

# AQA Geography practice paper answers

Paper 1 Section A: The challenge of natural hazards		
Question	Marking guidance	Total marks
1.1	<p>One mark for either:</p> <ul style="list-style-type: none"> <li>Sea temperatures decrease and then increase.</li> <li>Sea temperatures fluctuate quite considerably.</li> </ul> <p>Second mark for use of data shown on graph or for data manipulation.</p>	2
1.2	<p>One mark for correct reason, such as:</p> <ul style="list-style-type: none"> <li>Climate change.</li> <li>Natural factors.</li> </ul> <p>Second mark for a developed reason outlining why this has caused temperature change.</p>	2
1.3	A and C	2
1.4	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Natural causes of climate change are: orbital changes such as differences in eccentricity, which cause the path of the Earth around the Sun to change affecting the temperature of the Earth.</li> <li>Changes in solar radiation caused by sunspots.</li> <li>Volcanic ash can block out the sunlight and so temperatures are reduced.</li> <li>Sulfur dioxide from a volcanic eruption mixes with water to cause sulfuric acid. This reflects the Sun's radiation, reducing temperatures.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks</b></p> <ul style="list-style-type: none"> <li>A03 Demonstrates a thorough application of knowledge and understanding to give detailed explanations of the natural causes of climate change.</li> <li>A03 Shows a full understanding of the interrelationships between natural processes and climate change.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates a specific and accurate knowledge of the natural causes of climate change.</li> <li>A02 Shows a clear geographical understanding of the interrelationships between natural processes and climate change.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks</b></p> <p>A01 Demonstrates some knowledge of natural causes of climate change.            A02 Shows limited geographical understanding of the interrelationships between natural processes and climate change.            0 marks: No relevant content.</p>	6
1.5	<p>Answer must be purely descriptive and use direction in answer, such as:            Hurricane Katrina initially travelled northwards, then travelled in a westerly direction before heading northwards again.            Hurricane Katrina travelled in a westerly direction before heading northwards.</p>	2
1.6	<p>One mark for a correct reason, such as:</p> <ul style="list-style-type: none"> <li>Tropical storms only develop in the tropics.</li> <li>The eye of the storm is calm.</li> <li>They bring strong winds and heavy rainfall with them.</li> </ul> <p>Second mark for developed reason, e.g.:</p> <ul style="list-style-type: none"> <li>They form where the ocean temperatures are above 27° Centigrade.</li> </ul>	2
1.7	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>The primary and secondary effects should relate to the image.</li> <li>Credit secondary effects that could happen in hours, days and the weeks after.</li> <li>Primary effects include amount of people injured, killed and displaced. Will also focus on buildings destroyed. May have an indication of cost.</li> <li>Secondary effects include damage to communication or transport routes, power supplies being cut off and lack of water and shelter for people.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks</b></p> <ul style="list-style-type: none"> <li>A03 Shows an accurate understanding of primary and secondary effects through the application of knowledge and understanding of the resource.</li> <li>A04 Makes clear and effective use of the image to support primary and secondary effects.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks</b></p> <ul style="list-style-type: none"> <li>A03 Shows a limited interpretation of primary and/or secondary effects through the application of knowledge and understanding of the resource.</li> <li>A04 Makes a limited and piecemeal use of the image to support primary and secondary effects.</li> </ul> <p>0 marks: No relevant content.</p>	4
1.8	<p>Any <b>two</b> of the following:</p> <ul style="list-style-type: none"> <li>They may become more frequent.</li> <li>They may become more intense.</li> <li>The distribution of tropical storms may be increased.</li> </ul>	2

1.9	<p><b>Indicative content</b> The command word is 'evaluate', so the focus of the answer should be on evaluating the success of responses to either an earthquake or volcanic eruption. Credit only responses (immediate and long-term) not causes or effects.</p> <p><b>Earthquakes – immediate responses</b></p> <ul style="list-style-type: none"> <li>• Providing medical support, rescue teams and water.</li> <li>• Potentially the DEC raising money to support country.</li> <li>• Temporary shelters set up.</li> </ul> <p><b>Long-term responses</b></p> <ul style="list-style-type: none"> <li>• Post disaster assessment of area and building to strict building codes.</li> <li>• Areas affected by landslides cleared and repaired.</li> <li>• Houses and schools etc. rebuilt and people rehoused.</li> </ul> <p><b>Volcanoes – immediate responses</b></p> <ul style="list-style-type: none"> <li>• Evacuation to neighbouring safe regions.</li> </ul> <p><b>Long-term responses</b></p> <ul style="list-style-type: none"> <li>• Careful monitoring of volcanic activity.</li> <li>• Rebuilding in safer areas.</li> </ul> <p><b>Level 3 (Detailed) 7–9 marks</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates a detailed knowledge of the responses to an earthquake or volcano eruption.</li> <li>• A02 Shows a thorough geographical understanding of the interrelationships between places, environments and processes in the context of a hazard.</li> <li>• A03 Demonstrates application of knowledge and understanding in a coherent and reasoned way in evaluating the success of the responses to an earthquake or volcanic eruption.</li> </ul> <p><b>Level 2 (Clear) 4–6 marks</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates a clear knowledge of the responses to an earthquake or volcanic eruption.</li> <li>• A02 Shows some geographical understanding of the interrelationships between places, environments and processes in the context of a hazard.</li> <li>• A03 Demonstrates a reasonable application of knowledge and understanding in evaluating the significance of responses to an earthquake or volcanic eruption.</li> </ul> <p><b>Level 1 (Basic) 1–3 marks</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates limited knowledge of the responses to an earthquake or volcanic eruption.</li> <li>• A02 Shows slight geographical understanding of the interrelationship between places, environments and processes in the context of a hazard.</li> <li>• A03 Demonstrates a limited application of knowledge and understanding in evaluating the significance of responses to an earthquake or volcanic eruption.</li> </ul> <p>0 marks: No relevant content.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left;">Spelling, Punctuation and grammar (SPaG)</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;"><b>High performance</b></td> <td style="width: 15%;">3 marks</td> <td> <ul style="list-style-type: none"> <li>• Answers are spelled and punctuated with consistent accuracy.</li> <li>• Answers use rules of grammar with effective control of meaning overall.</li> <li>• Answers use a wide range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Intermediate performance</b></td> <td>2 marks</td> <td> <ul style="list-style-type: none"> <li>• Answers spelled and punctuated with considerable accuracy.</li> <li>• Answers use rules of grammar with general control of meaning overall.</li> <li>• Answers use a good range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Threshold performance</b></td> <td>1 mark</td> <td> <ul style="list-style-type: none"> <li>• Answers spelled and punctuated with reasonable accuracy.</li> <li>• Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Answers use a limited range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Below threshold performance</b></td> <td>0 marks</td> <td> <ul style="list-style-type: none"> <li>• Nothing is written.</li> <li>• The answer does not relate to the question.</li> <li>• The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul> </td> </tr> </tbody> </table>	Spelling, Punctuation and grammar (SPaG)			<b>High performance</b>	3 marks	<ul style="list-style-type: none"> <li>• Answers are spelled and punctuated with consistent accuracy.</li> <li>• Answers use rules of grammar with effective control of meaning overall.</li> <li>• Answers use a wide range of specialist terms as appropriate.</li> </ul>	<b>Intermediate performance</b>	2 marks	<ul style="list-style-type: none"> <li>• Answers spelled and punctuated with considerable accuracy.</li> <li>• Answers use rules of grammar with general control of meaning overall.</li> <li>• Answers use a good range of specialist terms as appropriate.</li> </ul>	<b>Threshold performance</b>	1 mark	<ul style="list-style-type: none"> <li>• Answers spelled and punctuated with reasonable accuracy.</li> <li>• Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Answers use a limited range of specialist terms as appropriate.</li> </ul>	<b>Below threshold performance</b>	0 marks	<ul style="list-style-type: none"> <li>• Nothing is written.</li> <li>• The answer does not relate to the question.</li> <li>• The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>	9+3 SPaG
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Paper 1 Section B: The living world		
Question	Marking guidance	Total marks
2.1	<p>One mark for the correct answer: <b>B</b> The green anaconda eats squirrel monkeys and caimans. No credit if two or more statements are shaded.</p>	1
2.2	<p>Credit <b>one</b> statement that links to the removal of the caiman from the ecosystem, such as:</p> <ul style="list-style-type: none"> <li>• The green anaconda will have a reduced food supply so may decrease in number.</li> <li>• The squirrel monkey, hummingbird, lungfish, and piranha will have one less predator and so could increase in number.</li> <li>• If more squirrel monkeys, hummingbirds, lungfish and piranha exist, their food sources may decrease in number.</li> </ul>	2
2.3	<p>One mark for the correct answer: <b>C</b> Small average temperature range during a year (20°C to 30°C) and very low precipitation (approximately 125 mm a year). No credit if two or more statements are shaded.</p>	1
2.4	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Responses should include both description and explanation. There should be clear evidence that the diagram has been used, e.g. emergent layer, canopy layer, shrub layer, and ground layer. No credit for features not observed from the diagram.</li> <li>• Emergent trees have straight tall trunks. This is to reach above the canopy layer to get maximum sunlight.</li> <li>• The main canopy layer is almost continuous, where trees have large umbrella-shaped crowns to maximise the collection of sunlight by leaves, so that photosynthesis is most effective.</li> <li>• The shrub layer is less dense, due to the lack of sunlight below the canopy layer, so plants have difficulty growing until a space occurs when a taller tree falls down.</li> <li>• Young trees (juvenile) grow upwards as quickly as possible in any small gaps where sunlight is able to penetrate the canopy layer.</li> <li>• Max level 1 for either description or explanation.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Applies a detailed knowledge of rainforest vegetation and influences to interpret the tropical rainforest structure shown.</li> <li>• A04 Clearly relates characteristic(s) shown in the diagram to the tropical rainforest environment.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates an accurate knowledge of the features of vegetation structure and influences in a tropical rainforest.</li> <li>• A04 Makes clear and effective use of the diagram.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates a limited knowledge of vegetation structure and influences on tropical rainforest structure.</li> <li>• A04 Makes limited use of the diagram.</li> </ul> <p>0 marks: No relevant content.</p>	6

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2.5	One mark for correct answer. Plot marked correctly in place (2010 = 7000 km <sup>2</sup> ) and line completed.	1
2.6	One mark for correct answer: Year is 1995.	1
2.7	Credit <b>one</b> impact only. The impact <b>must</b> be an economic one, not environmental or social. It could be positive or negative. One mark for stating an impact, such as: <ul style="list-style-type: none"> <li>• Money is gained from rainforest resource.</li> <li>• Soils are washed away when exposed so that farming cannot take place.</li> <li>• Forest resources are used up too quickly.</li> <li>• People can move out of poverty by having small farms in cleared areas.</li> </ul> Second mark for <b>developing</b> the point, such as: <ul style="list-style-type: none"> <li>• Timber from the rainforest, or metals from underneath it can be extracted and sold for money, helping to develop the country.</li> <li>• Once trees are removed, soils are exposed to heavy rain and wind and so are eroded, this makes profits for small and large farms decrease.</li> <li>• If too much of the forest is removed, it will not regrow and so the timber resource could be lost forever, affecting the future economic development of the country.</li> <li>• Poor people from cities may be given small areas of forest to farm, this enables them to move out of poverty by selling crops.</li> </ul>	2
2.8	Credit <b>one</b> way only. The answer must focus on debt reduction and the implications for making rainforests more sustainable. One mark for stating how, such as: <ul style="list-style-type: none"> <li>• Countries can be relieved of some of their international debt through 'debt for nature' schemes.</li> <li>• Sustainability is achieved by legally protecting areas for the future.</li> </ul> Second mark for a developed explanation, such as: <ul style="list-style-type: none"> <li>• 'Debt for nature' schemes can achieve greater sustainability by setting aside more natural areas for protection from human activities so that they still exist in a natural condition in the future.</li> <li>• Legally protected areas are 'bought' by the cancellation of some debt. In this way biodiversity is preserved for the future.</li> </ul>	2
2.9	<b>Indicative content</b> The answer must focus on <b>either</b> a hot desert <b>or</b> a cold environment, not both. <ul style="list-style-type: none"> <li>• The question requires consideration of the extent to which technology helps balance economic development and conservation and this theme should be present throughout the answer.</li> <li>• Answers may focus on economic development or conservation more strongly, as long as both are considered closely in a named area, such as the Thar Desert or Svalbard, which are featured in the accompanying AQA GCSE Geography Revision Guide.</li> <li>• Technologies have allowed people to explore and develop these remoter, more inhospitable climatic areas.</li> <li>• In hot deserts, economic developments may include water supply, commercial farming with irrigation, mining activity, power supplies, and tourism.</li> <li>• In cold environments, economic developments may include mining activities, power generation, tourism and fishing.</li> <li>• In hot deserts, conservation may link to desertification, climate change, deforestation and overgrazing, oases, and the fragile ecosystem.</li> <li>• In cold environments, conservation may link to pollution, damage to permafrost, climate change, too many tourists and the fragile ecosystem and overfishing.</li> <li>• In hot deserts, conservation technologies may include water management through intermediate technology, which is more efficient; land management using intermediate technologies such as terracing and wind breaks, and using solar cookers.</li> <li>• In cold environments, conservation technologies may include scientific studies, pipeline design, use of ICT, fishing techniques, and carbon capture.</li> <li>• The question requires consideration of the balance between economic development and conservation of the environment. Candidates should make a judgement on whether technology has helped to achieve a balance or not.</li> </ul> <b>Level 3 (Detailed) 7–9 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates a comprehensive and accurate knowledge of locations, places and processes in relation to a hot desert or cold environment.</li> <li>• A02 Shows a thorough geographical understanding of the interrelationships between technology, economic development and conservation in the context of a hot desert or cold environment.</li> <li>• A03 Demonstrates a thorough application of knowledge and understanding in evaluating the extent to which technology has helped balance economic development and conservation in a hot desert or cold environment.</li> </ul> <b>Level 2 (Clear) 4–6 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates a clear knowledge of locations, places and processes in relation to a hot desert/cold environment.</li> <li>• A02 Shows some geographical understanding of the interrelationships between technology, economic development and conservation in the context of a hot desert or cold environment.</li> <li>• A03 Demonstrates a reasonable application of knowledge and understanding in evaluating the extent to which technology has helped balance economic development and conservation in a hot desert or cold environment.</li> </ul> <b>Level 1 (Basic) 1–3 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates basic knowledge of locations, places and processes in relation to a hot desert/cold environment.</li> <li>• A02 Shows slight geographical understanding of the interrelationships between technology, economic development and conservation in the context of a hot desert or cold environment.</li> <li>• A03 Demonstrates a limited application of knowledge and understanding in evaluating the extent to which technology has helped balance economic development and conservation in a hot desert or cold environment.</li> </ul> 0 marks = No relevant content.	9

Paper 1 Section C Physical landscapes in the UK		
Question	Marking guidance	Total marks
3.1	One mark for a named erosion process and a second for explanation of that process. Any one from: <ul style="list-style-type: none"> <li>• Hydraulic power – power of the waves as they smash into the cliff, air gets trapped in cracks in the rock, increases in pressure force them to break apart.</li> <li>• Abrasion (or corrosion) – sandpapering effect of beach sediment wearing away the rock making it smooth.</li> <li>• Attrition – rock fragments knock into each other and break up into smaller pieces.</li> <li>• Solution (or corrosion) – dissolving of chemicals in the rocks (by weak acids in the sea water).</li> </ul>	2
3.2	One mark for each: <b>A</b> = Arch <b>B</b> = Stack	2
3.3	<b>Indicative content</b> Feature B is a stack formed by coastal erosion. (The example shown is known as Old Harry Rocks in Dorset.) A stack is formed when: <ul style="list-style-type: none"> <li>• There is weakness at a point in the headland.</li> <li>• A crack forms in the headland at the point of weakness.</li> <li>• The crack is enlarged by the process of hydraulic action and abrasion to form a notch.</li> <li>• Waves make the crack/notch larger over time to form a cave.</li> <li>• If two caves form back-to-back these will eventually join/cut through to form an arch.</li> <li>• The arch is enlarged by further erosion. Over time the arch becomes too heavy to support itself. It collapses, leaving behind a rock stack.</li> </ul> <b>Level 2 (Clear) 3–4 marks:</b> <ul style="list-style-type: none"> <li>• A02 Shows a clear understanding of how a stack is formed.</li> <li>• A03 Application is sound with clear interpretation of the processes involved.</li> </ul> <b>Level 1 (Basic) 1–2 marks:</b> <ul style="list-style-type: none"> <li>• A02 Shows a limited understanding of how a stack is formed.</li> <li>• A03 Application is limited with basic interpretation of processes involved.</li> </ul> 0 marks: No relevant content.	4

3.4	<p>One of the following:</p> <ul style="list-style-type: none"> <li>• (Curved) sea wall.</li> <li>• Riprap or rock armour.</li> <li>• Concrete tetrapods or Xblobs.</li> </ul>	1
3.5	<p><b>Indicative content</b> Although the question relates to hard engineering, it is expected that the candidate will mention soft engineering as an alternative strategy to access level 3.</p> <p>Hard engineering:</p> <ul style="list-style-type: none"> <li>• Groynes: timber or rock structures built out to sea. They create a wider beach, which is good for tourism, but starve beaches further along the coast of beach material, increasing rates of erosion elsewhere.</li> <li>• Sea wall: concrete barriers to reflect waves back out to sea. They are effective at stopping erosion and create a promenade or walkway for tourists, but often look ugly and unnatural. They are very expensive to build and maintain.</li> <li>• Rock armour: piles of boulders at the base of the cliff absorbing wave energy. Cheap and easy to maintain, but can be dangerous and ugly and can be expensive to import rock from abroad.</li> <li>• Tetrapods and Xblobs – cheaply constructed interlocking concrete blocks/structures that deflect the energy of the waves.</li> </ul> <p>Soft engineering:</p> <ul style="list-style-type: none"> <li>• Beach nourishment: the addition of extra sand or shingle to make the beach wider. Cheap and easy to maintain, blending in with natural beach, but needs constant maintenance as the sand and shingle can get washed away in storms.</li> <li>• Dune regeneration: planting marram grass to stabilise the sand dunes. Maintains a natural attractive environment and is good for wildlife habitats, but the dunes need to be fenced off from the public and can be damaged by storms.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a thorough application of knowledge and understanding to give a detailed explanation of how hard engineering is used to protect the coastline.</li> <li>• A03 Shows a full understanding of the costs and benefits of hard and soft engineering. Balance between costs and benefits. Includes both hard and soft engineering strategies.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a specific and accurate knowledge of how hard engineering protects the coastline.</li> <li>• A02 Shows a clear geographical understanding of the costs and benefits of hard engineering. May be biased towards the costs or benefits, or more hard than soft engineering.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates some knowledge of hard engineering to protect the coastline.</li> <li>• A02 Shows a limited geographical understanding of the costs and benefits of hard engineering. Will focus on just hard engineering strategies.</li> <li>• 0 marks: No relevant content.</li> </ul>	6
4.1	This is the upper course of a river.	1
4.2	<p><b>Indicative content</b> Figure 11 shows a meandering river and floodplain.</p> <ul style="list-style-type: none"> <li>• The thalweg or fastest line of velocity of the water in a river swings from side to side.</li> <li>• The velocity is fastest on the outer bends of the river. Sediment is eroded from the outside of the bend.</li> <li>• The velocity is slower on the inside bends of the river. Sediment can be deposited there.</li> <li>• The river changes shape and begins to meander laterally by a combination of this process of sediment erosion and deposition.</li> <li>• Over time this process of erosion and deposition causes the meander to migrate across the valley floor.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Shows a clear understanding of how meanders are formed.</li> <li>• A03 Demonstrates application of knowledge and understanding to make a full interpretation of the photograph, suggesting how meanders are formed.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Shows a limited understanding of how meanders are formed.</li> <li>• A03 Demonstrates application of knowledge and understanding to make limited interpretation of the photograph, suggesting possible reasons for the formation of meanders.</li> <li>• 0 marks: No relevant content.</li> </ul>	4
4.3	<p>Any <b>two</b> from:</p> <ul style="list-style-type: none"> <li>• Precipitation: heavy rainfall can lead to flash flooding, or a long period of rain can lead to flooding.</li> <li>• Geology: impermeable rock increases surface run-off, which increases the rate at which water reaches a river.</li> <li>• Saturated soil: waterlogged soil doesn't allow water to infiltrate it.</li> <li>• Deforestation: this decreases the amount of interception so rainfall can get to rivers more quickly.</li> <li>• Urbanisation: increased impermeable surfaces increase the speed at which water reaches rivers.</li> </ul>	4
4.4	<p>The answer given will depend on the case study/example in the UK studied by the candidate. To achieve level 2 or higher, this must be stated, e.g. the Jubilee River at Windsor or River Cherwell at Banbury. The answer may make use of examples of hard and/or soft engineering methods.</p> <p><b>Indicative content</b> Gives a range of costs and benefits including:</p> <p>Costs:</p> <ul style="list-style-type: none"> <li>• (Potential) flooding elsewhere downstream.</li> <li>• Potential flooding behind the dam upstream.</li> <li>• High expense of constructing the scheme.</li> <li>• High expense of maintaining the scheme.</li> <li>• Natural habitats damaged in creation of the scheme.</li> </ul> <p>Benefits:</p> <ul style="list-style-type: none"> <li>• Increase in biodiversity along the river.</li> <li>• Lower risks of flooding in surrounding areas.</li> <li>• Homes and businesses protected.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a thorough application of knowledge and understanding to give detailed explanations of a flood management scheme.</li> <li>• A03 Shows a full understanding of the costs and benefits of a flood management scheme.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates specific and accurate knowledge of explanations of a flood management scheme.</li> <li>• A02 Shows clear geographical understanding of the costs and benefits of a flood management scheme.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates some knowledge of a flood management scheme.</li> <li>• A02 Shows limited geographical understanding of the costs and benefits of a flood management scheme. May not give a named example.</li> <li>• 0 marks: No relevant content.</li> </ul>	6
5.1	The landform shown is a pyramidal peak.	1
5.2	C arête	1
5.3	The glacial lake is Red Tarn.	1

5.4	<p>One mark for the economic activity and second for the explanation. Includes any one from a range of economic activities in glacial areas:</p> <ul style="list-style-type: none"> <li>Jobs in farming: upland areas have thin acidic soils due to glaciation so are good for sheep farming, e.g. the Lake District.</li> <li>Jobs in farming: lowland glacial areas have a thick layer of till making it good for arable farming, e.g. East Anglia.</li> <li>Jobs in forestry: coniferous trees cope well with the acidic soils in upland areas, e.g. in Scotland.</li> <li>Jobs in quarrying: upland glaciated areas are often made of hard resistant rock. This is good for being crushed and used for stone in the building industry, e.g. limestone from the Pennine hills.</li> <li>Jobs created by tourism: glacial uplands create stunning scenery. This provides excellent tourist opportunities, e.g. the Lake District where tourists spend approximately £1000 million every year.</li> <li>Jobs created by tourism: glacial uplands can provide skiing opportunities creating jobs, e.g. in hotels, shops and other tertiary services.</li> </ul>	2
5.5	<p><b>Indicative content</b> A range of conflicts needs to be identified with at least two conflicts explained.</p> <ul style="list-style-type: none"> <li>Opportunities for economic development in a glaciated upland area often lead to conflict as people view some development as damaging to the environment.</li> <li>Quarrying can create environmental damage and visual, dust and noise pollution as well as meaning more large vehicles on often small roads.</li> <li>Tourism can cause conflict between farmers and other local residents and visitors over access to land, litter and traffic congestion, etc.</li> <li>Energy production can cause conflicts such as the development of reservoirs or wind turbines creating environmental damage, or flooding of farmland.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows a clear understanding of why conflicts occur in a glaciated upland area.</li> <li>A03 Demonstrates application of knowledge and understanding that is sound with clear interpretation of a range of conflicts. Will use one or more named examples.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows limited understanding of why conflicts occur in a glaciated upland area.</li> <li>A03 Demonstrates application of knowledge. Understanding is limited with basic interpretation of a limited range of conflicts.</li> </ul> <p>0 marks: No relevant content.</p>	4
5.6	<p><b>Indicative content</b> The answer will include an explanation of the range of different erosional processes and link these to the landforms created:</p> <ul style="list-style-type: none"> <li>The weathering process of freeze-thaw, where water repeatedly freezes and thaws in a crack, causing the rock to break away, is responsible for angular rock areas, e.g. scree and scree slopes in the glacial landscape, e.g. at Wastwater in the Lake District.</li> <li>The erosion process of abrasion, where rocks carried in the base of the glacier are dragged along the surface beneath the glacier. These scour and scratch the rock under the glacier to leave a smooth surface.</li> <li>Abrasion may also cause striations. These are large scratches left in the bedrock, showing where large boulders were dragged along by the glacier.</li> <li>The erosion process of plucking is where the meltwater under the glacier freezes and bonds to the rocky surface. As the glacier moves, it 'plucks' away pieces of rock and leaves a jagged surface behind.</li> <li>The processes of plucking, abrasion and freeze-thaw weathering can combine to form U-shaped valleys with truncated spurs, arêtes, corries and pyramidal peaks. Corries form in hollows on the sides of mountains where the snow compresses to ice and begins eroding as it moves. Arêtes form when two corries are back-to-back. Pyramidal peaks occur when three or more corries have formed on three or more sides of a mountain and weathering and erosion creates a sharp peak, e.g. the Matterhorn on the border between Switzerland and Italy.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Demonstrates a thorough application of knowledge and understanding to give detailed explanations of how erosion creates glacial landforms.</li> <li>A03 Shows a full understanding of the interrelationships between glacial upland areas and erosional processes.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates specific and accurate knowledge of how erosion creates glacial landforms.</li> <li>A02 Shows a clear geographical understanding of the interrelationships between glacial upland areas and erosional processes.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates some knowledge of erosional processes. Alternatively, may be descriptive about landform appearance and structure.</li> <li>A02 Shows limited geographical understanding of the interrelationships between glacial upland areas and erosional processes.</li> </ul> <p>0 marks: No relevant content.</p>	6

Paper 2 Section A: Urban issues and challenges		
Question	Marking guidance	Total marks
1.1	<b>B and C</b>	2
1.2	<p>One mark for describing the general pattern. Second mark for the use of named places or data, such as:</p> <ul style="list-style-type: none"> <li>Developed countries have the highest percentage of urban population.</li> <li>Africa has the lowest percentage of urban population.</li> <li>The USA and Western Europe have urban populations of over 80%.</li> <li>Most of Asia has an urban population of 40%–59%.</li> </ul>	2
1.3	<ul style="list-style-type: none"> <li>There are higher rates of rural to urban migration in developing countries.</li> <li>There are higher rates of natural increase due to higher birth rates in cities in the LICs and NEEs.</li> </ul>	2
1.4	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Growth of squatter settlements on the edges of cities.</li> <li>Rapid increase in population, creating demand for housing and services.</li> <li>Problems created in squatter settlements such as poor quality housing, poor sanitation, open sewers, lack of water and electricity.</li> <li>Increase in informal sector jobs with low pay and lack of workers' rights.</li> <li>Pressure on employment in city with high rates of unemployment or increase in sweatshops.</li> <li>May include some of the social and economic benefits of rapid population growth, such as – strong young workforce can drive the economy, increase in TNC factories' providing demand for workers, improvements in education and access to health care better than in rural areas.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Demonstrates a thorough application of knowledge and understanding to give detailed explanations of social and economic effects on a named city.</li> <li>A03 Shows a full understanding of social and economic effects. Will give some explanation of challenges and benefits created by rapid growth and offer a conclusion.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Demonstrates specific and accurate knowledge of social and economic effects of rapid population growth.</li> <li>A03 Shows a clear geographical understanding of both social and economic effects, but may be more focused on one. May recognise the benefits also created.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates some knowledge of the effects of rapid population growth in cities.</li> <li>A02 Shows limited geographical understanding of the different social or economic effects. Likely to be more negative than positive.</li> </ul> <p>0 marks: No relevant content.</p>	6

1.5	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Richmond upon Thames has a higher quality of life and a lower level of deprivation than Newham.</li> <li>On average, people in Richmond upon Thames live to 83, compared to 77 in Newham. This indicates differences in health and lifestyle between Richmond and Newham.</li> <li>A higher percentage of pupils get 5 A*–C grades at GCSE in Richmond at 70% compared to 57% in Newham. This may be due to the quality of the schools and/or the differences in attitudes to education of the young people in the two areas. The figures could indicate more investment in education and schools in Richmond upon Thames.</li> <li>People in Richmond upon Thames earn on average nearly twice the salary of people in Newham. This could be linked to higher levels of education received in Richmond upon Thames. More people in Richmond upon Thames are employed in professional positions having been to university.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows clear understanding of differences between the two boroughs.</li> <li>A03 The application is sound with clear interpretation of evidence in the table.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows limited understanding of differences between the two boroughs.</li> <li>A03 The application is limited with basic interpretation of evidence in the table.</li> </ul> <p>0 marks: No relevant content.</p>	4
1.6	<p>Any <b>two</b> strategies from:</p> <ul style="list-style-type: none"> <li>Integrated transport network linking all different transport methods together.</li> <li>Use of ticket systems like the Oyster card to make travel easier and cheaper.</li> <li>Developing use of cycle lanes to encourage more cycling.</li> <li>Use of bus lanes to speed up bus travel and more frequent public transport services.</li> <li>Sustainable bus services – electric buses.</li> <li>Electric car charging points.</li> <li>Congestion Charge in London.</li> <li>Ring roads to take traffic around city centres.</li> <li>Park-and-ride schemes to avoid excess traffic in the city centre.</li> </ul>	2
1.7	<p>Indicative content will vary depending on the case study used. Candidate must use a named example to access higher levels.</p> <p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Reduce water consumption by collecting rainwater and recycling it.</li> <li>Financial incentives to use less water.</li> <li>Greater use of water meters.</li> <li>More green spaces and roofs and pavements that allow water to soak into the ground.</li> <li>Reduce use of fossil fuels by making homes and businesses more fuel efficient.</li> <li>Increase use of renewable energy by use of solar panels and wind turbines to generate electricity for homes and businesses.</li> <li>Use energy-efficient technology and appliances.</li> <li>Recycle more plastics and paper products to allow for less consumption of products.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Demonstrates a thorough application of knowledge and understanding to give a wide range of ways cities can reduce use of resources to be more sustainable.</li> <li>A03 Shows a full understanding of a variety of strategies and gives a named example. Will clearly show the social and environmental benefits of such strategies.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Demonstrates specific and accurate knowledge of and explains two or more ways a city can reduce its use of resources to be more sustainable.</li> <li>A03 Shows a clear geographical understanding of strategies used and gives a named example. Will show some social and environmental benefits of such strategies.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates some knowledge of how a city can reduce its use of resources to be more sustainable.</li> <li>A02 Shows limited geographical understanding of the environmental benefits of such strategies and may not give a suitable example.</li> </ul> <p>0 marks: No relevant content.</p>	6

1.8	<p>Indicative content will vary depending on the case study used. Candidate must use a named example to access higher levels. Candidate must reach a conclusion through their evaluation.</p> <p><b>Indicative content</b>                  Example such as Olympic regeneration at Newham.                  Successes of the scheme, such as:</p> <ul style="list-style-type: none"> <li>• Created open spaces and parkland.</li> <li>• Created 10 000 new jobs.</li> <li>• Created 3000 new homes including affordable housing.</li> <li>• Facilities from Olympics are now being used by local community.</li> <li>• The set up of a media centre created 5000 new jobs.</li> <li>• Cleaned up a polluted and derelict area.</li> </ul> <p>Problems with the scheme, such as:</p> <ul style="list-style-type: none"> <li>• Not all housing affordable for local communities.</li> <li>• Still high unemployment for local unskilled workers.</li> <li>• Local people forced out of homes and businesses for the development.</li> <li>• The scheme was very expensive and is still being paid for by Londoners by council tax rises.</li> </ul> <p><b>Level 3 (Detailed) 7–9 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a thorough application of knowledge and understanding of a regeneration scheme to evaluate its effectiveness.</li> <li>• A03 Shows a full understanding of a named example with detailed content. Able to evaluate the successes and problems of the scheme and offer conclusions.</li> </ul> <p><b>Level 2 (Clear) 4–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Demonstrates specific and accurate knowledge of a regeneration scheme.</li> <li>• A03 Shows a clear geographical understanding of a named example. Able to evaluate the success of scheme giving some successes and problems.</li> </ul> <p><b>Level 1 (Basic) 1–3 marks:</b></p> <ul style="list-style-type: none"> <li>• A01 Demonstrates some knowledge of a regeneration scheme.</li> <li>• A02 Shows a limited geographical understanding of how successful the scheme has been and may not give a suitable example.</li> </ul> <p>0 marks: No relevant content.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="background-color: #e0e0e0;">Spelling, punctuation and grammar (SPaG)</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;"><b>High performance</b></td> <td style="width: 15%; text-align: center;">3 marks</td> <td> <ul style="list-style-type: none"> <li>• Answers spelled and punctuated with consistent accuracy.</li> <li>• Answers use rules of grammar with effective control of meaning overall.</li> <li>• Answers use a wide range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Intermediate performance</b></td> <td style="text-align: center;">2 marks</td> <td> <ul style="list-style-type: none"> <li>• Answers spelled and punctuated with considerable accuracy.</li> <li>• Answers use rules of grammar with general control of meaning overall.</li> <li>• Answers use a good range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Threshold performance</b></td> <td style="text-align: center;">1 mark</td> <td> <ul style="list-style-type: none"> <li>• Answers spelled and punctuated with reasonable accuracy.</li> <li>• Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Answers use a limited range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Below threshold performance</b></td> <td style="text-align: center;">0 marks</td> <td> <ul style="list-style-type: none"> <li>• Nothing is written.</li> <li>• The answer does not relate to the question.</li> <li>• The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul> </td> </tr> </tbody> </table>	Spelling, punctuation and grammar (SPaG)			<b>High performance</b>	3 marks	<ul style="list-style-type: none"> <li>• Answers spelled and punctuated with consistent accuracy.</li> <li>• Answers use rules of grammar with effective control of meaning overall.</li> <li>• Answers use a wide range of specialist terms as appropriate.</li> </ul>	<b>Intermediate performance</b>	2 marks	<ul style="list-style-type: none"> <li>• Answers spelled and punctuated with considerable accuracy.</li> <li>• Answers use rules of grammar with general control of meaning overall.</li> <li>• Answers use a good range of specialist terms as appropriate.</li> </ul>	<b>Threshold performance</b>	1 mark	<ul style="list-style-type: none"> <li>• Answers spelled and punctuated with reasonable accuracy.</li> <li>• Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Answers use a limited range of specialist terms as appropriate.</li> </ul>	<b>Below threshold performance</b>	0 marks	<ul style="list-style-type: none"> <li>• Nothing is written.</li> <li>• The answer does not relate to the question.</li> <li>• The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>	9+3 SPaG
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Paper 2 Section B: The changing economic world		
Question	Marking guidance	Total marks
2.1	<p>Responses should focus on the differences (or similarities) between Europe and South-East Asia in respect of life expectancies. There must be a comparison. Expect statements backed by data from the map.</p> <ul style="list-style-type: none"> <li>• Life expectancy is generally higher in Europe than South-East Asia.</li> <li>• Many countries in Europe have life expectancies of more than 77 years, while in South-East Asia they are mostly between 62.8 and 77 years.</li> <li>• Europe has a west-east divide (longer life expectancy in west) while South-East Asia has a north/centre-south/periphery divide (life expectancy is longer in the north/centre).</li> </ul> <p>No credit for statements about other parts of the world. Credit reference to countries within Europe and South-East Asia.</p>	2
2.2	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Responses must make (negative) links between infant mortality rate levels and quality of life. Candidates must only use example countries from the scatter graph.</li> <li>• HICs tend to have low infant mortality rates because they have better living conditions, including better levels of hygiene, which mean that babies are not affected as much by disease. LICs have high infant mortality rates, partly because hygiene levels are lower, due to lack of understanding and infrastructure, such as access to clean water and medical supplies, and so the quality of life is lower.</li> <li>• HICs have lower infant mortality rates because money is spent on health care systems, which ensure that more babies are born healthy and medicines are available if they get ill. LICs have less money available for health care and medicines and so babies have fewer advantages due to the lower quality of life.</li> <li>• Education levels are higher in HICs than LICs and therefore parents understand basic health care and the need for clean water and hygiene better in HICs, this lowers the infant mortality rate.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Shows a sound understanding of infant mortality rates and quality of life.</li> <li>• A03 Demonstrates a sound application of knowledge and understanding in interpreting how infant mortality rates can be used to show differences in quality of life.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Shows limited understanding of infant mortality rates and quality of life.</li> <li>• A03 Demonstrates a limited application of knowledge and understanding in interpreting how infant mortality rates can be used to show differences in quality of life.</li> </ul> <p>0 marks: No relevant content.</p>	4

2.3	<p>Credit <b>one</b> measure only; do not accept infant mortality rate but any other measure linked to quality of life (a broad selection such as education levels, life expectancy, happiness, freedom, gender equality, number of doctors, wealth, food supply, safe water, housing conditions, sanitation system). Responses depend on the measure chosen – the example below is for the adult literacy rate.</p> <p>One mark for a basic statement, such as:</p> <ul style="list-style-type: none"> <li>Higher adult literacy rates mean that more people can read and write.</li> <li>Higher adult literacy rates help people to understand things.</li> </ul> <p>Second mark for a developed idea, such as:</p> <ul style="list-style-type: none"> <li>High adult literacy rates show that more people have been to school, so the education system is good, this allows people to find better-paid jobs to improve their lives.</li> <li>Where the education system provides school places, people are able to read and understand information about things such as birth control and hygiene so that they can improve the quality of their lives with fewer children and better health.</li> </ul>	2
2.4	<p>One mark for correct answer.</p> <p>Any one of: North America, Australasia (Oceania), Europe or Asia.</p> <p>Do not accept country names – question asks for 'continent' not country.</p>	1
2.5	<p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>The question focuses on emigration so responses must explain why the migration patterns are different; for example, recognise that the UK is an HIC and Nigeria an LIC/NEE; suggest the push and pull factors that are present and consider other factors such as transport, language and government migration policies.</li> <li>Emigration from the UK is mostly to other developed continents and countries, some long-distance such as to Australia and the USA and some short-distance such as to Spain and France. Richer people can afford the costs of long-distance travel.</li> <li>Emigration from Nigeria is split by shorter distance moves to other African countries, or long-distance to the USA, the UK or Germany. Poorer people are less able to afford long-distance travel.</li> <li>Many people from the UK go to other parts of Europe, while many people from Nigeria go to other parts of Africa. The UK currently has freedom of movement within the EU, Nigeria has close links with neighbouring countries.</li> <li>UK emigration includes to English-speaking former colonies such as Australia and Canada. Nigeria, as a former colonial nation, has links to the UK, encouraging migration to the UK.</li> <li>Nigerians emigrate to top economic nations such as the USA and Germany to get better paid jobs, while UK emigrants emigrate to Europe for retirement.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows sound understanding of reasons for differences in patterns of migration.</li> <li>A03 Demonstrates a sound application of knowledge and understanding in interpreting why patterns of migration are different.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows limited understanding of the reasons for differences in patterns of migration.</li> <li>A03 Demonstrates a limited application of knowledge and understanding in interpreting why patterns of migration are different.</li> </ul> <p>0 marks: No relevant content.</p>	4
2.6	<p><b>Two</b> reasons should be given, such as:</p> <ul style="list-style-type: none"> <li>Jobs and industries may be concentrated in a few core areas and not in the periphery, which remains agricultural with relatively low incomes.</li> <li>Government may invest only in certain key areas and not others, so wages and incomes are different.</li> <li>Education and other services may not exist in some areas, so people are unable to help themselves by finding better-paid jobs, while in other areas these exist and help people.</li> <li>Resources may be available in some areas to provide jobs and income but not in other areas.</li> </ul> <p>No credit for vague statements, such as: core-periphery divide, government money, better education.</p>	2
2.7	<p><b>One</b> comparison point (similarity or difference) should be given, such as:</p> <ul style="list-style-type: none"> <li>Primary employment declined 22% to 4% between 1851 and 1961, while tertiary employment grew from 34% to 54%.</li> <li>Primary employment declined by 18% between 1851 and 1961 while tertiary employment grew by 20%.</li> </ul>	1
2.8	<p>One mark for correct calculation:</p> <p>Primary = 1%, Quaternary = 12%. <math>12 - 1 = 11\%</math> difference</p>	1
2.9	<p>Credit <b>one</b> way only.</p> <p>One mark for stating one way globalisation has helped increase the tertiary sector in UK, such as:</p> <ul style="list-style-type: none"> <li>Globalisation has linked more service businesses together.</li> <li>Globalisation has increased financial business around the world.</li> </ul> <p>Second mark for the development of the idea, such as:</p> <ul style="list-style-type: none"> <li>Instant communications via mobile technologies and the internet have enabled UK service businesses to make links and sell all around the world, so more jobs are created.</li> <li>The global spread of 'western' culture and the desire to become wealthier has helped UK financial services to develop global businesses that have created jobs, especially in London.</li> </ul> <p>No credit for a second way. Must stick to tertiary (services).</p>	2
2.10	<p>Credit <b>one</b> problem only.</p> <p>One mark for stating a problem, such as:</p> <ul style="list-style-type: none"> <li>High unemployment.</li> <li>Closure of lots of factories.</li> </ul> <p>Second mark for development of the problem, such as:</p> <ul style="list-style-type: none"> <li>Workers were left unemployed by the closure of secondary industries and factories. This left them with no money for themselves or their families.</li> <li>As factories closed they became derelict with lots of vacant land that was unsightly and often contaminated.</li> <li>With the closure of secondary industries, the UK produced fewer goods for export, this reduced the amount of wealth coming into the country.</li> </ul> <p>No credit for more than one problem. Problem must be linked to deindustrialisation.</p>	2



2.11	<p>The question requires candidates to make a judgement on whether technology has helped to achieve a balance or not and this should be clearly stated.</p> <p><b>Indicative content</b>                  The answer must focus on the UK. The specific example in the accompanying AQA GCSE Geography Revision Guide is Torr Quarry in Somerset. The question requires consideration of the extent to which industrial activity can be environmentally sustainable and this theme should be present throughout the answer.</p> <ul style="list-style-type: none"> <li>Industrial activity has the potential to damage the environment through land, air and water pollution and removal of natural areas (ecosystems). Examples would include carbon dioxide emissions from coal-fired power stations, chemical spills from factories and ships into rivers, and scars in the landscape from mining and quarrying activity.</li> <li>However, environmental laws help to prevent and reduce pollution, such as monitoring carbon dioxide emission levels and water quality, and large fines to punish polluters.</li> <li>More and more green technologies are being invented to make machinery more efficient and less polluting, as well as a group of technologies to help clean up the environment.</li> <li>For example, Torr Quarry has created a scar in the Somerset landscape, removed natural vegetation and changed run-off patterns in a 2.5 km<sup>2</sup> area. However, once it has finished operating, the area can be made more sustainable again through restoration, which will involve re-landscaping with rock formations and a lake, planting new woodland and grassland areas, and keeping the local railway link to encourage commuters to use it instead of their cars – so reducing air pollution.</li> </ul> <p><b>Level 3 (Detailed) 7–9 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates a comprehensive and accurate knowledge of locations, places and processes in relation to industrial activity and environmental sustainability in the UK.</li> <li>A02 Shows a thorough geographical understanding of the interrelationships between industrial activity and environmental sustainability in the UK.</li> <li>A03 Demonstrates a thorough application of knowledge and understanding in evaluating the extent to which industrial activity can be made environmentally sustainable in the UK.</li> </ul> <p><b>Level 2 (Clear) 4–6 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates a clear knowledge of locations, places and processes in relation to industrial activity and environmental sustainability in the UK.</li> <li>A02 Shows some geographical understanding of the interrelationships between industrial activity and environmental sustainability in the UK.</li> <li>A03 Demonstrates a reasonable application of knowledge and understanding in evaluating the extent to which industrial activity can be made environmentally sustainable in the UK.</li> </ul> <p><b>Level 1 (Basic) 1–3 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates basic knowledge of locations, places and processes in relation to industrial activity and environmental sustainability in the UK.</li> <li>A02 Shows slight geographical understanding of the interrelationships between industrial activity and environmental sustainability in the UK.</li> <li>A03 Demonstrates a limited application of knowledge and understanding in evaluating the extent to which industrial activity can be made environmentally sustainable in the UK.</li> </ul> <p>0 marks: No relevant content.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="background-color: #e0e0e0;">Spelling, punctuation and grammar (SPaG)</th> </tr> </thead> <tbody> <tr> <td style="width: 25%;"><b>High performance</b></td> <td style="width: 15%; text-align: center;">3 marks</td> <td style="width: 60%;"> <ul style="list-style-type: none"> <li>Answers spelled and punctuated with consistent accuracy.</li> <li>Answers use rules of grammar with effective control of meaning overall.</li> <li>Answers use a wide range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Intermediate performance</b></td> <td style="text-align: center;">2 marks</td> <td> <ul style="list-style-type: none"> <li>Answers spelled and punctuated with considerable accuracy.</li> <li>Answers use rules of grammar with general control of meaning overall.</li> <li>Answers use a good range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Threshold performance</b></td> <td style="text-align: center;">1 mark</td> <td> <ul style="list-style-type: none"> <li>Answers spelled and punctuated with reasonable accuracy.</li> <li>Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>Answers use a limited range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Below threshold performance</b></td> <td style="text-align: center;">0 marks</td> <td> <ul style="list-style-type: none"> <li>Nothing is written.</li> <li>The answer does not relate to the question.</li> <li>The answer SPaG does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul> </td> </tr> </tbody> </table>	Spelling, punctuation and grammar (SPaG)			<b>High performance</b>	3 marks	<ul style="list-style-type: none"> <li>Answers spelled and punctuated with consistent accuracy.</li> <li>Answers use rules of grammar with effective control of meaning overall.</li> <li>Answers use a wide range of specialist terms as appropriate.</li> </ul>	<b>Intermediate performance</b>	2 marks	<ul style="list-style-type: none"> <li>Answers spelled and punctuated with considerable accuracy.</li> <li>Answers use rules of grammar with general control of meaning overall.</li> <li>Answers use a good range of specialist terms as appropriate.</li> </ul>	<b>Threshold performance</b>	1 mark	<ul style="list-style-type: none"> <li>Answers spelled and punctuated with reasonable accuracy.</li> <li>Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>Answers use a limited range of specialist terms as appropriate.</li> </ul>	<b>Below threshold performance</b>	0 marks	<ul style="list-style-type: none"> <li>Nothing is written.</li> <li>The answer does not relate to the question.</li> <li>The answer SPaG does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>	9+3 SPaG
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Paper 2 Section C: The challenge of resource management		
Question	Marking guidance	Total marks
3.1	1 billion minus 805 million = <b>195 million</b> people. One mark for correct answer.	1
3.2	Must be a description of distribution. Credit observations based on the map. Reference to names of world regions is expected. One mark for basic description of distribution shown on map, such as: <ul style="list-style-type: none"> <li>Most undernourishment is in Southern Asia.</li> <li>There is no major undernourishment in North America.</li> </ul> Second mark for developed point using detail from the map, such as: <ul style="list-style-type: none"> <li>LIC/NEE world regions have the majority of undernourishment, with both Southern Asia and sub-Saharan Africa with over 200 million people undernourished. Eastern Asia also has a significant number but the figures in all other areas are much lower.</li> <li>All world regions not named, such as North and South America, Europe and Asia have 117 million between them and even the LIC/NEE region of Latin America and the Caribbean has only 37 million undernourished people.</li> </ul>	2

3.3	<p>An understanding of nutrition should be indicated in the answer. Responses should focus on why investment in nutrition (balanced diet) may offer better development opportunities. The multiplier effect may be considered.</p> <p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Expect some development of links between strategies to improve nutrition, the economic sector and quality of life. Strategies mentioned may include irrigation, GM crops, biotechnology, use of intermediate technology, reducing food waste and loss.</li> <li>Undernutrition or malnutrition is a result of an unbalanced diet so that the human body does not have enough vitamins and minerals to stay healthy and fight off disease and illness.</li> <li>Better nutrition produces healthier people and therefore stronger workers that can contribute more to an economy, so producing more or better goods for sale, which brings in money. Improved nutrition may be one way of starting a multiplier effect, and as they get wealthier, people can afford to buy a wider variety of foods, which further improves nutrition and health.</li> <li>Better nutrition makes children healthier and allows them to develop physically and mentally. This makes them more intelligent and stronger so that they can improve their own lives by understanding, for example, the benefits of birth control, clean water, hygiene and improved farming methods. These things improve the quality of their lives and so bring about development.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Demonstrates in detail why investment in nutrition increases the development of countries.</li> <li>A03 Applies detailed knowledge and understanding of nutrition strategies to the development of countries.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows a sound understanding of nutrition and development of countries.</li> <li>A03 Applies some detailed knowledge and understanding of nutrition strategies to the development of countries.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows a simple understanding of nutrition and development of countries.</li> <li>A03 Applies limited knowledge and understanding of nutrition strategies.</li> </ul> <p>0 marks: No relevant content.</p>	6
3.4	One mark for correct drawing of bar on graph. Correct shading not necessary to gain mark. 2011 = 33% natural gas.	1
3.5	One mark for correct answer. A = 3.5%	1
3.6	<p>Responses must make use of Figure 10 in order to help explain the increase in renewable energy sources in the UK. Candidates should apply their knowledge and understanding when using the graph.</p> <ul style="list-style-type: none"> <li>In the 9 years shown (2007 to 2015) the amount of electricity generation from renewables has increased from about 20 TWh to over 80 TWh. It has quadrupled.</li> <li>The biggest increase in electricity generation from renewables has been in wind energy (onshore and offshore), hydro has remained the same, bioenergy has increased steadily, and solar energy has increased a lot recently.</li> <li>Wind energy has increased because of investment and encouragement by the government, and the development of the turbine technology and the engineering ability to place wind turbines offshore.</li> <li>Fossil fuel power stations have been converted to use bioenergy as part of a policy to cut back on coal use due to international, EU and national targets for reducing carbon dioxide emissions.</li> <li>The quadrupling of renewable electricity is part of the government environmental strategy to reduce carbon dioxide emissions and achieve energy security and sustainability in the future as fossil fuels will run out.</li> </ul> <p>No credit for just describing the graph. The graph must be used to gain full marks.</p>	3
<b>Food</b>		
4.1	One mark for correct answer. C 7.2 billion euros	1
4.2	<p>Must be a description of the pattern of exports. Credit observations based on the map. References to the names of countries is expected.</p> <p>One mark for basic description of pattern shown on map, such as:</p> <ul style="list-style-type: none"> <li>Most exports go to the USA.</li> <li>Lots of exports go eastwards to East Asia.</li> </ul> <p>Second mark for developed point using detail from the map, such as:</p> <ul style="list-style-type: none"> <li>Food exports are largest to the USA (over 15 billion euros) while other significant flows are to China (7 billion euros) and Russia (9 billion euros).</li> <li>The food exports are all to northern hemisphere countries and are mostly HICs or NEEs. Algeria is the exception with just under 4 billion euros of exports.</li> </ul>	2
4.3	<p><b>Two</b> reasons should be given, such as:</p> <ul style="list-style-type: none"> <li>Permaculture aims to be self-sufficient, so does not require outside inputs. It can keep itself going without artificial assistance, which would damage soils, for example.</li> <li>It uses natural systems such as pollination by bees and natural predators to control pests, and so does not damage the ecosystem, keeping things as they are for the future.</li> <li>It uses renewable materials in all aspects, including natural building materials, which can be regrown or replaced.</li> </ul> <p>No credit for vague statements, such as: eco-friendly, uses nature, recycles.</p>	2
4.4	<p>An understanding of large-scale agricultural developments should be indicated in the answer.</p> <p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>Responses should focus on how large-scale agricultural developments can be successful in reducing food insecurity (ensuring that there is no deficit in food supplies).</li> <li>Expect some development of at least one example of a large-scale agricultural development that has been successful in reducing food insecurity (in the accompanying AQA GCSE Geography Revision Guide the example is the Indus Basin Irrigation System).</li> <li>Irrigation water from the Indus River goes to 14 million hectares of farmland increasing the crop yields and providing more food for India and Pakistan.</li> <li>A wider range of crops can be grown because the growing conditions have been improved, so fruits are now available to improve people's diets. The reservoirs have also been stocked with fish, which provides another food source of protein.</li> <li>Higher yields create surpluses that can be sold. This provides income for farmers to be able to buy foods if there are shortages or a wider variety of foods to achieve a balanced diet.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A02 Shows a thorough understanding of large-scale agricultural developments.</li> <li>A02 Demonstrates in detail how large-scale agricultural developments can reduce food insecurity.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates a specific and accurate knowledge of large-scale agricultural developments.</li> <li>A02 Shows sound understanding of how large-scale agricultural developments can reduce food insecurity.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A01 Demonstrates a limited knowledge of large-scale agricultural developments.</li> <li>A02 Shows simple understanding of how large-scale agricultural developments can reduce food insecurity.</li> </ul> <p>0 marks: No relevant content.</p>	6

Water		
5.1	One mark for correct answer. <b>B</b> Medium to high stress.	1
5.2	The answer must be a description of distribution of water stress in South America. Credit observations based on the map. Reference to names of countries not expected. One mark for basic description of distribution shown on map, such as: <ul style="list-style-type: none"> <li>• Most countries have low stress levels.</li> <li>• There is a west to east difference in water stress.</li> </ul> Second mark for developed point using detail from the map, such as: <ul style="list-style-type: none"> <li>• Six countries have low water stress levels; these are mostly in the centre and east of South America.</li> <li>• The countries in the centre and east have a lower water stress than those on the west coast, where two countries have high water stress levels.</li> </ul>	2
5.3	<b>Two</b> natural factors should be given, such as: <ul style="list-style-type: none"> <li>• Climate – different climates have differing amounts of precipitation, e.g. a desert country such as Libya.</li> <li>• Water supply can be reduced in areas with high evaporation rates due to high temperatures.</li> <li>• Geology – the type of rock determines how much groundwater there is; a permeable or porous rock is able to store water which people can get at through wells, but it may reduce the number of rivers on the surface.</li> </ul>	2
5.4	An understanding of large-scale water transfer schemes should be indicated in the answer. These involve diverting water from one place to another, especially from one river basin to another. <b>Indicative content</b> Responses should focus on how large-scale water transfer schemes can be successful in reducing water insecurity (ensuring that there is no deficit in water supplies). Expect some development of at least one example of a large-scale water transfer scheme that has been successful or has the potential to reduce water insecurity (in the accompanying AQA GCSE Geography Revision Guide, this example is the south to north water transfer scheme in China). <ul style="list-style-type: none"> <li>• Southern China has more water available than the drier north-east of the country. There is water insecurity in the north-east where demand is high from urban areas, industries and farming.</li> <li>• The scheme involves transferring water (around 45 billion m<sup>3</sup>) from the Yangtze river basin northwards to the Huang He river basin. This quantity of water will supply the extra water needed by the cities (e.g. Beijing) and industries of the north-east allowing people to have what they need in order to live and to support the economic development of China.</li> </ul> <b>Level 3 (Detailed) 5–6 marks:</b> <ul style="list-style-type: none"> <li>• A02 Shows a thorough understanding of large-scale water transfer schemes.</li> <li>• A02 Demonstrates in detail how large-scale water transfer schemes can reduce water insecurity.</li> </ul> <b>Level 2 (Clear) 3–4 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates specific and accurate knowledge of large-scale water transfer schemes.</li> <li>• A02 Shows a sound understanding of how large-scale water transfer schemes can reduce water insecurity.</li> </ul> <b>Level 1 (Basic) 1–2 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates a limited knowledge of large-scale water transfer schemes.</li> <li>• A02 Shows a simple understanding of how large-scale water transfer schemes can reduce water insecurity.</li> </ul> 0 marks: No relevant content.	6
Energy		
6.1	One mark for correct answer. <b>B</b> 2.1 to 5%	1
6.2	Must be a description of distribution of wind and solar energy production in South America. Credit observations based on the map. Reference to names of countries not expected. One mark for a basic description of the pattern shown on the map, such as: <ul style="list-style-type: none"> <li>• Most countries have low production.</li> </ul> Second mark for developed point using detail from the map, such as: <ul style="list-style-type: none"> <li>• One country (Brazil) has a production between 2.1 and 5%, while most other countries are below 1%.</li> <li>• One country on the west coast (Chile) has a production between 1.1 and 2%, three countries are below 1%. Only one country is higher (Brazil 2.1 to 5%).</li> </ul>	2
6.3	<b>Two</b> reasons should be given, such as: <ul style="list-style-type: none"> <li>• Wind energy is sustainable because it is a free source of electricity that uses a renewable source.</li> <li>• Micro-wind turbines can be used on individual buildings to generate electricity without large costs and avoid the need to use polluting fossil fuels.</li> </ul> One mark for sentences such as: <ul style="list-style-type: none"> <li>• Wind energy is a renewable source of energy so is sustainable.</li> <li>• Wind energy is a renewable source of energy so is sustainable and avoids polluting the environment.</li> </ul> No credit for vague statements, such as: renewable energy, avoids pollution.	2
6.4	An understanding of large-scale fossil fuel extraction should be indicated in the answer. <b>Indicative content</b> Responses should focus on how large-scale fossil fuel extraction can be successful in reducing energy insecurity (ensuring that there is no deficit in energy supplies). Expect some development of at least one example of large-scale fossil fuel extraction that has been successful in reducing energy insecurity (in the accompanying AQA GCSE Geography Revision Guide the example is the Camisea natural gas reserves in the Peruvian Amazonia area). <ul style="list-style-type: none"> <li>• Estimated 385 billion m<sup>3</sup> of natural gas providing supplies that will last to about 2034. Therefore Peru has a valuable energy resource that has provided energy security since 2004, including income from exports. These reserves supply 95% of Peru's needs.</li> <li>• Pipelines supply natural gas to cities such as the capital Lima, where it is used to produce electricity, to the gas processing plant at Cusco and copper mines in the south of the country.</li> <li>• It is a cheap source of energy saving Peruvians about US\$1.4 billion a year, and exports will add a total of US\$34 billion to the economy.</li> </ul> <b>Level 3 (Detailed) 5–6 marks:</b> <ul style="list-style-type: none"> <li>• A02 Shows a thorough understanding of large-scale fossil fuel extraction.</li> <li>• A02 Demonstrates in detail how large-scale fossil fuel extraction developments can reduce energy insecurity.</li> </ul> <b>Level 2 (Clear) 3–4 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates specific and accurate knowledge of large-scale fossil fuel extraction.</li> <li>• A02 Shows a sound understanding of how large-scale fossil fuel extraction can reduce energy insecurity.</li> </ul> <b>Level 1 (Basic) 1–2 marks:</b> <ul style="list-style-type: none"> <li>• A01 Demonstrates limited knowledge of large-scale fossil fuel extraction.</li> <li>• A02 Shows a simple understanding of how large-scale fossil fuel extraction can reduce energy insecurity.</li> </ul> 0 marks: No relevant content.	6

Paper 3 Section A Issue evaluation		
Question	Marking guidance	Total marks
1.1	One mark for the correct answer: Bar added with height marked correctly in place (2000 = 1006) with neat lines. Shading not needed.	1
1.2	One mark for the correct answer: <b>D</b> The continent of Africa had no country with over 50.35 million passengers.	1
1.3	Responses should show some understanding or an implied understanding of how high volumes of air traffic bring benefits. <b>Indicative content</b> The benefits should be substantiated with evidence and examples, such as: <ul style="list-style-type: none"> <li>• Global air links help globalisation of UK businesses.</li> <li>• The UK government earns revenues from APD tax which has increased by £1 billion in recent years.</li> <li>• The increase in freight movements by air helps modern UK industries transport high-value goods.</li> <li>• More tourists visiting the UK and spending money in the UK economy.</li> <li>• 130 million passengers travelling to and from the UK help to support the UK aviation industry and airport-related businesses.</li> </ul> <b>Level 3 (Detailed) 5–6 marks:</b> <ul style="list-style-type: none"> <li>• A03 Demonstrates a detailed application of knowledge and understanding in identifying the benefits of high volumes of air traffic with supporting evidence from Figure 2.</li> <li>• A04 Communicates ideas with clarity.</li> </ul> <b>Level 2 (Clear) 3–4 marks:</b> <ul style="list-style-type: none"> <li>• A02 Demonstrates a sound understanding of how high volumes of air traffic bring benefits.</li> <li>• A03 Demonstrates clear application of knowledge and understanding in identifying the benefits of high volumes of air traffic with supporting evidence from Figure 2.</li> </ul> <b>Level 1 (Basic) 1–2 marks:</b> <ul style="list-style-type: none"> <li>• A02 Demonstrates limited understanding of how high volumes of air traffic bring benefits.</li> <li>• A03 Demonstrates limited application of knowledge and understanding in identifying the benefits of high volumes of air traffic.</li> </ul> 0 marks: No relevant content.	6
2.1	One mark for correct answer: February 2014	1
2.2	There must be an evaluation of the validity of the statement, which could agree or disagree with the statement. The question requires candidates to make appropriate links between content from different areas of the course of study. Responses must use evidence from the resources to establish links between holiday travel and annual patterns. <b>Indicative content</b> <ul style="list-style-type: none"> <li>• Figure 3.3 shows that the number of EU air passengers changes seasonally with low numbers in winter (November to February) and highest numbers in summer (June to September). This pattern corresponds with the school summer holidays in the UK, when passenger numbers are at a peak and the northern hemisphere has a summer climate.</li> <li>• Figure 3.1 shows that holiday passengers dominate Gatwick but not the other airports. Visiting friends and family is the largest proportion of passengers at the other airports. This may reflect the ethnic mix of the UK with visits to countries such as India, Pakistan or Poland; or visiting UK citizens who have retired to Spain or France, for example.</li> <li>• Figure 3.2 shows Spain to be the top country (arrival and destination). Due to its Mediterranean climate, it is a popular holiday destination, along with other countries shown such as Italy, France, Portugal and Greece.</li> <li>• The UK is an HIC and people are relatively wealthy and many can afford to travel by air to go on holiday. There is also a lot of business travel by air, as air transport plays an important role in enabling economic and cultural globalisation.</li> </ul> <b>Level 3 (Detailed) 5–6 marks:</b> <ul style="list-style-type: none"> <li>• A03 Demonstrates application of knowledge and understanding by making full analysis of the resource, deconstructing information and making detailed links between content from different areas of study.</li> <li>• A03 Demonstrates detailed application of knowledge and understanding in evaluating the extent to which holiday air travel influences the annual pattern of air traffic.</li> </ul> <b>Level 2 (Clear) 3–4 marks:</b> <ul style="list-style-type: none"> <li>• A02 Demonstrates clear understanding of how holiday air travel influences the annual pattern of air traffic.</li> <li>• A03 Demonstrates application of knowledge and understanding by making reasonable analysis of the resource, deconstructing information and making clear links between content from different areas of the course of study.</li> </ul> <b>Level 1 (Basic) 1–2 marks:</b> <ul style="list-style-type: none"> <li>• A02 Demonstrates basic understanding of how holiday air travel influences the annual pattern of air traffic.</li> <li>• A03 Demonstrates application of knowledge and understanding by making limited analysis of the resource, deconstructing information and making basic links between content and different areas of the course of study.</li> </ul> 0 marks: No relevant content.	6
3.1	One mark for the correct answer: Plot of 1990 value = 17.0 in correct place and completion of line.	1
3.2	One mark for the correct answer: <b>C</b> 075758 No credit if two or more statements are shaded.	1
3.3	<b>Two</b> reasons should be given with evidence, such as: <ul style="list-style-type: none"> <li>• The airport is easily accessible by motorways that run to London and the north and west of the UK. There is also a railway link which follows the A30 from the east.</li> <li>• The OS map shows an absence of contour lines, so there is plenty of flat land for building long runways and terminal buildings.</li> <li>• There are urban areas nearby, e.g. West Drayton, which can supply workers for the airport.</li> <li>• It is on the edge of the built-up area so there is less disturbance of people, as shown in the west of the OS map.</li> </ul> No credit for vague statements such as: flat land, lots of roads, housing.	2

<p>3.4</p>	<p>Responses should show some understanding or an implied understanding of how patterns of air traffic bring problems. The problems should be substantiated with evidence and relevant examples.</p> <p><b>Indicative content</b> Problems such as:</p> <ul style="list-style-type: none"> <li>• Air pollution from aircraft, such as carbon dioxide, which has an upward trend (Figure 4), predicted to reach nearly 40 million tonnes by 2020. Carbon dioxide and other pollutants affect people's health.</li> <li>• Noise pollution along flightpaths, especially where they are over or nearly over urban areas such as Crawley or West Drayton disturbs people.</li> <li>• Congestion of roads due to traffic movements to and from the airports, e.g. A408, especially lorries involved with deliveries, freight and servicing, which creates difficulties in travelling.</li> <li>• Passenger numbers have rapidly increased since 1991 (Figure 2.2) so that these problems are also likely to have increased, and the peak is still likely to be the summer when there are more passenger movements (Figure 3.3) as people travel on holiday e.g. to Spain</li> <li>• Although air transport movements have decreased as aircraft have got larger – 13% lower than the peak of 2007 - they are beginning to rise again.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a detailed application of knowledge and understanding in identifying the problems experienced by people living near Gatwick and Heathrow airports, using evidence from Figures 4 and 5.</li> <li>• A04 Communicates ideas with clarity.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Demonstrates a sound understanding of how trends in UK air traffic bring problems to people living near Gatwick or Heathrow airports.</li> <li>• A03 Demonstrates clear application of knowledge and understanding in identifying the problems experienced by people living near Gatwick and Heathrow airports, using evidence from Figures 4 and 5.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A02 Demonstrates a limited understanding of how trends in UK air traffic bring problems to people living near Gatwick or Heathrow airports.</li> <li>• A03 Demonstrates a limited application of knowledge and understanding in identifying the problems experienced by people living near Gatwick and Heathrow airports.</li> </ul> <p>0 marks: No relevant content.</p>	<p>6</p>															
<p>3.5</p>	<p>The question requires candidates to make appropriate links between content from different areas of the course of study. Responses also need to use evidence from the resources booklet and their own understanding to justify their decision of the chosen solution.</p> <p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• Decision-making requires a thorough evaluation of the full range of data.</li> <li>• Decision-making requires an evaluation of the locations in relation to the challenges facing the South-East and the UK.</li> <li>• There should be some clear reference to the particular socio-economic and environmental challenges facing expansion of air traffic capacity. Links between these challenges should be clearly expressed and related to the decision.</li> <li>• There should be some recognition of the scales of the benefits and problems facing expansion of air traffic capacity at all three locations separately and overall, including an evaluation of national need compared with local issues.</li> <li>• Key factors for the three locations to be mentioned include: air passenger and freight trends; capacities of London airports; space for expansion; economic costs of building or enlarging; the links that already exist; the future potential to help the South-East and the rest of the UK; accessibility – local, regional, national and international; the ability to limit all forms of pollution; the ability to limit disturbance of local people; international role and importance such as trade and tourism; impacts on natural environment; economic development and trade prospects; urban processes and change.</li> </ul> <p><b>Level 3 (Detailed) 7–9 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a thorough application of knowledge and understanding in evaluating the effectiveness of the chosen location in terms of socio-economic and environmental benefits.</li> <li>• A03 Applies knowledge and understanding to make a decision based on a wide range of supportive evidence, making detailed links between content from different areas of the course of study.</li> <li>• A04 Communicates findings with clarity.</li> </ul> <p><b>Level 2 (Clear) 4–6 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a reasonable application of knowledge and understanding in evaluating the effectiveness of the chosen location in terms of socio-economic and environmental benefits.</li> <li>• A03 Applies knowledge and understanding to make a decision based on a reasonable range of supporting evidence, making clear links between content from different areas of the course of study.</li> <li>• A04 Selects appropriate information in order to support judgement.</li> </ul> <p><b>Level 1 (Basic) 1–3 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates a basic application of knowledge and understanding in evaluating the effectiveness of the chosen location in terms of socio-economic and environmental benefits.</li> <li>• A03 Applies knowledge and understanding to make a decision based on a limited range of supportive evidence, making basic links between content from different areas of the course of study.</li> <li>• A04 Selects information with some links to the judgement.</li> </ul> <p>0 marks: No relevant content.</p> <table border="1" data-bbox="261 1435 1318 1823"> <thead> <tr> <th colspan="3">Spelling, Punctuation and grammar (SPaG)</th> </tr> </thead> <tbody> <tr> <td><b>High performance</b></td> <td>3 marks</td> <td> <ul style="list-style-type: none"> <li>• Answers are spelled and punctuated with consistent accuracy.</li> <li>• Answers use rules of grammar with effective 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Paper 3 Section C: Fieldwork														
Question	Marking guidance	Total marks												
4.1	<p>Possible enquiry questions could be:</p> <ul style="list-style-type: none"> <li>• What are the differences in levels of deprivation between Windsor and Slough?</li> <li>• What are the differences in the quality of the environment between Windsor and Slough?</li> <li>• How and why is there a difference in housing types between Windsor and Slough?</li> <li>• How and why are there differences in the type of employment in Windsor and Slough?</li> </ul>	1												
4.2	There could be a range of answers, but most are likely to focus on the dangers of working near a road and the need to be vigilant for vehicles.	1												
4.3	<p>There could be a range of answers that could focus on reasons such as:</p> <ul style="list-style-type: none"> <li>• Inaccurate measurements taken.</li> <li>• Poor recording of measurements.</li> <li>• Lack of reliability of counting, e.g. five minutes is not long enough and the data may not be representative.</li> </ul>	1												
4.4	<p>One mark for the correct completion of the graph.</p> <table border="1"> <caption>Traffic Count Data</caption> <thead> <tr> <th>Location</th> <th>Slough</th> <th>Windsor</th> </tr> </thead> <tbody> <tr> <td>Location 1</td> <td>95</td> <td>58</td> </tr> <tr> <td>Location 2</td> <td>160</td> <td>18</td> </tr> </tbody> </table>	Location	Slough	Windsor	Location 1	95	58	Location 2	160	18	1			
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4.5	<p><b>Two</b> comparative points must be made:</p> <ul style="list-style-type: none"> <li>• More traffic is recorded at both sites in Slough.</li> <li>• Site 2 in Slough has the highest recorded traffic count, whilst site 4 in Windsor has the lowest recorded traffic count.</li> </ul>	2												
4.6	<p>There could be a number of reasons suggested. Credit is given for one reason and an explanation such as:</p> <ul style="list-style-type: none"> <li>• The traffic count was higher in Slough at both sites as these could have been taken early in the morning when people would be travelling to work, whilst the counts in Windsor could have been taken in late morning when most people would be at work and school.</li> </ul>	2												
4.7	<p><math>8.01 \times 0.17 = 1.36\text{m}^2</math> Units of measurement must be included to gain both marks.</p>	2												
4.8	<p>1 mark awarded for accurate completion of the scatter graph.</p> <table border="1"> <caption>Scatter Graph Data</caption> <thead> <tr> <th>X-axis</th> <th>Y-axis</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.05</td> </tr> <tr> <td>2</td> <td>0.1</td> </tr> <tr> <td>3</td> <td>0.25</td> </tr> <tr> <td>4</td> <td>0.45</td> </tr> <tr> <td>5</td> <td>1.1</td> </tr> </tbody> </table>	X-axis	Y-axis	1	0.05	2	0.1	3	0.25	4	0.45	5	1.1	1
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4.9	There could be a range of answers, but most are likely to focus on the dangers of working in or near a river and the associated possible risks of injury or drowning.	1												
4.10	<p><b>Indicative content</b> Answer must demonstrate understanding of the scatter graph. Answer may refer to:</p> <ul style="list-style-type: none"> <li>• Width of the river.</li> <li>• Depth of the river.</li> <li>• Increase in size of the cross-sectional area.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates clear application of knowledge and understanding of scatter graphs in describing and interpreting the cross-sectional area.</li> <li>• A04 Clear reference made to the data shown on the scatter graph.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>• A03 Demonstrates limited application of knowledge and understanding of scatter graphs in describing and interpreting the cross-sectional area.</li> <li>• A04 Basic use of data shown on the scatter graph.</li> </ul> <p>0 marks: No relevant data.</p>	4												
5.1	<p>The title of the fieldwork enquiry will depend on the specific fieldwork completed by the student. Only one data collection method is required. Accept any reasonable method that may have been used for the investigation. One mark is awarded for stating the method and a second for describing how the method was carried out.</p>	2												
5.2	Answers need to identify the data presentation method that was used for one mark and explain how the data was presented for a further two marks.	3												

<p>5.3</p>	<p>The title of the of fieldwork enquiry will depend on the specific fieldwork completed by the student.</p> <p><b>Indicative content</b> The command word is 'assess', so candidates must provide an informed judgement relating to the overall effectiveness of their presentation technique(s) by examining the constituent primary data collection methods involved. Evaluative comments leading to the overall judgements are credited at levels 1 and 2. Actual content will depend on the physical geography fieldwork investigation undertaken and the technique(s) used. Answers may refer to:</p> <ul style="list-style-type: none"> <li>Type(s) of primary data collection method(s) used.</li> <li>Data collected.</li> <li>Variables involved and how collected, such as surveys, counts and measurements.</li> <li>Features within the primary data collection method(s) will be discussed in terms of success in helping you complete the fieldwork enquiry.</li> <li>Overall judgements in relation to the features and the effectiveness of method(s) used will be very clear and substantiated.</li> </ul> <p><b>Level 3 (Detailed) 5–6 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Demonstrates a developed and balanced appreciation of the effectiveness of primary data collection methods in helping to complete the fieldwork enquiry.</li> <li>A03 Provides a substantiated overall assessment of the success of the primary data collection methods and their part in helping to complete the fieldwork enquiry.</li> </ul> <p><b>Level 2 (Clear) 3–4 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Specific components of named primary data collection methods are evaluated with clear statements addressing their success.</li> <li>A03 Evaluation of named primary data collection methods in terms of success is made using clear statements.</li> </ul> <p><b>Level 1 (Basic) 1–2 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Evaluative comments relating to specific primary data collection methods are limited and vague.</li> <li>A03 Evaluation of primary data collection methods in terms of success is generic or incomplete. Example(s) of method(s) may not be provided.</li> </ul> <p>0 marks: No relevant content.</p>	<p>6</p>															
<p>5.4</p>	<p><b>Indicative content</b> Answers should provide explanations of the results, explain the contribution of these results to the conclusion(s), and then a judgement must be provided linking the results to the conclusion(s). Results and conclusions will vary according to the investigation undertaken. A judgement linking the results to the conclusion(s) will be made.</p> <p><b>Level 3 (Detailed) 7–9 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Provides a detailed explanation of results and conclusions.</li> <li>A03 Explains the contribution made by results to the conclusion(s) reached in detail.</li> <li>A03 Provides an informed judgement as to the extent to which the results contributed to reaching a conclusion.</li> </ul> <p><b>Level 2 (Clear) 4–6 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Provides a clear explanation of results.</li> <li>A03 Provides a clear explanation of the contribution made by results to the conclusion(s) reached.</li> <li>A03 Makes a judgement as to the extent to which the results contributed to reaching a conclusion.</li> </ul> <p><b>Level 1 (Basic) 1–3 marks:</b></p> <ul style="list-style-type: none"> <li>A03 Provides a basic explanation of results.</li> <li>A03 Provides a basic explanation of the contribution made by results to the conclusion(s) reached.</li> <li>A03 Any judgement as to the extent to which the results contributed to reaching a conclusion will be weak and generic.</li> </ul> <p>0 marks: No relevant content.</p> <table border="1" data-bbox="261 1070 1197 1473"> <thead> <tr> <th colspan="3">Spelling, Punctuation and grammar (SPaG)</th> </tr> </thead> <tbody> <tr> <td><b>High performance</b></td> <td>3 marks</td> <td> <ul style="list-style-type: none"> <li>Answers are spelled and punctuated with consistent accuracy.</li> <li>Answers use rules of grammar with effective control of meaning overall.</li> <li>Answers use a wide range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Intermediate performance</b></td> <td>2 marks</td> <td> <ul style="list-style-type: none"> <li>Answers spelled and punctuated with considerable accuracy.</li> <li>Answers use rules of grammar with general control of meaning overall.</li> <li>Answers use a good range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Threshold performance</b></td> <td>1 mark</td> <td> <ul style="list-style-type: none"> <li>Answers spelled and punctuated with reasonable accuracy.</li> <li>Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>Answers use a limited range of specialist terms as appropriate.</li> </ul> </td> </tr> <tr> <td><b>Below threshold performance</b></td> <td>0 marks</td> <td> <ul style="list-style-type: none"> <li>Nothing is written.</li> <li>The answer does not relate to the question.</li> <li>The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul> </td> </tr> </tbody> </table>	Spelling, Punctuation and grammar (SPaG)			<b>High performance</b>	3 marks	<ul style="list-style-type: none"> <li>Answers are spelled and punctuated with consistent accuracy.</li> <li>Answers use rules of grammar with effective control of meaning overall.</li> <li>Answers use a wide range of specialist terms as appropriate.</li> </ul>	<b>Intermediate performance</b>	2 marks	<ul style="list-style-type: none"> <li>Answers spelled and punctuated with considerable accuracy.</li> <li>Answers use rules of grammar with general control of meaning overall.</li> <li>Answers use a good range of specialist terms as appropriate.</li> </ul>	<b>Threshold performance</b>	1 mark	<ul style="list-style-type: none"> <li>Answers spelled and punctuated with reasonable accuracy.</li> <li>Answers use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>Answers use a limited range of specialist terms as appropriate.</li> </ul>	<b>Below threshold performance</b>	0 marks	<ul style="list-style-type: none"> <li>Nothing is written.</li> <li>The answer does not relate to the question.</li> <li>The SPaG in the answer does not reach the threshold performance level, for example, errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>	<p>9+3 SPaG</p>
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