich' and 'poor' leads to the rich living in increasingly segregated/gated communities for fear of crime, kidnapping and issues linked to drugs. • Workers in the informal economy are vulnerable to exploitation and collecting taxes from the informal economy is a challenge for the government. • Health problems associated with declining air quality and poor waste disposal methods can place an additional strain on health services.
Level	**Mark**	**Descriptor**
	0	No acceptable response.
Level 1	1–3	• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
Level 2	4–6	• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7–8	• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)

Question 2 – Global development

Question number	Answer	Mark
2(a)(i)	**B** life expectancy **E** mean years of schooling Incorrect responses: **A**, **C** and **D** as these are not measures used in the calculation of the HDI score.	**(2)**

Question number	Answer	Mark
2(a) (ii)	**C** Between 0.550 and 0.799 Incorrect responses: **A** and **B** are HDI scores for developing countries **D** is the HDI score for developed countries	**(1)**

Question number	Answer	Mark
2(b)(i)	One mark for each correctly drawn line, up to a maximum of 2 marks. One mark for the correct labeling of all three sectors if both lines have been drawn correctly (1)	**(3)**

Question number	Answer	Mark
2(b)(ii)	Award 1 mark for any of the following: Generate income/wealth/increase level of development (1) Cheaper to import a good rather than make it themselves (1) Geographically close to each other (1) A country might be able to supply a product that is not available in another country (1) Possible historical / colonial links between countries (1)	

	Members of a trading bloc / geopolitical relationships (1)	
	To obtain raw materials/goods (a country doesn't have) (1)	
	Accept any other appropriate response	**(1)**
Question number	**Answer**	**Mark**
2(c)(i)	Award 1 mark for any of the following:	
	Overview i.e. mainly in Africa (1) and Asia (1)	
	Named example of one country within the highest growth category (1)	
	Around the / both sides of the equator (1)	
	Mainly in the northern hemisphere (1)	
	Small area in North America / Oceania (1)	
	Accept any other appropriate response	**(3)**

Question number	**Answer**	**Mark**
2(c)(ii)	Award 1 mark for identification of a possible economic factor, and a further 1 mark for further explanation, up to a maximum of 3 marks.	
	There has been FDI (1) which has generated jobs (1) boosting the local economy (1)	
	Investment/improved infrastructure (1) has attracted FDI (1) creating more jobs / boosting trade (1)	
	Growth in trading (1) due to improvements in infrastructure / development of the secondary sector (1) which has brought more money into the economy (1)	
	TNCs have invested in a particular country (1) which generates jobs / improves infrastructure (1) so that average earnings go up as more people are employed (1)	
	The government has spent money on improving the infrastructure (1) which makes area more equipped to deal with new businesses / factories (1) which means that it is more attractive to TNCs looking to invest (1)	
	Also accept reference to: loans, financial aid, debt relief, remittances, and growth in tourism.	
	Accept any other appropriate response	
		(3)

Question number	Answer	Mark
2(d)	One mark for any of the following: Parts of a country outside the more developed core region Poorer area of a country Areas of lower productivity/technology/skills/or wages Outskirts of city with squatter settlements (1) **Don not accept 'the edge/outskirts/outside' of a city/country/area – unless linked to development** **Accept any other appropriate response**	**(1)**

Question number	Answer	Mark
2(e) (i)	One mark for each correctly plotted bar: 	**(2)**

Question number	Answer	Mark
2(e) (ii)	Award 1 mark for the identification a physical factor that could affect development, and a further 1 mark for explanation linked to development/GDP, up to 2 marks. Some countries might have a less fertile soil (1) so they are unable to grow crops leading to less money being made (1). Some countries might be more at risk / vulnerable to natural hazards / drought (1) which means that crops die and GDP will be lower (1). The amount of rainfall in some countries might be higher / less extreme climate (1) allowing more crops to grow which increases profits (1). Some countries might be landlocked (1) which will make trading with other countries more difficult so they do not earn as much money (1). Some countries might be flatter / have a temperate climate / have more fertile soil (1) which will make the growing crops easier so GDP is higher (1). **Accept any other appropriate response**	**(2)**

Question number	Answer	Mark
2(f)	Award 1 mark for identifying an advantage of community-led schemes, and a further one mark for explanation, up to a maximum of 2 marks each. The aims of the project are more likely to meet the needs of the local people (1) because members of the local community were involved in the planning meetings / lack of government interference (1) These schemes can be kept running for many years (1) because the equipment is usually cheap to run / easy to repair (1) Low/cheap set-up costs (1) which means that these schemes are often quick to get off the ground (1) Lack of government involvement / local community are involved in the decision-making process (1) which means that the specific needs of the community are more likely to be met (1) **Accept any other appropriate response.**	**(4)**

Question number	Indicative content
2(g)	**AO2 (4 marks)/AO3 (4 marks)** This question can either be answered in the context of a single area within a country (e.g. 'the periphery' or a specific city) or by considering approaches to address the entire country (e.g. policies on transport, energy and waste) **AO2** • Challenges such as increasing inequality need to be tackled in developing / emerging countries as a result of rapid economic growth. • There are growing social and regional (core-periphery) divides in some developing/emerging countries. • Governments in developing/emerging countries have attempted to improve the quality of life and the country's global status by improving the infrastructure, including the supply of clean drinking water, electricity supply, provision of sanitation, affordable housing / reduction in squatter settlements, increasing health and education services and improving public transport. • Attempts to improve the quality of life may include increased life expectancy as a result of less disease / greater access to healthcare and clean drinking water. • Details of relationships with other countries and/or membership of trading blocs. **AO3** Evaluation will depend on the chosen specific case study/studies, but may include: • Details about how and why the improvements in infrastructure outlined above (AO2) have had / not had an impact on the named country. • Awareness that improvements might be localised, e.g. urban vs rural or the failure to fill job vacancies due to a shortage of skilled workers in a particular field in the country. • Information about why specific relationships between countries and/or trading blocs has possibly led an improvement in a country's global status. • Links with major international organisations, such as the World Bank, IMF, United Nations and World Trade Organisation, including an evaluation of the extent to which these links have helped enhance a country's global status and/or improved the quality of life for people in the country.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)
Level 2	4–6	• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7–8	• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)

Question 3 – Resource management

Question number	Answer	Mark
3(a) (i)	Non-living things / not derived from organic matter **Accept any other appropriate response.**	**(1)**

Question number	Answer	Mark
3(a)(ii)	**D** oxygen Incorrect responses: **A**, **B** and **C** are all examples of biotic resources.	**(1)**

Question number	Answer	Mark
3(b) (i)	Award 1 mark for each comparative statement, up to a maximum of 2 marks: World production of grain and world population have both increased (1) World population has had a greater (relative) increase (1) Production of grain has fluctuated more than world population (1) World population has been more of a steady/constant increase (1). Allow up to one mark for supporting data (1) e.g. population has changed from 2.8 to 7.5 billion (1) / grain has changed from 0.6 to 2.9 (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Mark
3(b)(ii)	Award 1 mark for identifying an impact, and a further 1 mark for further explanation of this impact or its cause, up to a maximum of 2 marks each. Greenhouse gases are released into the atmosphere (1) reducing air quality / increasing problems of global warming / due to the use of (farm) machinery (1) Soil exposed more often to the weather (1) which increases soil erosion / due to over-farming / over-ploughing of the land (1) Habitat loss (1) reducing biodiversity / due to deforestation or increased monoculture (1) Eutrophication / reduction in water quality (1) killing animals / due to the use of chemical fertiliser (1) Increase in non-biodegradable / plastic waste (1) due to packaging of final product (1) **Accept any other appropriate response.**	
		(4)

Question number	Answer	Mark
3(b)(iii)	Award 1 mark for suitable technique, and a further mark for description of what this technique might show, up to a maximum of 2 marks: Use of 'wordle' – *or similar* (1) to analyse the text of the website about farming impacts (1) Use of a spreadsheet / Excel (1) to display data about farming impacts over time (1) Use of PowerPoint / Publisher (1) to transform the information about farming impacts into a poster (1) Create a table (1) to show the positive and negative impacts of farming (1) Drawing a graph (1) to show data from the website e.g. impacts of farming over time (1) **Accept any other appropriate response**	
		(2)

Question 4 – Energy resource management

Question number	Answer	Mark
4(a)	**B** wind Incorrect responses: **A**, **C** and **D** are all examples of non-renewable energy resources.	**(1)**

Question number	Answer	Mark
4(b)	Award 1 mark for any one of the following: Population is rising (1) Levels of development / wealth / income are growing (1) Increased industrialisation in some parts of the world (1) Advances in technology (1) **Accept any other appropriate response**	**(1)**

Question number	Answer	Mark
4(c)	Award 1 mark for an advantage and a further 1 mark for explanation of why this has a positive impact on people and/or the environment, up to a maximum of 3 marks. Coal Coal is found in many places around the word / easily accessible (1) which reduces costs for those wanting to develop it (1) which means that coal companies will maximise their profits (1). Coal is easy/cheap to mine (1) because is often located near the surface / because mining technology is well-developed (1) which reduces costs for consumers/companies (1). It is (relatively) easy to convert into energy (1) by simply burning it (1) so it is a cheap option for countries wanting to use it (1). Oil (including tar sands) Jobs are created (1) which is good for the local / country's economy (1) because employees will have disposable income to spend in the local area / revenue is generated from income tax (1). Oil can be used to heat homes (1) as the technology already exists in many parts of the world (1) which means that it is cheaper for consumers to keep using the same energy resource (1). Natural Gas (including fracking) Fracking can reduce the need to import energy (1) which lowers fuel prices for consumers (1) which is good for the economy (1) Development of natural gas creates fewer carbon emissions / air pollution than coal (1) reducing the extent global warming / health issues for people (1) which reduces the damage to habitats / life expectancy (1). Uranium (nuclear) Uranium is an efficient resource as only very small amounts are needed (1) which reduces the impact on the environment through exploitation (1) and means that it is a long-term option (1). Energy can be produced cheaply once power plants have been built (1) reducing costs for consumers (1) which is good for the economy (1). Produces less carbon emissions compared to burning fossil fuels (1) which (1) reducing effects of global warming (1) which means sea levels are not going to rise as quickly (1)	

	Do not accept 'it's cheap', 'it's effective' or 'it's reliable'– without further qualification **Accept any other appropriate response**	
		(3)
Question number	**Answer**	**Mark**
4(d)(i)	**C** solar power Incorrect responses: **A, B** and **D** are incorrect because Figure 4 shows a field with a number of photovoltaic cells (solar panels) which are only used in the development of solar power.	**(1)**

Question number	**Answer**	**Mark**
4(d) (ii)	Award 1 mark for each additional piece of information, up to a maximum of 2 marks. Aspect / is this location south-facing? (1) Hours of sunlight How much shade there is / nearby obstructions to sunlight (1) Amount of solar energy that can be produced here (1) Road access (1) Views of the local people – is there conflict/opposition to the development? (1) Proximity to nearby settlements / houses (1) Proximity to the National Grid (1) Other nearby developments of renewable energy resources (1) Physical size of the area of land to be developed / is it big enough etc. (1) Land ownership (1) Climate (e.g. amount of wind) (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Mark
4(d)(iii)	Award 1 mark for a disadvantage of solar energy / the site shown in Figure 4, and a further one mark for explanation, up to a maximum of 4 marks. Solar energy is unreliable (1) because the sun does not shine all of the time / if there's no sun the panels do not work (1) so less energy is produced (1) which means that other types of energy resources are needed to meet demand (1). The area in Figure 4 doesn't look very sunny (1) so less energy is produced (1) which means alternative energy resources will need to be used (1) which means that CO_2 emissions might still be given off (1) There is not much room for many solar panels in the area in Figure 4 (1) which means that only a small amount of solar energy/electricity will be produced (1) which means that only a small amount of people will benefit from this development (1) and other types of energy resources are still going to be needed to meet the needs of the rest of the population (1). Solar panels are very expensive / high start-up costs (1) which means that only a few solar panels have been located in this field (1) therefore not much electricity will be generated (1) which means that only a small number of homes will benefit (1). Tourists might think the solar panels spoils the natural beauty of the area (1) which may put them off from visiting the area (1) and so the area's economy suffers (1) and there is unrest amongst the local population (1). Construction of the solar panels might lead to animal habitats being destroyed (1) as trees have to be cleared to make room for the panels (1) so animals migrate away from the area (1) and so the area's economy/biodiversity suffers (1). The vegetation appears to show an area with a temperate climate (1) which would suggest that sunlight hour per year might be relatively low (1) which reduces the efficiency of the solar panels (1) and may make the development of renewable energy here not cost-effective (1) These solar panels might be taking up valuable farmland (1) which means that fewer crops can be grown (1) so food production falls / more food has to be imported (1) pushing up prices for consumers (1) **Accept any other appropriate response e.g. high start-up costs**	**(4)**

Question number	Indicative content
4 (e)	**AO2 (4 marks)/AO3 (4 marks)** **AO2** • Awareness of the context of the question i.e. that the the world's population is growing, which is going to increase the demand for energy. • If demands for energy are to be met in the future, energy resources are going to require sustainable management. • Sustainable management is where energy resources are used in a way that ensures that they do not damage the environment and meet the needs of future generations. • Broader global implications linked to global warming and waste management need to be considered. • Countries are also looking to secure energy supplies for geopoloitical reasons as well as meeting the needs of their population. • At current rates, non-renewable energy resources will run out within the next 50-450 years. • Renewable energy supplies are slowly being developed as a more sustainable option compared to non-renewables. • Different groups of people have different views on the management and sustainable use of energy resources; these views are often complex and contradictory. For example, environmental groups (e.g. Friends of the Earth and Greenpeace) are going to be in favour of developing non-renewable energy resources, whereas oil / motor vehicle will often be more in favour of developing existing fossil fuels. **AO3** • Some organisations/governments chose to develop renewable options to generate electricity, heat and hot water for their home; this includes the installation of biofuel boilers and/or solar panels on the roof. However, these options are expensive – and government-led incentives and grants have diminished in recent years. • Some organisations/governments may be against the development of certain types of energy resource for personal reasons; for example, they might be in favour of the development of renewable, but do not want to see a wind farm built next to their house because they might think they are unsightly or have the perception that they are noisy. • Energy companies are often driven by profit, government policy/incentives, but also have to meet shifts in demand which may lead them to using a combination of different energy resources. • Government (national and local) will be driven by national and international agendas, which could include the meeting of targets for non-renewables; this could in turn influence policy-makers and schemes to encourage different stakeholders to use different energy resources. • Conservationists will be very much in favour of sustainable, more renewable forms of energy resources such as wind, solar and HEP; this will be advantageous for the environment as less carbon emissions are created, but might conflict with the

		views and opinions of different stakeholders as the development of these resources may often be costly or inefficient. • The viewpoints of different stakeholders may vary depending on a country's level of development; for example, governments in developed countries may have the capacity to promote the development of renewables, whereas governments in emerging/developing may not have the luxury to do so.
Level	**Mark**	**Descriptor**
	0	No acceptable response.
Level 1	1–3	• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4–6	• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)
Level 3	7–8	• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPGST 0	0	*No marks awarded* • Learners write nothing. • Learners response does not relate to the question. • Learners achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPGST 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPGST 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy.

		• Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPGST 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.

Question 5 – Water resource management

Question number	Answer	Mark
5(a)	**B** 3% Incorrect responses: **A, C** and **D** are incorrect because these are not the correct percentage of water on the Earth that is available as fresh water.	**(1)**

Question number	Answer	Mark
5(b)	Award 1 mark for any one of the following: Water demand is greater than /exceeds supply (1) A place that has less water than required (1) **Must have idea of supply and/or demand; do not credit 'water shortage' or 'lack of water' unless linked to supply or demand.** **Accept any other appropriate response**	**(1)**

Question number	Answer	Mark
5(c)	Award 1 mark for a reason why there is a difference, and a further 1 mark for explanation of why this has an effect on domestic water usage, up to a maximum of 3 marks. Little government investment into infrastructure (1) which means that households have limited access to piped water to households (1) as there are limited funds available to develop the infrastructure (1). Different countries have different levels of development (1) which means that people in developed countries can afford to use more water (1) so they tend to have more baths / showers / swimming pool / kitchen appliances that use water (1). In some countries, there are restrictions on how much water can be used each day (1) because rainfall levels are low each year / seasonal variation (1) which means that people have to use water much more sparingly (1). It is much easier to access clean drinking water some countries (1) because the government has invested more in infrastructure (1) which may lead to some people using (and wasting) more as it is easily replaced (1) There is a smaller supply of water to start with (1) due to low rainfall / pollution of water courses by industry (1) which means that restrictions on domestic usage are in place (1). **Accept any other appropriate response**	**(3)**

Question number	Answer	Mark
5(d)(i)	**D** irrigation Incorrect responses: **A**, **B** and **C** are incorrect because these are not shown on Figure 5.	**(1)**

Question number	Answer	Mark
5(d) (ii)	Award 1 mark for each additional piece of information, up to a maximum of 2 marks. Data/spreadsheet/graph about how much water is used (in different sectors) (1) Data/spreadsheet/graph about population (1) Information about income (1) Data/spreadsheet/graph about how accessibility to water supplies (1) Economic data (e.g. GDP per capita / HDI score) (1) Interviews with local people about their water usage habits (1) Climate/rainfall data (1) Information about water storage/transfer schemes (1) Proximity of water supply in relation to settlements / houses (1) Government policy/investment into water supply schemes (1) Ownership of water sources (1) **Accept any other appropriate response**	**(2)**

Question number	Answer	Mark
5(d)(iii)	Award 1 mark for a reason why irrigation is used in the UK / the area shown in Figure 5, and a further one mark for explanation, up to a maximum of 4 marks. Rainfall in some parts of the UK is low (1) which means that in some areas, there is not enough rainfall for the crops (1) which means that irrigation is needed to water the land (1) otherwise the crops will not grow (1). Rainfall is unbalanced / varies seasonally in the UK (1) with most of the rain falling during winter (1) which means that irrigation is needed to overcome shortages in summer (1) which means that water wastage will be minimised (1). The UK is a developed country which can afford irrigation technology (1) which increases crop yield (1) as the growing season is prolonged (1) which means that the demand by the growing population is met (1). This type of water usage is needed to help plants/crops grow (1) as the rainfall might be quite low (1) which means that irrigation allows enough crops to be grown to meet the needs of the population / maximise profits for the farmer (1) and reduce the need to import food supplies (1). This type of water usage an effective way of watering a large area of land (1) as it is less labour intensive than watering it manually (1) which means that it can be done more quickly (1) which will maximise crop yield (1) **Accept any other appropriate response**	**(4)**

Question number	Indicative content
5(e)	**AO2 (4 marks)/AO3 (4 marks)** **AO2** • The world's population is growing, which is going to increase the demand for water resources. • If demands for water are to be met in the future, water resources are going to require sustainable management. • Sustainable management is where water resources are used in a way that ensures that environmental degradation does not occur and the needs of future generations are met. • Broader implications linked to pollution and waste management need to be considered. • Countries are also looking to secure water supplies for geopoloitical reasons as well as meeting the needs of their population. • Future issues linked to climate change need to be considered as this could place further pressure on water supplies. • More sustainable uses of water resources are slowly being developed, but these are often costly and people are often reluctant to change their habits. • Different groups of people have different views on the management and sustainable use of water resources; these views are often complex, contradictory and vary according a country's level of development. **AO3** • Some organisations will have the view that they need to water their crops regardless issues to sustainability; this is because reduced water usage might lead to a reduction in crop yield, which will have a negative financial impact on the farmer. • A country's government will have contrasting priorities; they will want to ensure that there is enough water to supply the population, but they will also need to ensure that supplies in a way that there will be enough in the future. • Conservation groups will want to ensure that levels of water quality are high and wildlife habitats are not damaged by new developments; this may conflict with water companies and governments wanting to develop water supplies to meet the needs of growing demand. • Some organisations/governments in developed countries may be reluctant to conserve water as they can afford to pay for it; they may have other views e.g. developments for leisure / water sports are equally as important as developments for drinking water. • Water companies are trying to balance supply and demand, but this is difficult given the ageing infrastructure (including leaking pipes) in some areas which could lead to inefficient distribution of water around the country. They might have the view that the government should be spending more money on upgrading old pipes, but the government's priorities may lie elsewhere. • Some governments in emerging/developing country may recognize the importance of developing clean water supplies for a healthier working population which could lead to economic development; however, they might not have the capacity to implement any new developments or have to rely on aid and international support from NGOs such as Water Aid.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)
Level 2	4–6	• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements are supported by evidence occasionally. (AO3)
Level 3	7–8	• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)

Marks for SPGST		
Performance	**Marks**	**Descriptor**
SPaG 0	0	*No marks awarded* • Learners write nothing. • Learners response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.
SPaG 1	1	*Threshold performance* • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate.
SPaG 2	2–3	*Intermediate performance* • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate.
SPaG 3	4	*High performance* • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate.