



Mark Scheme (Results)

November 2020

Pearson Edexcel International GCSE
In Geography (4GE1)
Paper 2R: Human Geography

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Autumn 2020

Publications Code 4GE1_02R_2011_MS

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General Marking Guidance

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

Question number	Answer	Mark
1(a)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C natural gas that is trapped within shale formations</p> <p>The answer cannot be A (coal), B or D (these are incorrect).</p>	(1)

Question number	Answer	Mark
1(b)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> • the goal to reduce the amount of energy required to provide products and services. (1) • reducing the amount of energy (coal / power / electricity etc) that is used by people or industry or transport. (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1(c)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A hydroelectric power</p> <p>The answer cannot be B, C or D as these are all non-renewable sources of energy.</p>	(1)

Question number	Answer	Mark
1(d)	<p style="text-align: center;">AO2 (1 mark) / AO3 (1 mark)</p> <p>Award 1 mark for a basic evidence from the from the graph (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • There is an increase in the population (1) because over time less people will die from disease as healthcare improves (1). • There is a rapid rise in population (1) as there is greater food availability for the population (1). • There is a steep rise in population (1) as people become wealthier it means they can buy more food (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
1(e)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award one mark for suitable example of secondary employment.</p> <ul style="list-style-type: none"> • Manufacturing jobs (1). • Jobs in an industrial setting (1). <p>Accept other specific jobs relevant to this sector, e.g. steel worker</p>	(1)

Question number	Answer	Mark
1(f)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each. Maximum of 2 marks when no named megacity is not used in context.</p> <ul style="list-style-type: none"> • Work not regulated by the government (1) which is often low paid and insecure (1). • Work not protected by the state (1) which is often a form of self-employment (1). • A part of the economy not taxed or monitored by the government (1) therefore it is not included in a countries GDP or GNP (1). • Work which might be dangerous / undesirable (1) so only the poorest parts of society have to undertake it (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
1(g)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark (AO3) for a basic reason and a further 2 marks (AO2) for extension through explanation or description, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • Low carbon emissions (1) due to the fact that that there is no combustion of fossil fuels (1) which means that it does not contribute to climate change directly (1). • Compared to other sources of energy wind power is cheaper (1) which has stimulated the growth of new jobs in this sector (1) and encouraged the development of associated employment supporting this industry (1). • Wind turbines do not create particulate pollution (1) which is associated with power generation in coal-fired power stations (1) and ultimately should improve local levels of air quality (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
1(h)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • Some countries are more populous than others (1) so this means their total energy demand will vary according to the population size (1). • Generally, increasing wealth of a country means that their energy demand rises (1) so the richest countries will have a greater demand for energy (1). 	

	<ul style="list-style-type: none"> Some countries have natural energy resources, e.g. Iceland (geothermal) which promotes their usage (1) as consumers can have energy supplied at a lower cost (1). <p>Accept any other appropriate response.</p>	(4)
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Question number	Indicative content
1 (i)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> The decline in manufacturing as a share of GDP is a phenomenon experienced in many richer countries. Partly, this reflects rising real wages, meaning comparative advantage shifts away from labour-intensive industries to higher tech and service sector-based industries. Increased automation of tasks in manufacturing means that many economies need less workers to achieve comparable outputs. Some governments have been blamed for either the loss or gain in manufacturing employment. Roles in providing training and skills as well as tax breaks and benefits for manufacturing businesses. Government macro-economic policy – relying too heavily on consumer spending to support economic growth rather than encouraging manufacturing business development, e.g. supported by infrastructure. Manufacturing decline is relative, some may argue that manufacturing output (not jobs) has increased in many economies in real terms. South Korea has a competitive manufacturing base with good exports and it has avoided de-industrialisation at the

		<p>same rate as many other economies.</p> <p>AO4</p> <ul style="list-style-type: none"> • Figure 1c shows the variations between positives and negatives (percentages) in the changes in manufacturing employment. • On Figure 1c, it can be seen that most countries have experienced overall decline in the amount of manufacturing employment (-4 to -16%) • Figure 1c shows that Sweden and Italy have had the largest fall in manufacturing employment, 16 and 15% respectively • Figure 1c shows that South Korea is an anomaly with a large 21% increase in manufacturing employment • Taiwan and Germany have seen modest rises in manufacturing employment, 6 and 1% respectively.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7-8	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide logical connections between concepts

		<p>throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</p> <ul style="list-style-type: none"> • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)
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Question number	Answer	Mark
2(a)	<p>B population movement from rural to urban areas</p> <p>The answer cannot be A (urbanisation), C or D (counter-urbanisation).</p>	(1)

Question number	Answer	Mark
2(b)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> • A collection of plants and animals (in the same area) that have common characteristics due to similar climate (1). • A community of plants and animals that have common characteristics for the environment they exist in (1). • Biomes are large scale or global scale ecosystem units. (1) 	(1)

Question number	Answer	Mark
2(c)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D non-governmental organisation</p> <p>The answer cannot be A, B or C as these are not the correct definitions of NGO.</p>	(1)

Question number	Answer	Mark
2(d)	<p style="text-align: center;">AO2 (1 mark) / AO3 (1 mark)</p> <p>Award 1 mark for a basic evidence from the from the image (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Ground looks wet (1) means that this type of farming is appropriate (1). • It is too wet to grow cereal crops (1) so the grazing pasture is the only viable alternative (1). • Appears to be an exposed coastal area (1) so it's too windy for crops to grow (1). • An area wet pasture (1) which is too boggy / muddy to mechanise with machines (1). <p>Accept any other appropriate responses.</p>	(2)

Question number	Answer	Mark
2(e)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award one mark for suitable way farmers can diversify identified.</p> <ul style="list-style-type: none"> • Holiday barns and / or campsites (1). • Paintballing and other leisure industries (1). • Sell products direct to customers (1). • Develop vineyards (1). • Crop change for higher value, e.g. biofuels (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
2(f)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • Ecosystems purify atmosphere and hydrological systems (1) therefore supporting life and maintaining biodiversity (1). • Ecosystems provide provisioning goods e.g. wood and water (1) which are used by people in construction or water supply for homes and crops (1). • Ecosystems provide access to natural environments for the public (1), which increases wellbeing (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
2(g)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark for an identification of a reason and a further 2 marks for extension through explanation or description, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • At high latitudes the climate is colder (1) and the temperatures stay below 0°C most of the year (1) allowing the ground to remain frozen, apart from a few centimetres of thaw in the summer (1). • At high latitudes there is limited precipitation (1) and this falls as snow (1) allowing this biome distribution to be restricted to a few areas around the globe (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
2(h)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. Maximum of 2 marks when no named developed or emerging country is used in context.</p> <p>A range of countries and examples could be chosen, based on several changes, e.g. political, socio-economic, environmental etc.</p> <ul style="list-style-type: none"> • In the Vietnam Programme 133 the government has provided credit to farmers (1) and this is linked to local investment in infrastructure to help reduce poverty (1). • In Vietnam, NGOs have worked with the government also to provide better rural health and education services (1) which has lifted some people out of poverty (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
2 (i)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • Increases in farm productivity are likely due to a range of factors: more efficiencies, greater use of technology / better equipment, more fertilizers and chemicals. • Although the amount of farmland under production has remains fairly stable (it's a finite resource) this may hide an underlying trend of an increase in actual farm size. • The reduction in the number of farms is likely due to amalgamation and greater economies of scale from larger scale production and more efficient use of machinery on bigger farms. • Figure 2c shows averages for the whole of USA and there may be considerable local variations in the patterns of data and so cannot be relied on as an accurate pattern of trends everywhere. <p>AO4</p> <ul style="list-style-type: none"> • Figure 2c shows a steady increase in farm / agricultural productivity over time. • On Figure 2c, the overall number of farms has decreased. • The fastest rate of decline in the numbers of farms was between 1940-1990. • Figure 2c shows that area of farms (acres) has remained fairly constant at about 1 billion acres.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
3(a)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C a city with a population of more than 10 million</p> <p>The answer cannot be A, B or D as these are not the correct meanings for megacity.</p>	(1)

Question number	Answer	Mark
3(b)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> • The increasing proportion of a country's population living in towns and cities (1). • The process of making an area / region more urban (1). <p>Accept the population shift from rural to urban residency / living / dwelling</p>	(1)

Question number	Answer	Mark
3(c)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A a location that has never been built-on</p> <p>The answer cannot be B, C or D as these are not correct definitions of a greenfield site.</p>	(1)

Question number	Answer	Mark
3(d)	<p style="text-align: center;">AO2 (1 mark) / AO3 (1 mark)</p> <p>Award 1 mark for a basic evidence from the from the photograph (AO3) and a further 1mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Heavily congested roads are evident (1) which means the movement of traffic has been slowed down (1). • The roads are filled with yellow taxis (1) meaning that there appears to be congestion (1). • Appears to be a high-density urban area with lots of housing and apartments (1) so this can lead to more congestion due to the number of people travelling (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
3(e)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award one mark for a suitable land use identified.</p> <ul style="list-style-type: none"> • Housing (1) • Golf course (1) • Airport (1) • Equestrian (1) • Business parks (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
3(f)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • Prices of land typically increase towards the city centre (1) therefore only certain land-uses and activities can afford the rents / spaces (1). • Historic reasons such as growth of urban areas next to a river (1) can mean that the core CBD is in a particular / unusual location (1). • Transport routeways and nodes can influence land-use patterns (1) as these offer points of access which means that housing or industry can develop next to points of accessibility (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
3(g)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark for an identification of a reason and a further 2 marks for extension through explanation or description, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • Delhi has a much higher index of pollution compared to Dubai as it is a poorer country (1) which means that the government has less money to manage waste for example (1) and therefore the place has lots of litter and is untidy (1). • Dubai has moderate air pollution compared to Delhi's very high air pollution due to the differences in the cities' populations (1) where each person / activity has a pollution "overhead" (1) which means that air pollution is worse in the most crowded places (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
3(h)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. Maximum of 2 marks when no named developing or emerging country is used in context.</p> <p>A range of countries and examples could be chosen, for both waste and housing, e.g. with policies and incentives, working with NGOs as well as legislation.</p> <p>Waste disposal:</p> <ul style="list-style-type: none"> • In Delhi (India) local government has provided funding to promote e-waste recycling (1) which reduces the amount of electronics reaching landfill (1). <p>Housing:</p> <ul style="list-style-type: none"> • In Rio (Brazil), NGOs have worked with the government to develop for better quality housing in slum settlement (1) which provides families with a more stable lifestyle (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
3 (i)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • Rates of urbanisation are controlled by a number of complex factors linked to development. • Urban areas have better provision of education and services which attract people from rural areas; the speed of this process may be limited by transport, housing technology etc. • Physical geography, resource, e.g. coal and access to trade and markets would have controlled population growth and rates of urbanisation especially in the last 200 years. • Political governance influences rural urban migration, e.g. growth of Chinese megacities in recent years and the country has developed and opened its borders to more trade and business. • There may be push factors operating especially in Asia and Africa: conflict, natural disasters, food and famine, lack of services and healthcare etc. • It could be argued that these projections may not be true, e.g. wealthier countries have much lower growth rates or even declining populations in future, so this is a factor of more recent urbanisation. <p>AO4</p> <ul style="list-style-type: none"> • On Figure 3c, it can be seen that all regions have seen an increase in their urban populations 1950-2020. • Figure 3c shows urban populations (compared to rural) are projected to continue to rise. • Figure 3c shows the greatest change in the percentage of urban population has been in Asia compared to Europe and Oceania between 1950-2020.

	<ul style="list-style-type: none"> Figures 3c shows how there has been very little change in the percentage of urban population in Oceania between 1980 and the present day.
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
4(a)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for explaining the hazard / risk and a further mark for explaining how the risk is managed, up to a maximum of 2 marks.</p> <p>NB: <i>the title provides a context for the investigation and the subsequent parts that follow – no credit for this.</i></p> <ul style="list-style-type: none"> • In urban areas there is a lot of traffic so high risk of being struck by a vehicle (1) which was managed by only using a designed crossing (1). • Fieldwork was carried out in winter so there was a small risk of hypothermia (1) so lots of warm clothes were used (1). • The wet rocks present a slip and trip risk (1) so walking boots were used to minimise the risk of falling over (1). • Risk of collecting bias / unreliable data leading to invalid results (1) which could be managed by careful site selection / sample size / design (1). <p>Nature of risk, and risk management will vary depending on the location as well as the context of the investigation.</p>	(2)

Question number	Answer	Mark
4(b)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identification of the qualitative data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The qualitative data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy.</p> <ul style="list-style-type: none"> • Interviews were unreliable since they often have bias (1) so the respondent may have a particular attitude towards the development which is not reflected in the wider population (1). • Photographs are a snapshot of what is happening at a certain time (1) so we don't know what the place / area looks like at other times, e.g. at night for example (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for an improvement and a further mark for extension through explanation, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • We could have used a larger sample of people (1) and this would have made the conclusion's stronger based on more people's opinions (1). • Photographs could have been taken in different seasons (1) to see how the area has changed over time (1) • I could have completed more field sketches from different views (1) thereby giving me a more complete picture of the landscape and its environment (1). 	(2)

	Accept any other appropriate response.	
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Question number	Answer	Mark
4(c)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark for identification of the secondary data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The secondary data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy.</p> <ul style="list-style-type: none"> • The local census information helped us to work out how many people lived in our sample area (1) so we were able to design a fair sample for the fieldwork (1). • A 2018 city report from the regional government (accessed online) allowed to find out about the proposed plans in the area (1) and we were then able to use these when we were considering the sample design (1). • A specialist textbook about energy allowed us to find out about the planning requirements for a large windfarm (1) and we then used GIS to simulate the type of area that would be good to build new energy source (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(d)	<p style="text-align: center;">A03 (2+2 marks)</p> <p>Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • We used located pie charts on a base map (1) to show the differences in outcomes based on the questionnaire survey (1). • We used gain loss-bar charts to show EQA data (1) and this made it easy to compare the best and worst sites (1). • We used scatter graphs to compare two proposed energy sites (1) which allowed us to see the relationship between places as revealed by the data (1). • Annotations on fieldwork pictures allowed commentary on different sites (1) allowing me to express my perceptions of differences (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	
4(e)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • Both Figures 4a and 4b do show some relevant approaches to the collection questionnaire data. • Figure 4a seems to have the questions in the wrong order • Figure 4a – can be very difficult to judge age, therefore this technique is limited in its appropriateness. • 4b has several limitations in terms of sample size, timing / frequency and the choice / selection of people. • No justification or rationale for sample size or spacing, e.g. every 8th person – may lead to bias. <p>AO4</p> <ul style="list-style-type: none"> • In Figure 4a there are issues with the age categories – overlap. • In Figure 4a the questions are poorly worded. • In Figure 4a there is a scale which has a mid-3 on it. • In Figure 4b there is a small sample size. • In Figure 4b their questionnaires are delivered at lunchtime. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic

		fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Mark
5(a)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for explaining the hazard / risk and a further mark for explaining how the risk is managed, up to a maximum of 2 marks.</p> <p>NB: <i>the title provides a context for the investigation and the subsequent parts that follow – no credit for this.</i></p> <ul style="list-style-type: none"> • Some areas may have narrow roads so no footpaths (1) which means they need to be careful walking along and crossing roads (1). • Fieldwork was carried out in winter so there was a small risk of hypothermia (1) so lots of warm clothes were used (1). • The wet rocks present a slip and trip risk (1) so walking boots were used to minimise the risk of falling over (1). • Risk of collecting bias / unreliable data leading to invalid results (1) which could be managed by careful site selection / sample size / design (1). <p>Nature of risk, and risk management will vary depending on the location as well as the context of the investigation.</p>	(2)

Question number	Answer	Mark
5(b)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identification of the qualitative data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The qualitative data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: rural environments.</p> <ul style="list-style-type: none"> • Interviews were unreliable since they often have bias (1) so the respondent may have a particular attitude towards the development which is not reflected in the wider population (1). • Photographs are a snapshot of what is happening at a certain time (1) so we don't know what the place / area looks like at other times, e.g. at night for example (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for an improvement and a further mark for extension through explanation, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • We could have used a larger sample of people (1) and this would have made the conclusions stronger based on more people's opinions (1). • Photographs could have been taken in different seasons (1) to see how the area has changed over time (1). • I could have completed more field sketches from different views (1) thereby giving me a more complete picture of the landscape and its environment (1). 	(2)

	Accept any other appropriate response.	
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Question number	Answer	Mark
5(c)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark for identification of the secondary data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The secondary data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: rural environments.</p> <ul style="list-style-type: none"> • The local census information helped us to work out how many people lived in our sample area (1) so we were able to design a fair sample for the fieldwork (1). • A report from the regional government (accessed online) allowed to find out about the proposed change in the area (1) and we were then able to use these when we were considering the sample design. • A specialist textbook about rural environments allowed us to find out about the planning requirements for new development (1) and we then used GIS to simulate the type of area that would be good to have for new developments (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5(d)	<p style="text-align: center;">A03 (2+2 marks)</p> <p>Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • We used located pie charts on a base map (1) to show the differences in outcomes based on the questionnaire survey (1). • We used gain loss-bar charts to show EQA data (1) and this made it easy to compare the best and worst sites (1). • We used scatter graphs to compare two sites (1) which allowed us to see the relationship between places as revealed by the data (1) • Annotations on fieldwork pictures allowed commentary on different sites (1) allowing me to express my perceptions of differences (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
5(e)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • Both Figures 5a and 5b do show some relevant approaches to the collection questionnaire data. • Figure 5a seems to have the questions in the wrong order. • Figure 5a – can be very difficult to judge age, therefore this technique is limited in its appropriateness. • 5b has several limitations in terms of sample size, timing / frequency and the choice / selection of people. • No justification or rationale for sample size or spacing, e.g. every 8th person – may lead to bias. <p>A04</p> <ul style="list-style-type: none"> • In Figure 5a there are issues with the age categories – overlap. • In Figure 5a the questions are poorly worded. • In Figure 5a there is a scale which has a mid-3 on it. • In Figure 5b there is a small sample size. • In Figure 5b their questionnaires are delivered at lunchtime.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Mark
6(a)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for explaining the hazard / risk and a further mark for explaining how the risk is managed, up to a maximum of 2 marks.</p> <p>NB: the title provides a context for the investigation and the subsequent parts that follow – no credit for this.</p> <ul style="list-style-type: none"> • In urban areas there is a lot of traffic so high risk of being struck by a vehicle (1) which was managed by only using a designed crossing (1). • Fieldwork was carried out in winter so there was a small risk of hypothermia (1) so lots of warm clothes were used (1). • The wet rocks present a slip and trip risk (1) so walking boots were used to minimise the risk of falling over (1). • Risk of collecting bias / unreliable data leading to invalid results (1) which could be managed by careful site selection / sample size / design (1). <p>Nature of risk, and risk management will vary depending on the location as well as the context of the investigation.</p>	(2)

Question number	Answer	Mark
6(b)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identification of the qualitative data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The qualitative data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: urban environments.</p> <ul style="list-style-type: none"> • Interviews were unreliable since they often have bias (1) so the respondent may have a particular attitude towards the development which is not reflected in the wider population (1). • Photographs are a snapshot of what is happening at a certain time (1) so we don't know what the place / area looks like at other times, e.g. at night for example (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for an improvement and a further mark for extension through explanation, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • We could have used a larger sample of people (1) and this would have made the conclusion's stronger based on more people's opinions (1). • Photographs could have been taken in different seasons (1) to see how the urban area changed over time (1). • I could have completed more field sketches from different views (1) thereby giving me a more complete picture of the landscape and its environment (1). 	(2)

	Accept any other appropriate response.	
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Question number	Answer	Mark
6(c)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark for identification of the secondary data and its use, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The secondary data will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: urban environments.</p> <ul style="list-style-type: none"> • The local census information helped us to work out how many people lived in our sample area (1) so we were able to design a fair sample for the fieldwork (1). • A report from the regional government (accessed online) allowed to find out about the proposed developments in the area (1) and we were then able to use these when we were considering the sample design. • A specialist textbook about urban environments allowed us to find out about the planning requirements for new buildings in cities (1) and we then used GIS to simulate the type of area that would be good to build new developments (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6(d)	<p style="text-align: center;">A03 (2+2 marks)</p> <p>Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • We used located pie charts on a base map (1) to show the differences in outcomes based on the questionnaire survey (1). • We used gain loss-bar charts to show EQA data (1) and this made it easy to compare the best and worst sites (1). • We used scatter graphs to compare two proposed energy sites (1) which allowed us to see the relationship between places as revealed by the data (1). • Annotations on fieldwork pictures allowed commentary on different sites (1) allowing me to express my perceptions of differences (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
6(e)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • Both Figures 6a and 6b do show some relevant approaches to the collection questionnaire data. • Figure 6a seems to have the questions in the wrong order. • Figure 6a – can be very difficult to judge age, therefore this technique is limited in its appropriateness. • 6b has several limitations in terms of sample size, timing / frequency and the choice / selection of people. • No justification or rationale for sample size or spacing, e.g. every 8th person – may lead to bias. <p>A04</p> <ul style="list-style-type: none"> • In Figure 6a there are issues with the age categories – overlap. • In Figure 6a the questions are poorly worded. • In Figure 6 there is a scale which has a mid-3 on it. • In Figure 6b there is a small sample size. • In Figure 6b their questionnaires are delivered at lunchtime.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Mark
7(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C a diet with too few nutrients</p> <p>The answer cannot be A, B or D as these are not the correct meanings for malnutrition.</p>	(1)

Question number	Answer	Mark
7(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D a place threatened by human and physical factors</p> <p>The answer cannot be A (activity that can take place in some fragile environments), B (not all fragile environments), C (refers to sustainable management).</p>	(1)

Question number	Answer	Mark
7(b)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable economic cause of deforestation.</p> <ul style="list-style-type: none"> • Timber extraction (1) • Conversion to agriculture (1) • Mining (1) • Transport (1) • HEP (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
7(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for any of the following, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • A - Mexico 	

	<ul style="list-style-type: none"> E - Madagascar 	(2)
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Question number	Answer	Mark
7(b)(iii)	<p style="text-align: center;">AO2 (2 marks) / AO3 (2 marks)</p> <p>Award 1 mark for the identification of a possible reason for the pattern shown on Figure 7a (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2marks per idea.</p> <ul style="list-style-type: none"> Increases in productivity e.g. Canada and Scandinavia (1) might be due to warmer soils allowing more rapid germination (1). Increases in productivity e.g. Canada and Scandinavia (1) might be due to more rapid rates of nutrient recycling with warmer climates (1). Decreases in productivity e.g. much of central and southern Africa (1) might be due to less reliable or lower rainfall causing crop stress (1). Decreases in productivity e.g. parts of northern and western Australia (1) might be due to increases temperatures causing crop stress and desiccation (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
7(c)	<p style="text-align: center;">AO1 (2 marks) / AO2 (2 marks)</p> <p>Award 1 mark (AO1) for identification of effect and a further mark (AO2) for an explanation of the reason, up to a maximum of 2 marks per idea:</p> <ul style="list-style-type: none"> • Deaths from increased heat and heatwaves (1) so this means increased temperatures will greatly affect places like Greece and Turkey which rely on tourism in their economy (1). • Sea level rise affecting many low-lying coastal areas and world cities (1). Linked effects of salinization and loss of agricultural productivity (1). • Droughts, and prolonged drought for some areas (1) leading to loss of health and therefore an ability to work (1). • Knock-on effects may be increased tensions over natural resources at risk from climate change (1) and even greater risk of conflict in areas of political instability, reducing GDP (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
7(d)(i)	<p>(AO4) 2 marks</p> <p>Award 1 mark for a correct answer and one mark for working:</p> <p>Ivory coast = 0.36 Brazil = 4.52</p> <p>Range = 4.16 (1)</p>	(2)

Question number	Answer	Mark
7(d)(ii)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark for the identification of a pattern and 1 mark for further detail through description or use of supporting data from the resource, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Brazil has by far the greatest loss (1) compared to the other countries, except DRC and Indonesia (1). • Ivory Coast to Madagascar have similar deforestation losses (between 0.36 to 0.51 respectively) (1) but deforestation for Indonesia and DRC is nearly 3x higher (1). • There are big variations between the top three (Brazil, DRC, Indonesia) (1), whereas the other countries all have similar rates of loss. <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
7(e)	<p style="text-align: center;">A03 (3 marks)/A04 (3 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • The most important impacts may be systems changes e.g. jet stream, El Nino which have a wider global reach. • Climate-change is a worrying factor because of its scale of impacts and the positive feedback / amplification mechanism.

	<ul style="list-style-type: none"> Local effects will also be severe affecting people's health and livelihoods, e.g. monsoon summer changes (reliability, amount). Systems are very interlinked and therefore it is actually difficult to predict impacts especially with unknown temperature increases. <p>AO4</p> <ul style="list-style-type: none"> Figure 7c shows vulnerability based predicted temperatures changes between 1 and >5°C. Figure 7c shows that a number of locations and environments are at risk from 3-5°C temperature increases: the Sahel, Amazon rainforest and Boreal forest (Canada / Arctic). Figure 7c shows especially ice areas (Greenland, Arctic, Alpine glaciers etc) are at risk from only a smaller 1-3°C temperature rise. Figure 7c indicates that a >5°C will impact on winter sea ice, permafrost and the East Antarctic ice sheet. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content
7 (f)	<p style="text-align: center;">AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO2</p> <ul style="list-style-type: none"> • Climate change is the increasing temperatures associated with average weather conditions or longer-term average conditions. • Ecosystems are affected by water and drought stress linked to climate change. • Ecosystems will be threatened by rising sea levels caused by climate change. • Biodiversity will be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat. • Climate change will affect global atmospheric circulation systems. <p>AO3</p> <ul style="list-style-type: none"> • There is an overlap between agricultural productivity and ecosystem health, so when one is stressed the other is also affected. • Attempts to mitigate against climate change threats, for example through sustainable management, can vary significantly for different fragile environments (judgements will depend on case studies). • A specific ecosystem's natural ability to respond to management can vary, which means that management solutions often have to be tailored locally or regionally, so the global aspect is difficult. • Changes in farming, through adaptation, may mitigate against the risks of climate change. So, the evidence in Figure 7a may not be reliable.

Question number	Indicative content	
	<p>AO4</p> <ul style="list-style-type: none"> • Figure 7a shows red “hotspots” of southern USA, much of Africa, N+W Australia as well as India and the Middle East. • Figure 7a shows some places are predicted to have an increase in agricultural productivity by 2080, but these are largely in the northern hemisphere. • Figure 7a shows a good deal of variability from -50% drop to +35% increase. • Figure 7c shows especially ice areas (Greenland, Arctic, Alpine glaciers etc) are at risk from only a smaller 1-3°C temperature rise. • Figure 7c shows several systems will be affected with a 3-5 Figure 7c shows rise: thermohaline circulation, jet stream, El Nino, monsoons. • Figure 7c indicates that a >5°C will impact on winter sea ice, permafrost and the East Antarctic ice sheet. Figure 7b shows forest fires are natural but their impact damages ecosystems. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5-8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but

Question number	Indicative content	
		<p>not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</p> <ul style="list-style-type: none"> • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
8(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C dealing with the rules of trade between nations</p> <p>The answer cannot be A, B or D as these are not roles of the WTO.</p>	(1)

Question number	Answer	Mark
8(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A International Monetary Fund</p> <p>The answer cannot be B, C or D as these are not the correct meanings for the term IMF.</p>	(1)

Question number	Answer	Mark
8(b)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for the correct definition of forced migration.</p> <ul style="list-style-type: none"> • movements of refugees and internally displaced people e.g. those displaced by conflicts (1). • people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
8(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for any of the following, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • B – South Africa • C – China 	(2)

Question number	Answer	Mark
8(b)(iii)	<p style="text-align: center;">AO2 (2 marks) / AO3 (2 marks)</p> <p>Award 1 mark for the identification of a possible reason for the pattern shown on Figure 8a (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2marks per idea.</p> <ul style="list-style-type: none"> • High rates of net loss, e.g. Central Africa (1) due to government corruption and resulting low quality of life (1). • High rates of net loss, e.g. Central Africa and S America (1) due to environmental hazards and linked climate change problems. (1). • High levels of net gain, e.g. USA, Canada, Australia and NW Europe (1) due to higher wage levels compared to home country (1). • Frictionless borders, e.g. much of Europe (1) so that workers and their family can freely move for work (1). • Low levels of political interference and corruption (1) means it's a good place for overseas businesses to trade (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
8(c)	<p style="text-align: center;">AO1 (2 marks) / AO2 (2 marks)</p> <p>Award 1 mark (AO1) for identification of effect and a further mark (AO2) for an explanation of the reason, up to a maximum of 2 marks per idea:</p> <ul style="list-style-type: none"> • Local job creation in the tourism and hospitality sector (1) so this means increased trade and money flows in local economies (1). • Job creation in associated industries, e.g. travel and transport (1) further supporting the national economy and tax base (1). • Educating visitors (1) as many people have created low-cost start-ups thanks to the global marketplace (1). • Knock-on effects may be increased global awareness for a “mega event”, e.g. royal wedding (1) encouraging more visits and greater spending in the area (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
8(d)(i)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for a correct answer and one mark for working:</p> <p>2000 = 475 and 2017 = 1340 (1)</p> <p>Range = 865 (1)</p>	(2)

Question number	Answer	Mark
8(d)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for the identification of a pattern and 1 mark for further detail through description or use of supporting data from the resource, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • There is considerable increase over time (1) but not always at a steady rate, e.g. 2009 when there was a drop (1). • Generally, it has increased (1) but some years e.g. 2008-2009 have seen a decrease (939 to 851) (1). • In the last few years the rate of increase has slowed (1), especially between 2014 and 2016 (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
8(e)	<p style="text-align: center;">A03 (3 marks)/A04 (3 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • The most important costs for people are likely to be lower wages, but this is a benefit, not a cost to some industries. • Some costs are difficult to quantify, e.g. loss of jobs and may be due to technology rather than off-shoring employment. • Causal factors are often interlinked and there can be a chain of events that lead to problems of globalisation. • Globalisation costs will vary temporally as well as spatially and trader barriers for example could have significant impacts on the nature of the different costs. • There could be some costs that are in some regions are local or cultural which are not on 8c and should not be overlooked. <p>A04</p> <ul style="list-style-type: none"> • Figure 8c shows a range of costs resulting from globalisation. • Figure 8c suggests that some costs of globalisation can be ranked as more important than others. • Figure 8c shows lowering of wages in most important. • Figure 8c shows exporting of pollution ranked as least important.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content
8 (f)	<p style="text-align: center;">AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO2</p> <ul style="list-style-type: none"> • Globalisation can be thought of as process by which businesses or other organizations develop international influence or start operating on an international scale. • Globalisation can also be considered as the degree of connectivity (people, money, resources etc) between countries and regions. • International migration is the movement of people across state or country boundaries and where they stay in the host nation for a minimum amount of time. • The number of international migrants has increased significantly between 1990 and 2019, with growth accelerating since 2005. <p>AO3</p> <ul style="list-style-type: none"> • Globalisation is a complex set of ideas driven by processes and flows. • Migration is an important driver of the process since people carry with them, skills, ideas and resources that facilitate change. • It is difficult to defines costs and benefits, just as it is winners and losers in the context of globalisation. • An alternative argument is that is it governments and trade agreements that have facilitated globalisation allow more frictionless trade between places and regions.

Question number	Indicative content	
	<p>AO4</p> <ul style="list-style-type: none"> • Figure 8a shows the world is experiencing a range of migration patterns, some positive (net gains), other negative (net losses). • Figure 8a shows that some places, e.g. India have neutral migration, or migrant that is roughly balanced. • Figure 8c shows a range of costs resulting from globalisation. • Figure 8c suggests there the costs of globalisation can be ranked in order of importance. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)

Question number	Indicative content	
		<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
9(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>B inequality</p> <p>The answer cannot be A, C or D as these are not what the Gini coefficient measures.</p>	(1)

Question number	Answer	Mark
9(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A information about population and people</p> <p>The answer cannot be B, C, or D as these are not the correct meaning of the term demographic data.</p>	(1)

Question number	Answer	Mark
9(b)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> • the “gap” in wealth between the world’s richest and poorest countries (1). 	

	<ul style="list-style-type: none"> the widening difference in levels of development between the richest and poorest countries in the world (1). <p>Accept any other appropriate response.</p>	(1)
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Question number	Answer	Mark
9(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for any of the following, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> C - Sweden A - Australia 	(2)

Question number	Answer	Mark
9(b)(iii)	<p style="text-align: center;">AO2 (2 marks) / AO3 (2 marks)</p> <p>Award 1 mark for the identification of a possible reason for the pattern shown on Figure 9a (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2marks per idea.</p> <ul style="list-style-type: none"> • In countries with high GDP per capita, e.g. Australia, where the workforce has a high productivity (1). They can work on the land from a young age and as they get older they can earn money in other jobs (1). • In countries / regions with a lower GDP per capita, e.g. central Africa there will be less spend on education (1), which causes the workforce to have a lower earning potential (1). • In countries with a large amount of resources (especially oil) (1), people and their economies are richer as a result of this foreign exchange, e.g. Saudi Arabia (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
9(c)	<p style="text-align: center;">AO1 (2 marks) / AO2 (2 marks)</p> <p>Award 1 mark (AO1) for identification of effect and a further mark (AO2) for an explanation of the reason, up to a maximum of 2 marks per idea:</p> <ul style="list-style-type: none"> • Projects can be built very quickly as there are resources to do so (1). This is very important when time is limited. (1). • Decisions can be made and taken very quickly (1) and the project implementation can be shared across different teams for a quick build / delivery (1). • Can create large amount of local employment (1) this is due to the scale of the project needing to be delivered quickly (1). 	

	<ul style="list-style-type: none"> Some projects both in developing and developed countries may support local skills and education (1) often aided by government in terms of grants or relaxing of rules and regulations (1). <p>Accept any other appropriate response.</p>	(4)
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Question number	Answer	Mark
9(d)(i)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for a correct answer and one mark for working:</p> <p>Urban = 24,700 Rural = 8,000</p> <p>Range = 16,700 (1)</p>	(2)

Question number	Answer	Mark
9(d)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for the identification of a pattern and 1 mark for further detail through description or use of supporting data from the resource, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> The mean per capita income for urban has increased slowly until 2006 (1) with more rapid growth after 2010 (1). The mean per capita income for urban population has more than doubled since 2001 (1) with greatest growth in recent years (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
9(e)	<p style="text-align: center;">A03 (3 marks)/A04 (3 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • HDI is published annually by the UNDP and focuses on longevity, basic education and minimal income – it is a long established and well-respected metric • HDI only uses a limited number of indicators, and this means that sometimes the measure is unreliable • HDI weight all components equally, but some people are critical of this • There could be some factors that in some regions are local or political which are not part of this diagram and are therefore significant. <p>A04</p> <ul style="list-style-type: none"> • Figure 9c shows a range of different factors and indicators which are all components of HDI. • Figure 9c shows how a decent standard of living, knowledge and a long and healthy life are factors that affect HDI. • Figure 9c shows how there are a number of indicators that are used to calculate HDI related to each of these factors. • Figure 9c shows all indicators are equally weighted.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content
9 (f)	<p style="text-align: center;">AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO2</p> <ul style="list-style-type: none"> • There are a range of indicators to measure development including HDI, GDP, education, inequality and measures of political corruption. • GDP per capita is a measure of the total economic output of a country divided by its population. • Different factors contribute to the development of a country / region: cultural, technological, social, economic as well as wider measures such as political stability and water availability. <p>AO3</p> <ul style="list-style-type: none"> • Many would argue that indices are better (e.g. HDI) than single indicators since they use a composite measure. These can also be weighted for which carries the greatest importance. HDI includes social indicators. • A significant disadvantage of GDP is that it can go out of date; it also may not be a true reflection of the size of the economy as doesn't take into account the informal economy for example. • GDP does not take into account living standards which is an important social measure. • Patterns of GDP can vary temporally as well as spatially and are therefore not fixed. Care should be taken in the interpretation of

Question number	Indicative content	
	<p>any data which could soon be out of date for any country as circumstances change.</p> <p>AO4</p> <ul style="list-style-type: none"> • Figure 9a shows that there are large variations in global GDP. • Figure 9a shows light coloured “not-spots” (low GDP) of central Africa and parts of the Middle East and SE Asia with very low rates along with parts of South America. • Figure 9a shows N America, Canada and NW Europe in particular have the highest GDP per capita. • Figure 9c shows a range of different factors and indicates which related to the HDI. • Figure 9c shows how a decent standard of living, knowledge as well as a long and healthy life are important factors for the HDI. • Figure 9c shows all indicators are equally weighted. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content	
Level 3	9–12	<ul style="list-style-type: none">• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)• Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

