National
Qualifications
2017

2017 Geography

Higher

Finalised Marking Instructions

General marking principles for Higher Geography

This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this paper. These principles must be read in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.

(a) Marks for each candidate response must always be assigned in line with these general marking principles and the detailed marking instructions for this assessment.

(b) Marking should always be positive, i.e. marks should be awarded for what is correct and not deducted for errors or omissions.

(c) If a specific candidate response does not seem to be covered by either the principles or detailed Marking Instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader.

(d) Where the candidate violates the rubric of the paper and answers two parts in one section, both responses should be marked and the better mark recorded.

(e) Marking must be consistent. Never make a hasty judgement on a response based on length, quality of hand writing or a confused start.

(f) Use the full range of marks available for each question.

(g) The detailed marking instructions are not an exhaustive list. Other relevant points should be credited.

(h) For credit to be given, points must relate to the question asked. Where candidates give points of knowledge without specifying the context, these should be rewarded unless it is clear that they do not refer to the context of the question.

(i) For knowledge/understanding marks to be awarded, points must be:
- **a.** relevant to the issue in the question
- **b.** developed (by providing additional detail, exemplification, reasons or evidence)
- **c.** used to respond to the demands of the question (i.e. evaluate, analyse, etc.)

Marking principles for each question type
There are a range of types of question which could be asked within this question paper. For each, the following provides an overview of marking principles, and an example for each.

Explain
Questions which ask candidates to explain or suggest reasons for the cause or impact of something, or require them to refer to causal connections and relationships: candidates must do more than describe to gain credit here.
Where this occurs in a question asking about a landscape feature, candidates should refer to the processes leading to landscape formation.
Where candidates are provided with sources, they should make use of these and refer to them within their answer for full marks.
Where candidates provide a purely descriptive answer, or one where development is limited, no more than half marks should be awarded for the question.
Other questions look for higher-order skills to be demonstrated and will use command words such as analyse, evaluate, to what extent does, discuss.

Analyse
Analysis involves identifying parts, the relationship between them, and their relationships with the whole. It can also involve drawing out and relating implications.
An analysis mark should be awarded where a candidate uses their knowledge and understanding/ a source, to identify relevant components (eg of an idea, theory, argument, etc) and clearly show at least one of the following:

- links between different components
- links between component(s) and the whole
- links between component(s) and related concepts
- similarities and contradictions
- consistency and inconsistency
- different views/interpretations
- possible consequences/implications
- the relative importance of components
- understanding of underlying order or structure.

Where candidates are asked to analyse they should identify parts of a topic or issue and refer to the interrelationships between, or impacts of, various factors, eg analyse the soil-forming properties which lead to the formation of a gley soil. Candidates would be expected to refer to how the various soil formatting properties contributed to the formation.

Evaluate
Where candidates are asked to evaluate, they should be making a judgement of the success, failure, or impact of something based on criteria. Candidates would be expected to briefly describe the strategy/project being evaluated before offering an evidenced conclusion.

Account for
Where candidates are being asked to account for, they are required to give reasons, often (but not exclusively) from a resource, eg for a change in trade figures, a need for water management, or differences in development between contrasting developing countries.

Discuss
These questions are looking for candidates to explore ideas about a project, or the impact of a change. Candidates will be expected to consider different views on an issue/argument. This might not be a balanced argument, but there should be a range of impacts or ideas within the answer.

To what extent
This asks candidates to consider the impact of a management strategy or strategies they have explored. Candidates would be expected to briefly describe the strategy/project being evaluated before offering an evidenced conclusion. Candidates do not need to offer an overall opinion based on a variety of strategies, but should assess each separately.

Detailed marking instructions for each question

Section 1 Physical Environments

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
1.			Award a **maximum of 4 marks** for either feature. Check any diagram(s) for relevant explanations not present in the text and award accordingly. Well-annotated diagrams can gain full marks. Credit an explanation of the formation of glaciers to a **maximum of 1 mark.** Award a **maximum of 1 mark** for three or more correctly named, but undeveloped, processes. If a candidate merely explains processes, award a **maximum of 2 marks** for fully developed processes for any one feature (ie if no reference to the feature).	**7**	**Glacier formation includes:** • Snow accumulates in north facing hollows when more snow falls in winter than melts in the summer. **(1 mark)** **OR** • North/north-east facing slopes are more shaded so snow lies longer with accumulated snow compressed into ice. **(1 mark)** **Processes include:** • Plucking, when ice freezes on to bedrock, pulling loose rocks away from the backwall, making it steeper. **(1 mark)** • Abrasion, when the angular rock embedded in the ice grinds the hollow, making it deeper. **(1 mark)** • Frost shattering when water in cracks in the rock freezes, expands and contracts weakening the rock until fragments break off. **(1 mark)**

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
			Answers which are purely descriptive, or have no mention of any processes or conditions, should achieve no more than **2 marks** (for each feature) in total, with **1 mark** being awarded for every two descriptive points being made.		**Corrie:** • Bergschrund crevasse opens up at the back of the hollow. This allows melt-water and rock fragments to get to the base of the glacier increasing abrasion. **(1 mark)** • The weight of the glacier pushes down causing rotational sliding which deepens the hollow. **(1 mark)** • Friction causes the ice to slow down at the front edge of the corrie, allowing a rock lip to form, which traps water as ice melts, leaving a lochan or tarn. **(1 mark)**

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
			1 mark Limited explanation – the use of the names of at least two processes in context with no development of these. **2 marks** The use of the names of at least two processes with development of these, but no other reference to conditions. Or Limited use of the names of at least two processes, with at least two descriptive points about the landscape formation. **3 marks** Two developed processes with limited explanation of how the feature forms over time.		**U-shaped Valleys/Hanging Valleys:** • The weight of the glaciers causes them to flow downhill following existing V-shaped valleys. **(1 mark)** • Former interlocking spurs may be cut off by the glacier as it flows downhill leaving truncated spurs and steep valley sides. **(1 mark)** • The width and shape of the resulting glacial trough will depend on the nature of the rock type and the intensity and weight of the glacial and it erosion. **(1 mark)** • Tributary valleys have smaller less powerful glaciers which result in less deep U-shaped valleys 'hanging' about the main valley. **(1 mark)** **Terminal Moraine:** • Terminal moraine is a ridge across the valley and made up of glacial deposits/till/boulder clay; which is unsorted. **(1 mark)** • As the glacier moves downhill it acts like a bulldozer, pushing sediment in front of its snout as it goes. **(1 mark)** • On reaching lower altitudes and when temperatures rise, the glacier melts, losing power and depositing the moraine. **(1 mark)** • Terminal moraine marks the furthest point that the glacier reaches. Once the ice has retreated, the terminal (or end) moraine can often form a natural dam, creating a ribbon lake. **(1 mark)**

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
			4 marks Two named processes with development of these, with two further statements explaining the formation of the feature.		**Drumlin:** • Drumlins are elongated hills made up of unsorted glacial deposits/till/boulder clay. **(1 mark)** • Drumlins are formed as the glacier becomes overloaded with sediment and deposits it, streamlining the sediment as it flows over it. **(1 mark)** • The steep 'stoss' slope faces up-valley and the more gently-sloping 'lee' slope faces down-valley. **(1 mark)** • If there is a small obstacle on the ground, this may act as a trigger point and till/boulder clay can build up around it. **(1 mark)** • Drumlins may be reshaped by further ice movements after being originally deposited. Drumlins are found in swarms or in a 'basket of eggs' topography. **(1 mark)** **Esker:** • Eskers are meandering ridges formed by meltwater streams in or underneath a glacier. **(1 mark)** • They are therefore made up of meltwater sands and gravels. These are sorted by size with large stones at the base because larger stones are dropped first by flowing water. **(1 mark)** • The stones also tend to be more rounded than glacial deposits, because of the action of flowing water rounding the edges by erosion. **(1 mark)** • As the glacier melts, sub-glacial streams flow through tunnels and the load is deposited on the channel bed. **(1 mark)** Or any other valid point

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
2.			Award **1 mark** for each developed explanation or for two less developed explanations. A diagram can be used to add development to a point. Check any diagram(s) for relevant explanations not present in the text and award accordingly. Well-annotated diagrams can gain full marks. Credit any valid responses.	**4**	Explanations for the differences between tropical areas and polar areas may include: • Due to the curve of the Earth the sun's rays are concentrated on a much smaller surface area over the tropical latitudes resulting in more energy. **(1 mark)** • Rays have less atmosphere to pass through at the Tropics so less energy is lost through absorption and reflection. **(1 mark)** • Albedo differs between Tropics and Poles – darker forest surfaces absorb radiation. **(1 mark)** • Lighter snow/ice covered areas at the poles have a higher albedo and reflect more radiation. **(1 mark)** • Due to the tilt of the Earth there is no insolation at the poles during the winter solstices/tropical areas receive insolation all year round. **(1 mark)** Or any other valid point

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
3.			Well-annotated diagrams that explain conditions and processes can gain full marks. Marks may be awarded as follows: For **1 mark**, candidates may give one detailed explanation. For **1 mark**, candidates may give a limited description with a limited explanation. A **maximum of 2 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for **1 mark**.	**4**	• Low temperatures lead to a slow rate of decomposition of organic matter creating a thin humus. **(1 mark)** • Plant roots do not penetrate deeply resulting in limited recycling of minerals back to the vegetation. **(1 mark)** • Anaerobic conditions means few organisms living in soil to burrow and tunnel through the soil. **(1 mark)** • Soil has a blue grey colour due anaerobic conditions. **(1 mark)** • The iron compounds are changed from red brown to blue due to oxygen being extracted by microorganisms.**(1 mark)** • Red mottling in small air pockets due to re-oxygenation of the iron in the soil due to burrowing animals/soil drying out in summer. **(1 mark)** • Impermeable clay impedes drainage and causes waterlogging. Found on flat surfaces such as plateau moorland or foot of slope means water cannot drain away. **(1 mark)** Or any other valid point.

Section 2 Human Environments

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
4.	(a)		For **1 mark**, candidates may give one detailed explanation, or a limited description/explanation of two factors. A **maximum of 2 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for one mark. A **maximum of 3 marks** should be awarded for either push or pull factors. Where candidates give generic answers which do not refer to a named migration flow, a maximum of 3 marks should be awarded.	**4**	**For Poland to Scotland** **Push factors** • Not enough jobs with very few opportunities for example in 2014 the unemployment rate in Poland was around 14%**. (1 mark)** • Low paying jobs resulting in a low standard of living for example poor quality housing. **(1 mark)** • State benefits are very low compared to Scotland and the UK and also the healthcare in Scotland is free at the point of delivery. **(1 mark)** • Due to increased mechanisation/privatisation of farms rural unemployment has risen. **(1 mark)** **Pull Factors** • Due to Poland joining the European Union, this allowed people to move freely with unlimited migration**. (1 mark)** • The exchange rate meant that the sterling conversion into zloty was favourable and meant that people could send money back to family members in Poland. **(1 mark)** • There were plenty of available jobs in parts of the economy such as in construction and trades such as plumbers and electricians**. (1 mark)** Or any other valid point

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
	(b)		For **1 mark**, candidates may give one detailed impact, or a limited description/explanation of two impacts. Care should be taken to ensure impacts are relevant to specific case studies and not overly generalised.	**3**	**For Poland to Scotland Voluntary Migration** **Impacts on donor country** • Fewer people means less pressure on limited resources like good quality housing and healthcare allowing living standards to improve. **(1 mark)** • This will also help reduce the unemployment rates for the country and migrants return with new skills. **(1 mark)** • Birth rate is lowered as male migrants are away so there will be a decline in the population further reducing strain on resources. **(1 mark)** • Migrants often send money home to their families meaning people have more money in Poland helping to improve standard of living. **(1 mark)** • The most educated and healthy leave which could hinder development and it tend to be older population that stay behind. **(1 mark)** **Impacts on receiving country** • The government receives tax from migrant workers who are doing jobs that British people will not do due to low wages and unsociable hours, including fish processing, farm work and cleaning. **(1 mark)** • Generally, migrants are perceived as hard workers and many are highly skilled and/or graduates so brought sought after skills during the UK construction boom. **(1 mark)**

Question			General marking instructions for this type of question	Max mark	Specific marking instructions for this question
					• The language barrier and cultural differences can lead to racial tension with ethnic groups tending not to integrate which can add to the tension. **(1 mark)** • May lead to the development of over-crowded, multi occupancy accommodation due to the pressures on housing in certain areas. **(1 mark)** • The education system may become strained due to the number of children for whom English is not their first language. **(1 mark)** • Due to the number of migrants entering Scotland this can lead to increased unemployment rates as a knock-on of the economic downturn. **(1 mark)** • Positives for a multicultural society would include Polish shops or aisles in supermarkets. **(1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
5.			For **1 mark**, candidates may give one detailed impact, or a limited description/explanation of two impacts. Care should be taken to ensure impacts are relevant to specific case studies and not overly generalised.	**4**	**For the Sahel** • Loss of fertile topsoil leading to the inability of the land to support vegetation. **(1 mark)** • Crop failures/death of livestock, reducing food supply, leading to malnutrition and famine in Sudan, Ethiopia and much of Sahel. **(1 mark)** • Large scale rural migration into overcrowded urban areas in the south, causing more pressure and the growth of shanty towns. (**1 mark)** • The collapse of the nomadic way of life due to the lack of grazing and water forcing many nomads to settle in villages increasing pressure/tension in these areas. **(1 mark)** • Economically, farmers have lost their income as a result of poor crop yields meaning they can no longer afford to pay for their basic needs, such as schooling. **(1 mark)** • Conflict within and sometimes, between countries as people are forced to move and re-settle –growth of large refugee camps. **(1 mark)** • Countries increasingly reliant on international aid to gain access to food and water impacting development as debt repayments are high. **(1 mark)** • Desertification has become so severe that it has led to the southward expansion of the Sahara desert into the Sahel. In the last 50 years, 65 million hectares of the Sahel have turned into desert. **(1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
6			Marks may be awarded as follows: For **1 mark**, candidates should briefly describe a strategy and offer one evaluative point. Further developed/detailed evaluative comments should be awarded **1 mark** each. **1 mark** can be awarded for every two limited evaluative points. At least two strategies are required for full credit. Up to **2 marks** can be awarded where candidates only describe or explain strategies (ie no evaluation), with two such points required for one mark. Where candidates give generic answers which do not refer to a city, a maximum of 3 marks should be awarded. If candidates discuss developing world cities, credit any evaluative points which could be relevant to a developed world city, which uses a similar strategy, up to a maximum of 3 marks.	4	**For Glasgow answers may include:** • Pedestrianisation of CBD roads eg Buchanan Street, Argyle Street etc increases pedestrian safety making the areas more appealing for shoppers. **(1 mark)** • Fewer cars in this area leads to lower emissions and improves air quality and environment. **(1 mark)** • Traffic management systems such as one-way streets are used which is successful as they reduce waiting times at junctions. **(1 mark)** • Bus lanes to speed up public transport make it more efficient and so discourage the use of private transport. **(1 mark)** • Improved public transport eg installing free Wi-Fi on buses/trains however many people prefer the convenience of using their own car. **(1 mark)** • Parking restrictions and fines have reduced the amount of on street parking which allows the streets to be wider allowing more space for cars. **(1 mark)** • New links to motorway extensions **(M74)** to bypass congested areas has removed unnecessary through traffic from bottlenecks such as the Kingston Bridge. **(1 mark)** Or any other valid point

Section 3 Global Issues

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
7	(a)		**1 mark** should be awarded for each detailed explanation. A **maximum of 2 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for one mark. Markers should take care not to credit human factors. Although there could be overlap with factors like cost, this must be clearly linked to the physical environment.	**4**	• Narrow and deep valleys can be dammed more efficiently and require less construction materials reducing the overall cost of the project, these valleys also have a reduced surface area and combined with low temperatures they reduce water loss from evaporation **(2 marks)** • If the site has impermeable rock this would reduce water loss from the reservoir by percolation. **(1 mark)** • A geologically stable area away from earthquake zones/fault lines with a solid foundation will reduce the risk of damage or failure of the dam. **(1 mark)** • A high drainage density (or high rainfall) will ensure that the reservoir will receive enough water to avoid transfer from adjacent drainage basins. **(1 mark)** Or any other valid point.

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		Award **1 mark** for each detailed explanation. Candidate answers must include both socio-economic and environmental adverse consequences a **maximum of 5 marks** should be awarded if only one is discussed. No marks should be awarded for positive impacts. Award a **maximum of 5 marks** if the answer does not clearly relate to a specific named water management project. A **maximum of 3 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for one mark.	**6**	**For the Three Gorges Dam, China:** **Socio-Economic consequences could include:** • The displacement of millions of people from the Yangtze river region; hundreds of towns and villages were evacuated and later submerged with the area**. (1 mark)** • Those forced to relocate were promised compensation for the value of their homes and land although this did not cover the cost of relocation and some of the money was lost through corruption. **(1 mark)** • Compensation in some instances has been as little as the equivalent of £5 a month, and many claim they have received only half the land compensation they were promised. **(1 mark)** • This has resulted in problems for many as the cities and towns they have had to move to are more expensive, driving many people deeper into poverty. **(1 mark**) • The displaced people are mainly farmers with little formal education this makes it difficult for them to find jobs in the cities and towns they have been relocated to**. (1 mark)** • Flooding the reservoir has forced those farmers still in the region to migrate northwards on to the mountain slopes, adding to erosion. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
					Environmental consequences: • Construction of the dam has led to an increase in landslides in the area as a result of erosion caused by the increases and decreases in reservoir water. (**1 mark)** • There are 300 species of fish in the Yangtze River. The dam has created a barrier in the river and fish will not be able to travel upstream to spawn, so the populations of the species have decreased. **(1 mark)** • The Chinese River Dolphin is only found in the Yangtze and the construction area covers a large part of this animal's habitat so it is at risk of becoming extinct. **(1 mark)** • Decreases in freshwater flow has meant that more saltwater is creeping up the Yangtze, endangering fish populations already threatened by overfishing. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
8	(a) (b)		Candidates may choose to answer parts (a) and (b) separately or together. Award a **maximum of 7** marks if there is no comment on effectiveness. Each evaluation should only be credited once – ie candidates should be credited for eg cost only once. Care should be taken not to credit reversals. For **1 mark**, candidates should briefly explain a strategy and offer one limited evaluation or one detailed explanation of a strategy or one detailed comment on effectiveness of a strategy. Up to **3 marks** can be awarded for description of strategies, with two such points required for **1 mark**.	**10**	**Measures taken to eradicate the mosquitoes:** • One method used was to spray pesticides/insecticides in an attempt to kill the Anopheles mosquitoes which spread the disease**. (1 mark)** • Breeding genetically modified sterile mosquitoes (or mosquitoes unable to carry the parasite or mosquitoes which give birth to predominantly male offspring) were also attempts to reduce the numbers of female mosquitoes. **(1 mark)** • Another method was to use specially designed mosquito traps, which mimic animals and humans by emitting a small amount of carbon dioxide in order to lure the mosquitoes into the trap where they are killed. **(1 mark)** • BTI bacteria artificially grown in coconuts – the fermented coconuts are broken open after a few days and thrown into the mosquito larvae-infested ponds. The larvae eat the bacteria and have their stomach lining destroyed. **(1 mark)** • Putting larvae-eating fish such as the muddy loach into stagnant ponds or paddi fields can also help to reduce the larvae as the fish eat the larvae. (**1 mark)** • Flushing reservoirs and draining stagnant ponds or swamps every seven days as it takes longer than this period of time for the larvae to develop into adult mosquitoes. **(1 mark)** • Planting eucalyptus trees can help soak up excess moisture and reduce the amount of stagnant water. (**1 mark)** • Covering standing water and water storage cans (eg the Oxfam Bucket) reduces the chances of mosquitoes breeding there. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
					Measures taken to treat those suffering from Malaria include: • Drugs such as Quinine/Chloroquine/Larium/Malarone/Artemisia were all developed in an attempt to kill the parasite or prevent infection. **(1 mark)** • Trials have produced a vaccine (RTS,S) which has now been recommended as being safe for use, as prevention is better than cure. **(1 mark)** • Measures taken to prevent people being bitten by the mosquito: Education programmes such as the WHO's "Roll Back Malaria" campaign. In particular educating people in the use of Insect repellents. **(1 mark)** • Covering the skin at dawn/dusk when mosquitoes are most active to reduce the chances of being bitten. **(1 mark)** • The increased use of insecticide-coated mosquito nets at night was an attempt to stop the mosquitoes from biting people and passing on the disease as people slept. **(1 mark)** **Possible comments on the effectiveness might include:** • Insecticides to kill the mosquito were effective at first however the mosquito became resistant to DDT and alternative insecticides are often too expensive for developing countries. **(1 mark)** • Mosquito traps have been effective at a small scale, but mosquitoes breed so quickly that it is impossible to trap them all. **(1 mark)** • The BTI bacteria in coconuts is a cheap and environmentally friendly solution, with 2/3 coconuts clearing a typical pond of mosquito larvae for 45 days. **(1 mark)** • Draining stagnant ponds is impossible to be effective on a large-scale, especially in tropical climates where it can rain heavily most days. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
					• Using mosquito nets at night/covering up exposed skin is effective as mosquitoes are often most active during dusk and dawn. **(1 mark)** • Drugs to kill the parasite once inside humans have been effective for a spell, but the parasite often adapts and becomes resistant — this is true even of the Artemisia-based drugs in SE Asia. (**1 mark)** • Anti-malarial drugs often have unpleasant side-effects so may prevent people from completing the whole course**. (1 mark**) • They are also expensive to research, develop and produce, making them often too expensive for people living in developing countries. **(1 mark)** • Scientists have trialled a vaccine on children across Africa and the early results from this are encouraging (a 56% drop in malaria after a year with children who had the vaccine, compared with those who did not). **(1 mark)** • Putting larvae-eating fish such as the muddy loach into ponds. As the fish breed, this has the added advantage for farmers who can eat some of the fish and add extra protein to their diet. **(1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
9.	(a)		For **1 mark**, candidates should give one detailed explanation, or a limited description/explanation of two factors. A **maximum of 3 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for one mark. Candidates should be credited for both positive and negative impacts.	**6**	**Possible answers might include:** • Sea level rises caused by an expansion of the sea as it becomes warmer and also by the melting of glaciers and ice caps in Greenland, Antarctica, etc. **(1 mark)** • Low-lying coastal areas, eg Bangladesh affected with large-scale displacement of people and loss of land for farming and destruction of property. **(1 mark)** • Climate change refugees from areas such as Tuvalu or the Maldives moving to higher ground or to other countries will exert more pressure on resources such as housing, water and power supplies. **(1 mark)** • More extreme and more variable weather, for example hurricanes due to increased sea temperatures. **(1 mark)** • Globally, an increase in precipitation, particularly in the winter in northern countries such as Scotland, but some areas like the USA Great Plains may experience drier conditions. **(1 mark)** • Increase in extent of tropical/vector borne diseases, eg yellow fever, as warmer areas expand. Possibly up to 40 million more in Africa being exposed to risk of contracting malaria. **(1 mark)** • Longer growing seasons in many areas in northern Europe for example, increasing food production and range of crops being grown. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
					• Impact on wildlife and natural habitats, eg extinction of at least 10% of land species and coral reefs suffer 80% bleaching. **(1 mark)** • Changes to ocean current circulation, eg in the Atlantic the thermohaline circulation starts to lose impact on north-western Europe, resulting in considerably colder winters. **(1 mark)** • Changes in atmospheric patterns linking to changes in the monsoon caused by El Nino and La Nina. **(1 mark)** • Increased risk of forest fires, for example in Australia and California due to change in surface temperatures and changes in rainfall patterns. **(1 mark)** • Milder winters producing less snowfall in Scotland, with Met Office predictions of 50% less snow by 2080 threatening the Scottish ski industry. **(1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		For **1 mark** candidates should briefly describe a strategy and offer one evaluative point. Further developed/detailed evaluative comments should be awarded **1 mark each**. A **maximum of 2 marks** should be awarded for answers consisting entirely of descriptive points with 2 such points required for **1 mark**. Avoid giving marks for candidate comments which are the opposite/reverse of points already credited.	**4**	• The Thames Barrier has successfully protected London from flooding on numerous occasions and is predicted to provide protection from "one in a thousand year" flood events. (**1 mark)** • However, a second barrier may be needed to cope with flooding beyond 2070 and advance warning systems need to be further developed to advise Householders of the potential risks of flooding. (**1 mark)** • To manage the effects of drought during periods of extended rainfall, the UK has implemented hose-pipe bans but these are unpopular and difficult to enforce. (**1 mark)** • London has built a desalination plant, which is only intended to be used in periods of extreme drought due to the high operational costs. (**1 mark)** • Scotland is reducing greenhouse emissions by increasing energy production from renewables, which were meeting 50% of the demand by the end of 2014. **(1 mark)** • However, there is opposition to schemes such as wind farms because of their visual impact and effects on local wildlife, making it difficult to meet future targets on green energy supplies. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
10	(a)		Candidates should refer to both social and economic impacts for full credit, although markers should be aware that many impacts could be considered both social and economic. **1 mark** should be awarded for each detailed point. A developed point may be a detailed explanation of an impact, or may be two less detailed impacts. A **maximum of 3 marks** should be awarded for answers consisting entirely of limited points, with two such points required for **1 mark**.	**4**	**Possible answers might include:** • Many people are trapped in poverty because multinational companies want to manufacture their product for the cheapest price possible. **(1 mark)** • Many countries are unable to make a decent profit on the goods they sell because they are forced to pay tariffs to developed countries in trading blocs. **(1 mark)** • Government subsidies and grants in developed countries allow companies to sell products at a cheaper price than is possible in many developing countries – undercutting local farmers. **(1 mark)** • Many children work instead of going to school, and this causes an illiterate population, with the consequent lack of opportunities. **(1 mark)** • Creates a self-perpetuating cycle of poverty where the next generation are unable to access well paid employment due to being illiterate. **(1 mark)** • The lack of well-paid jobs means many people live in shanty town type accommodation, with little access to safe electricity and sanitation etc. **(1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		For **1 mark**, candidates should briefly describe a strategy and offer one evaluative point. Further developed/detailed evaluative comments should be awarded **1 mark** each. A **maximum of 3 marks** should be awarded for answers consisting entirely of limited descriptive points (ie no evaluation), with two such points required for **1 mark** or where answers are vague or overgeneralised.	**6**	**For the Caribbean Community and Common Market (CARICOM) answers may include:** • Removing customs duties between member states, means that even the smallest Caribbean countries have access to a regional market, reducing their costs. **(1 mark)** • Encouraging member countries to purchase raw materials from other CARICOM countries, generates more trade and wealth. **(1 mark)** • Spreading the benefits of industrialisation and encouraging industries to locate in the smaller countries, creates employment and raises GDP. **(1 mark)** • The creation of a single currency makes trade between Organisation of Eastern Caribbean States (OECS) countries much easier as money is not lost in transactions. (**1 mark)** • Trading alliances such as the EU can control the trade terms for the benefit of its members and make it difficult for non-members to compete on the same basis. **(1 mark)** • By setting up tariffs and import duties that they charge non-member countries, which protects employment and industries within the EU. **(1 mark)** • By introducing quotas, putting a limit on the amount of products that a Non-member country can sell, this protects vulnerable groups/industries**. (1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking Instructions for this question
11.	(a)		**No marks** for describing the trends shown on the graph; candidates must account for the differences. Award **1 mark** for each developed reason, or for two limited explanations.	**5**	• Most of the global economic growth is happening in developing countries such as China which requires lots of energy to construct infrastructure. **(1 mark)** • An increase in population growth leads to increased demands for electricity for lighting and appliances such as televisions. **(1 mark)** • Unlike in developed countries, much of the economic growth in developing countries is based on energy-hungry manufacturing industries. **(1 mark)** • In a global economy many of the manufactured products are sold to developed countries, and therefore need to be transported around the world. **(1 mark)** • Along with large increase in passenger air travel which has led to the construction of a large number of airport terminals and aeroplane use particularly in South East Asia. (**1 mark)** • As people in developing countries become more prosperous, car ownership rates will also increase. (**1 mark)** Or any other valid point

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)		Award **1 mark** for each developed point or for two undeveloped points. Candidates must discuss a renewable source of energy. No marks should be awarded for discussing non-renewable sources of energy. Credit any other valid responses.	**5**	**Possible answers for all renewable energy sources might include:** • Struggle to meet demand of energy at peak times such as early evening due to rise in use of home appliances for evening meals. **(1 mark)** • Output is variable and depends on the weather conditions. This means that there are times when more energy is available than is required, whilst at other times, turbines may be switched off due to over-production. **(1 mark)** • Often located in remote parts of a country which means electricity is lost in transferring to areas of higher demand/population. (**1 mark**) **For Hydroelectric power (HEP) other possible answers could include:** • Even countries like Norway with very high HEP potential have to import electricity from Sweden during drier months. (**1 mark)** • Run-of-the-river power stations rely on the flowing water of a river and when river is in spate potential power production is lost. (**1 mark)** • Conventional HEP stations dam the river to create capacity, however this floods large areas of land which have serious environmental consequences. **(1 mark)** • Turbines can be easily and cheaply added to existing dams / reservoirs allowing power to be generated from multipurpose dams, generating energy from pre-existing infrastructure. **(1 mark)** • Pump-storage dams effectively allow power to be stored, as water is pumped to an upper reservoir and times of low demand (price). This water can then be released at times of higher demand (price) where the water is stored in a lower reservoir for future use. **(1 mark)**

Section 4 Application of Geographical Skills

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
12.	(a) (b)		Candidates should make reference to all sources, including the OS map to discuss the suitability of the site and the social, economic and environmental impacts of the housing development on the surrounding area. **1 mark** should be awarded for each developed explanatory point. **1 mark** should be awarded where candidates refer to the resource and offer a brief explanation of its significance (beyond the wording of the resource), or give a limited description/explanation of two factors. A **maximum of 5 marks** should be awarded for answers consisting entirely of limited descriptive points, with two such points required for **1 mark**. A **maximum of 4 marks** should be awarded for candidates who give vague over-generalised answers, which make no reference to the map.	**10**	**Possible answers may include:** **Possible advantages of the location** • The site is located close to a number of transport links such as the M5 to the east leading to Weston Super Mare –or- A38 to Bridgwater which will allow for commuting. **(1 mark)** • The location is also close to a railway station (322470) this may appeal to a wide range of home buyers who may not wish to rely on a car for transport. **(1 mark)** • The site is located on a large expanse of flat land and this combined with ease of access will lower construction costs. (**1 mark)** • The site may also appeal to families as it is within driving distance of Exmoor National Park which may offer leisure activities. **(1 mark)** • The site is also close to the Bridgwater Bay National Reserve which offers scenic walks (River Parrett Trail). **(1 mark)** • There will be an increase in demand for housing due to the employment opportunities created by new power station. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
			There are a variety of ways for candidates to give map evidence including descriptions, grid references and place names. It is possible that some points referred to as a disadvantage may be interpreted by other candidates as a negative impact. Markers should take care to credit each point only once, where it is best explained.		**Possible Disadvantages of the site** • The site which has been chosen lies less than 10 metres above sea level, therefore this area may be at risk of flooding in heavy rainfall. **(1 mark)** • The area chosen is a floodplain and this may increase the cost of construction due to the need to build flood defences. **(1 mark**) • The building of this development may also increase the risk of flooding in surrounding areas as run off will increase from the development due to less infiltration. **(1 mark**) • The development lies between a railway and the A38 leading to possible air and noise pollution. **(1 mark)** • Some residents may be concerned about possible safety issues relating to transport of radioactive material or waste from the nearby power station. **(1 mark)** **Social Impacts** • The increase in houses will help relieve pressure on the local housing markets which may have a shortage as a result of people moving into the area due to construction of the power station. **(1 mark)** • The building of this development is also needed to relieve the pressure on housing as the population in the area has increased by 18,000 between 1991 and 2011. **(1 mark)** • With the building of the development to include leisure facilities this will benefit the town of Highbridge, this may also help further the appeal of the holiday park as a holiday destination (304482). **(1 mark)** Residents of Alstone (314468) may be unhappy that this quiet rural way of life may be disturbed by a large new housing development on their doorstep. **(1 mark)**

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
					Economic Impacts • Construction companies will be attracted to this area creating a number of skilled jobs boosting the local economy. **(1 mark)** • More impermeable surfaces may lead to increased risk of flooding meaning a rise in insurance premiums. **(1 mark)** • Increased population may lead to improved trade income for local small businesses. **(1 mark)** **Environmental Impacts** • The building of this development may see an increase in traffic and congestion on roads not just during construction as the building of 300 new homes will increase the population of the area, leading to more noise and air pollution. **(1 mark)** • The possible need for flood defences may have an adverse consequence on nesting birds and aquatic wildlife in the surrounding area. **(1 mark)** • Increased flooding is likely due to the more impermeable tarmac surfaces increasing run-off. **(1 mark)**

[END OF MARKING INSTRUCTIONS]