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Mark Scheme (Results)

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

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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 energy from plants</p> <p>C is the correct answer as the other options are not related to biomass, i.e. biotic sources.</p>	(1)

Question number	Answer	Mark
1(b)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> • The effort made to reduce the consumption of energy by using less of an energy source (1). • Reducing the amount of energy (coal / power / electricity etc) that is used by people in their homes 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>D burning natural gas</p> <p>D is the correct answer as the other options are 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 photo (AO3) and a further 1mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Looks like a well-protected deep-water port, e.g. harbour wall (1) so that large cargo ships can move / transport / unload freight (1). • Sea port for unloading container boxes (1) as it is likely to be an accessible location, e.g. by road (1). • Cranes for unloading containers (1) as it may be easy to transport them from here either by road, sea or rail (1) • Flat area for unloading (1) meaning that boxes / freight can be easily stored (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 1 mark for a suitable type of primary sector employment identified.</p> <ul style="list-style-type: none"> • Farming (1) • Fishing (1) • Forestry (1) • Mining (1) <p>Accept other specific jobs relevant to this sector, i.e. extractive industries.</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.</p> <ul style="list-style-type: none"> • Increasing population (1) means that there is a greater demand for resources, e.g. food (1). • There is a strong relationship between population and resources (1) The growth and decline of population directly affects the use of resources (1). • The availability of natural resources, e.g. food availability (1) controls population growth rates by influencing health and fertility (1). • Malthus's theory states that population would grow exponentially (1) whereas food production would grow more slowly (linear growth) (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 for an identification of the change taking place and a further 2 marks for explanation of a reason, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • The decline in manufacturing employment for most countries, e.g. UK -47% (1) due to shifts away from labour-intensive industries (1) into higher tech and service sector-based industries (1). • The decline in manufacturing employment for most countries, e.g. Germany -24% (1) due to shifts into low cost countries, e.g. Indonesia, Thailand, Vietnam (1) where companies can be more productive and profitable (1). • Increased automation of tasks in manufacturing leads to decline in employment, e.g. France -34% (1) means that many economies need less workers to achieve comparable outputs (1) so employment rates decline (1). • South Korea and Taiwan has seen increases – 2% + 12% (1) due to government policy (1) encouraging training as well as supporting industries with tax breaks (1). <p>Accept any other appropriate response. Must use evidence from the resource.</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. Maximum 2 marks if no named megacity, or incorrect city named.</p> <ul style="list-style-type: none"> • [Kolkata, India] Workers in the informal tertiary sector choose this way of working (1) as it means they will have to pay less / no tax to the government (1). • [Jakarta, Indonesia] Lack of government authority or government corruption means that the state is unable to manage the informal sector efficiently (1) so many people are able to work in the informal sector without having to pay tax (1). • [Karachi, Pakistan] Large rural – urban migration in some countries means there are not enough legal / regular paid jobs in some cities (1) so workers are forced into informal employment (1). <p>Accept any other appropriate response.</p>	(4)

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>Candidates don't need to cover all energy types to reach level 3, but do need to include both renewable and non-renewable energy.</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 energy mix of a country / globally is the specific combination of different energy sources it uses to meet its energy consumption needs. • The change in the energy mix is a result of several separate and interrelated factors including energy / resource price, local availability, national and international government agreements, public attitudes, level of development and local geographies. • An important factor is how energy is used in transport, in the future oil will decrease due to a switch towards more efficient and electric cars. This may also be driven by higher energy prices. • Government attitudes and policies towards renewable energy (especially large countries and populous such as China and India) will be very important in determining the future energy mix. • Energy efficient and public attitudes in some places (e.g. California) will affect the future energy mix through political pressure in countries such as USA. • Future prices of different energy sources e.g. natural gas and oil, as well as energy security of supplies and geopolitical concerns will also be important. <p>AO4</p> <ul style="list-style-type: none"> • Figure 1c shows that coal historically has been a main component of the global energy mix. • On Figure 1c, it can be seen that in the future coal will decline to around 30% of global energy mix by 2040. • Figure 1c shows that renewable will be very important in the future, expected to be approaching 25% of total energy mix by 2040.

	<ul style="list-style-type: none">• Figure 1c shows that gas will remain constant from 2010 to 2040 whilst nuclear will drop from high levels in the 1990s to around 10% in 2040.• Figure 1c shows oil will have the biggest relative drop in use from a high of around 20% in 1970 to just 1-2% in 2040.
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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
2(a)	<p>A the outward growth of urban development</p> <p>A is the correct answer as the other options are related to other processes, e.g. 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 set of factors or reasons as to why a rural area might go into continued decline (1). • (Government) spending money and not getting full value or financial return from the initial outlay (1). <p>Accept any other appropriate responses.</p>	(1)

Question number	Answer	Mark
2(c)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A intergovernmental organisation</p> <p>A is the correct answer as the other options are not the correct meaning for IGO.</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 1mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • A good supply of rainfall based on the colour of the grass (1) means good growth for grasslands for grazing (1). • The ground is quite steep (1) so it would be difficult to use machines to harvest and arable crop (1). • Appears to be an exposed area (1) so it's too windy for arable crops to grow (1). • It looks poor quality on the steeper slopes (1) so it's not fertile enough to support cereal or arable crop production (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 1 mark for a suitable way identified.</p> <ul style="list-style-type: none"> • Add fertilizers to soils (1) • Improve field or soil drainage (1) • Improve soil texture (1) • Use of GM crops (1) • Introduce better crop rotation and management systems (1) • Crop change for a more appropriate crop type / nitrogenous crop (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"> • Increased mechanisation of agriculture (1) means that machines replace people for some agricultural tasks (1). • Farming systems have become more efficient and profitable (1) and as a result they have been able to reduce their workforce (1). • Changes in farm operations / systems, e.g. production of biofuels (1) means that there may be a reduction in the workforce required (1). • External pressure to be more competitive and profitable, e.g. from supermarkets (1) mean that some farmers have reduced number of workers in order to remain operational (1). • Workers have been placed on short term contracts (1) so that agricultural operations can be more flexible and profitable (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 trend 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"> • There has been an increase in average farm size between 2009-2016 (approximately 420 to 440 acres) (1) as larger farms are more efficient with mechanisation (1) allowing greater profitability per unit land (1). • There has been a decrease in the number of farms (2.17m to 206m in 2016) (1) as farms grow in size (merging with smaller farms) (1) in an attempt to be more profitable (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
2(h)	<p style="text-align: center;">AO2 (2+2 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 total when no named developed country is used in context.</p> <p>A range of countries and strategies could be chosen.</p> <ul style="list-style-type: none"> • [Vineyard] In Surrey, UK the conversion of cereal crops to grapes for wine (1) has increased the farms profitability per unit area of land (1). • [Camping] In France many farmers have converted parts of their farm to cater for campers (1) which has allowed them to offer special family-friendly holidays, close to nature (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"> • Biomes are large-scale environments that are distinguished by characteristic temperature ranges and amounts of precipitation. • These two variables are, in most instances, the dominant controls which affect the types of vegetation and animal life that can exist in those areas. • Because each biome is defined by climate, the same biome can occur in geographically distinct areas with similar climates. • Other local factors may also be important in limiting distribution such as altitude and the direction a slope is facing (aspect). • The influence of people and human activity (e.g. deforestation, land drainage, soil improvement etc) can also disrupt the model that is presented in Figure 2c. <p>AO4</p> <ul style="list-style-type: none"> • Figure 2c shows temperature and precipitation control types of biome found globally. • On Figure 2c there are eight major terrestrial biomes: tropical rainforests, savannas, subtropical deserts, chaparral, temperate grasslands, temperate forests, boreal forests, and Arctic tundra. • On Figure 2c, there is a relationship between biome type and both precipitation and temperature. • On Figure 2c deserts are found in the driest and hottest locations whereas tundra is found only in moderately dry and cold environments. • Figure 2c shows that tropical and temperate rainforests need lots of precipitation and warm temperatures.

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)	AO1 (1 mark)	(1)
	D increasing proportion of people living in urban areas D is the correct answer as the other options are incorrect definitions	

Question number	Answer	Mark
3(b)	AO1 (1 mark)	(1)
	Award 1 mark for an appropriate definition. <ul style="list-style-type: none"> • An area on the outskirts / outside / periphery of the main urban area (1). • Landscape interface between town and country (1). • Where the town / city and the rural area / countryside mix (1). Accept the population shift from rural to urban residency / living / dwelling	

Question number	Answer	Mark
3(c)	AO1 (1 mark)	(1)
	A a location that has been previously built-on A is the correct answer as the other options are incorrect definitions	

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 1 mark for extension through explanation (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Very high density high rise housing (1) which means that there is a shortage of land to build on as land values are high (1). • Few green spaces in the picture (1) meaning that there is limited public amenity spaces for exercise and recreational activity (1). • Appears to be a high density urban area with lots of housing and apartments (1) so this can lead to problems of litter and even transferable diseases (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 suitable group.</p> <ul style="list-style-type: none"> • NGOs (1) • Government (1) • Planners (1) • Charities (1) • World Bank, UNESCO / WHO, other IGOs (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 bridging point (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 the change taking place and a further 2 marks for explanation of a reason, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • There has been an increase from 0.7m to 2.3m (1) as governments have encouraged lower emissions in cities (1) which means that cars have been taxed so people use bicycles (1). • There has been an increase from 0.7m to 2.3m (1) as people have become frustrated by congestion in cities (1) which means bikes are often the quickest way to get around (1). • There has been an increase from 0.7m to 2.3m (1). Governments incentivised through cheap hire models bicycle usage (1) which means more bikes have been installed to keep up with rising consumer demand (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
3(h)	<p style="text-align: center;">AO2 (2+2 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, based on either waste, housing, transport, education e.g. with policies and incentives, working with NGOs as well as legislation.</p> <ul style="list-style-type: none"> • [Brazil] In some urban areas of Brazil, the government have promoted the use of solar panels to generate electricity (1) and this has allowed poorer people to use tablet technology in order to better their schooling and education (1). • [Afghanistan] Some NGOs have used education to train self-help groups (1) so that they can develop business skills, as well as finding out about nutrition and hygiene (1). • [Kenya] The local government and UNESCO have put money into health education in Kibera (1) in order to improve women's reproductive health so that education can in turn be improved (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"> • Patterns 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. This would be the case in Sub-Saharan Africa. • Physical geography, resource, e.g. coal and access to trade and markets would have controlled population growth and rates of urbanisation and the number of cities over 500,000. • Political governance influences rural urban migration, e.g. growth of Chinese cities in recent years and the country has seen rapid population movement to urban areas – now 54%. • There may be push factors operating especially in Asia and Africa: conflict, natural disasters, food and famine, lack of services and healthcare etc. <p>AO4</p> <ul style="list-style-type: none"> • On Figure 3c, it can be seen that the three regions / countries have big differences in both number of cities and proportion of urban and rural dwellers. • Figure 3c shows the highest urban populations are in Europe at 73% and the lowest in sub-Saharan Africa at 37%. • Figure 3c shows that China has a roughly equal number of rural and urban population numbers. • Africa has the fewest number of cities over 0.5m and over at 55, whereas Europe and China are much higher.

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) (i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for a suitable type of primary data.</p> <ul style="list-style-type: none"> • Environmental quality survey (EQS, EQA) (1) • Questionnaire (1) • Interview (1) • Photographs (1) <p>Nature of data will vary depending on the location as well as the context of the investigation. It must be relevant to a human geography focused piece of fieldwork.</p>	(1)

Question number	Answer	Mark
4(a)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identifying a way it helped, and a further mark (s) for an explanation, up to a maximum of 2 marks:</p> <p>The primary 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 used to find out peoples' perceptions of the new wind farm (1) so that we knew more local attitudes of those who lived there (larger sample / survey) in order reach better conclusions (1). • Photographs were taken at the proposed HEP site to record the wildlife currently there (1) so we could understand more about how the area would change with the development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(b)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identify a reason and a further mark for extension through explanation, up to a maximum of 2 marks.</p> <p>NB: the location provides a context for the investigation and the subsequent parts that follow – no credit for this.</p> <ul style="list-style-type: none"> • It was safe to work in (1) and this means we could collect a sufficient range of data to be able to answer the hypothesis (1). • It was close to the local school (1) therefore we could collect primary data without having to spend a long time travelling (1) • The area provided two different communities / groups of people (1) therefore giving me a more complete picture of the contrasting attitudes towards energy development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(c)	<p style="text-align: center;">AO3 (3 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: 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) and that gave us stronger conclusions (1). • A local city energy future report from the regional government (accessed online) allowed us to find out about the proposed energy plans in the area (1) and we were then able to use these when we were considering the sample design (1) which allowed a more reliable data set to be collected (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) and from that developed a series of questionnaires (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
4(d)	<p style="text-align: center;">AO3 (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 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>AO3</p> <ul style="list-style-type: none"> • Both Figures 4a and 4b do show some outcomes from the fieldwork surveys, therefore it is possible to make some sense of what the student found. • Figure 4a seems to make it difficult to validate conclusions as don't know what data it is based upon • Figure 4b only shows two annotations, so this might be biased as some could have been missed, therefore this technique is limited in its appropriateness and value. • Line 6 cannot be verified in terms of reliability as there is not evidence noted as to how this statement has been made. • An evaluation of how far the conclusions can be trusted (line 10 +11) cannot be trusted as they are vague. <p>AO4</p> <ul style="list-style-type: none"> • In Figure 4a there are lots of generalisations. • In Figure 4a there is no data being presented as evidence. • In Figure 4a they are mostly lists of descriptive statements. • In Figure 4b only 2 simple labels are shown, rather than annotations as indicated in the title. • In Figure 4b the label blue sky is not very useful as a conclusion. • In Figure 4b the image includes no scale or direct reference to energy. • In Figure 4b there is no title provided by the student.

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)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for a suitable type of primary data.</p> <ul style="list-style-type: none"> • Environmental quality survey (EQS, EQA) (1) • Questionnaire (1) • Interview (1) • Photographs (1) <p>Nature of data will vary depending on the location as well as the context of the investigation. It must be relevant to a human geography focused piece of fieldwork.</p>	(1)

Question number	Answer	Mark
5 (a)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identifying a way it helped, and a further mark (s) for an explanation, up to a maximum of 2 marks.</p> <p>The primary 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 used to find out peoples' perceptions of the second-homes (1) so that we knew more local attitudes of those who lived there in order to collect reliable survey sample (1). • Photographs were taken at the proposed new housing development to record the wildlife currently there (1) so we could understand more about how the area would change with the development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5 (b)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identify a reason and a further mark for extension through explanation, up to a maximum of 2 marks.:</p> <p>NB: the location provides a context for the investigation and the subsequent parts that follow – no credit for this.</p> <ul style="list-style-type: none"> • It was safe to work in (1) and this means we could collect a sufficient range of data to be able to answer the hypothesis (1). • It was close to the local school (1) therefore we could collect primary data without having to spend a long time travelling (1) • The area provided two different communities / groups of people (1) therefore giving me a more complete picture of the contrasting attitudes towards rural development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5 (c)	<p style="text-align: center;">AO3 (3 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) and that gave us stronger conclusions (1). • A rural development plan from the regional government (accessed online) allowed to find out about the proposed housing plans in the area (1) and we were then able to use these when we were considering the sample design (1) which allowed a more reliable data set to be collected (1). • A specialist textbook about rural area allowed us to find out about the planning requirements for a large housing estate (1) and we then used GIS to simulate the type of area that would be good to build new housing estate (1) and from that developed a series of questionnaires (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
5 (d)	<p style="text-align: center;">AO3 (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 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>AO3</p> <ul style="list-style-type: none"> • Both Figures 5a and 5b do show some outcomes from the fieldwork surveys, therefore it is possible to make some sense of what the student found. • Figure 5a seems incomplete as the nature of the questions asked is not present on the key so it is difficult to link to conclusions. • Figure 5b only shows two annotations, so this might be biased as some could have been missed, therefore this technique is limited in its appropriateness and value. • Recognition of issue in analysis (both Figure 5a and 5b) may be flawed in terms of approach and usage. • An evaluation of how far the conclusions can be trusted (line 10 +11) cannot be trusted as they are vague and don't provide a context. <p>AO4</p> <ul style="list-style-type: none"> • In Figure 5a there are lots of generalisations. • In Figure 5a there is no data being presented as evidence. • In Figure 5a they are mostly lists of descriptive statements. • In Figure 5b only 2 simple labels are shown, rather than annotations as indicated in the title. • In Figure 5b the label cloudy sky is not very useful as a conclusion. • In Figure 5b the image includes no scale or direct reference to a particular rural area. • In Figure 5b there is no title provided by the student.

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) (i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for a suitable type of primary data.</p> <ul style="list-style-type: none"> • Environmental quality survey (EQS, EQA) (1) • Questionnaire (1) • Interview (1) • Photographs (1) <p>Nature of data will vary depending on the location as well as the context of the investigation. It must be relevant to a human geography focused piece of fieldwork.</p>	(1)

Question number	Answer	Mark
6 (a)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identifying a way it helped, and a further mark (s) for an explanation, up to a maximum of 2 marks.</p> <p>The primary 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 used to find our peoples' perceptions of the redevelopment (1) so that we knew more about the local attitudes of people who lived there in order to collect reliable survey sample (1). • Photographs were taken at the proposed new housing development to record the wildlife currently there (1) so we could understand more about how the area would change with the development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6 (b)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for identify a reason and a further mark for extension through explanation, up to a maximum of 2 marks.</p> <p>NB: the location provides a context for the investigation and the subsequent parts that follow – no credit for this.</p> <ul style="list-style-type: none"> • It was safe to work in (1) and this means we could collect a sufficient range of data to be able to answer the hypothesis (1). • It was close to the local school (1) therefore we could collect primary data without having to spend a long time travelling (1) • The area provided two different communities / groups of people (1) therefore giving me a more complete picture of the contrasting attitudes towards urban development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6 (c)	<p style="text-align: center;">AO3 (3 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) and that gave us stronger conclusions (1). • A local city future report from the regional government (accessed online) allowed to find out about the proposed housing plans in the area (1) and we were then able to use these when we were considering the sample design (1) which allowed a more reliable data set to be collected (1). • A specialist textbook about energy allowed us to find out about the planning requirements for a rebranding project (1) and we then used GIS to simulate the type of area that would be good to build new shopping centre (1) and from that developed a series of questionnaires (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
6 (d)	<p style="text-align: center;">AO3 (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 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>AO3</p> <ul style="list-style-type: none"> • Both Figures 6a and 6b do show some outcomes from the fieldwork surveys, therefore it is possible to make some sense of what the student found. • Figure 6a seems incomplete as the nature of the questions asked is not present on the key so it's difficult to link to conclusions. • Figure 6b only shows two annotations, so this might be biased as some could have been missed, therefore this technique is limited in its appropriateness and value. • Recognition of issue in analysis (both Figure 6a and 6b) may be flawed in terms of approach and usage. • An evaluation of how far the conclusions can be trusted (line 10 +11) cannot be trusted as they are vague. <p>AO4</p> <ul style="list-style-type: none"> • In Figure 6a there are lots of generalisations. • In Figure 6a there is no data being presented as evidence. • In Figure 6a they are mostly lists of descriptive statements. • In Figure 6b only 2 simple labels are shown, rather than annotations as indicated in the title. • In Figure 6b the label blue sky is not very useful as a conclusion. • In Figure 6b the image includes no scale or direct reference to a particular urban area. • In Figure 6b there is no title provided by the student.

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)	AO1 (1 mark) B intensive farming B is the correct answer as the other options are natural causes,	(1)

Question number	Answer	Mark
7(a)(ii)	AO1 (1 mark) D significant increase in mining D is the correct answer as the other options are not direct causes,	(1)

Question number	Answer	Mark
7(b)(i)	AO1 (1 mark) Award 1 mark for a suitable definition. <ul style="list-style-type: none"> • The long-term changes in the average planetary / surface temperature of the Earth (1). Accept any other appropriate response.	(1)

Question number	Answer	Mark
7(b)(ii)	AO3 (2 marks) Award 1 mark for any of the following, up to a maximum of 2 marks. <ul style="list-style-type: none"> • Highest = China (1) • Lowest = New Zealand (1) 	(2)

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 pattern (AO2), up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • The two most populated countries have the highest CO₂, e.g. China (1) this is because more people are generating more CO₂ emissions through domestic heating and lighting (1). • Countries with lower levels of development, e.g. within sub-Saharan Africa (1) have poor energy infrastructure grids and therefore use less power (1). • Places such in the Middle East have a high CO₂ footprint as energy is comparatively cheap (oil) (1) so people will be inclined to use more (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 causes 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"> • Overgrazing through exceeding the land natural carrying capacity (1) is caused when there is pressure on the land to produce more food from livestock (1). • Deforestation of large areas of tress and woodland especially in places like Asia (1) is often caused by conversion of the forest into a farmed landscape (1). • Over exploitation of plants for domestic use (1) causes soils to be degraded or lost which puts more pressure on the vulnerable land (1). • Increasing population pressures on vulnerable land (1) cause land to become degraded as the soils are slowly exhausted over time. (1). • Changing rainfall patterns (1) leading to reduce water availability (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>Total = -125 (accept -120 to - 130) / 7</p> <p>Mean = -17.9 (accept -17.4 to - 18.3) (1)</p>	(2)

Question number	Answer	Mark
7(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"> • Latin America has the greatest loss (1) compared to Europe which has seen the largest gains of nearly 25% (1). • Latin America has the greatest loss (1) whilst all other regions have seen net gains of between 5% to nearly 25% (1). • There are big variations between Latin America and other regions (1), the first two seeing huge losses (over 75%) and the other regions all seeing modest gains (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
7(e)	<p style="text-align: center;">A03 (3 marks)/AO4 (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 in the atmosphere e.g. unreliable rainfall and extreme temperatures have a wider global reach • Climate-change is a worrying because of its scale of impacts and the positive feedback / amplification mechanism. • Local effects will also be severe on land especially crop yields affecting people’s health and livelihoods. These are linked to atmosphere e.g. monsoon summer changes (reliability, amount) • Ocean degradation is important especially from a marine biodiversity point of view. • Systems are very interlinked and therefore it is actually difficult to predict the scale of impacts especially with unknown temperature increases. <p>A04</p> <ul style="list-style-type: none"> • Figure 7c shows six different climate change impacts. • Figure 7c shows that the climate change impacts are grouped into three categories: ocean, land and atmosphere. • Figure 7c shows a selected range of climate change impacts

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 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"> • Climate change is the increasing temperatures associated with average weather conditions or longer-term average conditions. • Ecosystems and places are affected by water and drought stress linked to climate change. • Low lying places will be threatened by rising sea levels caused by climate change. • Biodiversity will be threatened by animals migrating because they cannot easily / quickly adapt to the changing climate of their current habitat. • Climate change will affect global atmospheric circulation systems thereby affecting many places. <p>AO3</p> <ul style="list-style-type: none"> • Figure 7a shows that China, India and USA are the worse emitters, and to some extent they will suffers the effects of climate change although they may be able to adapt especially in the richest parts of those nations. • Perhaps the worst impact will be felt by the people and nations who do not emit, e.g. parts of Africa, small island states (SIDs) etc. Sea level rise for the latter is especially significant especially as they often don't have a voice on the global stage. • 7a shows emissions for a whole country; arguably a more useful measure are emission per capita. • Changes in farming, through adaptation, may mitigate against the risks of climate change. So, the evidence in Figure 7c may not be reliable and conclusions not valid. • Overall the view is likely to be broadly correct, with exceptions. <p>AO4</p> <ul style="list-style-type: none"> • Figure 7a shows China, India and USA as the biggest emitters (total CO₂). • Figure 7a shows that a large number of nations, especially in the southern hemisphere have a low total CO₂ output.

Question number	Indicative content	
	<ul style="list-style-type: none"> • Figure 7a shows a good deal of variability between countries and global regions. • Figure 7c shows nine different climate change impacts. • Figure 7c shows that the climate change impacts are grouped into three categories: ocean, land and atmosphere. • Figure 7c shows a selected range of climate change impacts. 	
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) • 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)	AO1 (1 mark) A promote financial cooperation between countries A is the correct answer as the other options are not roles of the IMF.	(1)

Question number	Answer	Mark
8(a)(ii)	AO1 (1 mark) D people choosing to move from one place to another D is the correct answer as the other options are not correct definitions.	(1)

Question number	Answer	Mark
8(b)(i)	AO1 (1 mark) <ul style="list-style-type: none"> • Tourism that involves tens of thousands of people going to the same resort often at the same time of year (1). • The act of visiting a leisure destination with large amounts of people at one time (1). Accept any other appropriate response.	(1)

Question number	Answer	Mark
8(b)(ii)	AO3 (2 marks) Award 1 mark for any of the following, up to a maximum of 2 marks. <ul style="list-style-type: none"> • Highest = Australia (1) • Lowest = India (1) 	(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 trade in place like Australia due to the government promoting overseas trade (1) therefore increasing productivity per person (1). • Trade is linked (correlated) to economic growth (1) so places which are more developed and wealthier will have more trade per capita (1). • Frictionless borders, e.g. much of Europe (1) so that workers and their family can freely move for work which increases (directly or indirectly) trade per capita (1). • Low levels of political interference and corruption (1) means it's a good place for businesses to trade therefore increasing trade per capita (1). • Relatively low population, but high trade (1) means that the figure per capita, e.g. Australia is relatively high (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"> • Deforestation and clearance of land for tourism development (1) means that there is a reduction in local wildlife biodiversity (1). • Air pollution associated with travel and transport (1) means that more tourism travel has a negative impact of the environment and air quality (1). • Increased numbers of tourist places demand in areas for valuable water resources (1) which may have negative impacts on local agriculture or ecosystems (1). • Knock-on effects may be increased global awareness for a "mega event", e.g. royal wedding (1) encouraging more visits and greater congestion / overcrowding 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>Total = 320 (accept $290 - 350$) / 5</p> <p>Mean = 64.0 (accept $60 - 70$) (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 initial description and 1 mark for further detail through development 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 (1).• Generally, it has increased rapidly (1) but the rate of increase is steepest between 2012 and 2015 (1).• The slowest rate of increase was between 1995 and 2005 (1), since then it has increased exponentially (1). <p>Accept any other appropriate response.</p>	<p style="text-align: center;">(2)</p>

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 factors for people are likely to be increased transport which has been facilitated by technology (not on Figure 8c). • The ranking of factors may not be very useful as several factors are interlinked and there can be a chain of events that encourage globalisation. • Some may argue that the role of TNCs and linked capital flows are very much the important drivers in the 21st century. • Globalisation drivers will vary temporally as well as spatially and trader barriers for example could have significant impacts on the way in which globalisation works in some places or regions. • There could be some factors that in some regions e.g. physical geography, location (core vs periphery), cultural factors which are not on 8c but have still contributed towards globalisation. <p>A04</p> <ul style="list-style-type: none"> • Figure 8c shows a range of factors that have facilitated globalisation. • Figure 8c shows factors that operate at different scales and with different ranked importance. • Figure 8c indicates that there is only a limited number of factors.

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"> • Trade involves the transfer of goods or services from one person or entity to another, often in exchange for money. A system or network that allows trade is called a market. This market can be between a number of different countries, countries or individuals. • Globalisation can also be considered the degree of connectivity (people, money, resources etc) between countries and regions. • Global institutions include WTO, IMF as well as individual TNCs that operate across international borders. <p>AO3</p> <ul style="list-style-type: none"> • Globalisation is a complex set of ideas driven by processes and flows. • Some many suggest that the drivers are not necessarily in the correct order and say technology, for instance, is the most important factor. • An alternative argument is that is it governments and trade agreements that have facilitated globalisation allow more frictionless trade between places and regions. • Migration is an important driver of the process since people carry with them, skills, ideas and resources that facilitate change. • Others might argue that technology is the most important driver, allow people, goods and money to move more easily between distant places, rather than global institutions. • TNCs and trade agreements (bilateral and regional) are very important as are rules around free markets and access to their economies. <p>AO4</p> <ul style="list-style-type: none"> • Figure 8a shows trade per capita variations at a global scale. • Figure 8a shows that some places, e.g. India and sub Saharan Africa have low levels of trade 0-\$500. • Figure 8a shows that in general, the north has much higher levels of trade per capita than the global south. • Figure 8c shows a range of factors that have facilitated globalisation. • Figure 8c shows factors that operate at different scales and with different importance.

Question number	Indicative content	
	<ul style="list-style-type: none"> Figure 8c indicates that there is only a limited number of factors, but for some places there may be more. 	
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) 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>C index of political corruption.</p> <p>C is the correct answer as the other factors are not directly measures of development.</p>	(1)

Question number	Answer	Mark
9(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D Human Development Index</p> <p>D is the correct answer as the other options are not the correct meaning of HDI</p>	(1)

Question number	Answer	Mark
9(b)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable definition.</p> <ul style="list-style-type: none"> • People having access to adequate quantities of and acceptable quality water for sustaining livelihoods / human well-being (1). • Enough quality and quantity of water for maintaining people's health (1). <p>Accept any other appropriate response.</p>	(1)

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"> • Highest = South Africa (1) • Lowest = Norway (1) 	(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"> • Some places with high levels of international trade / globalisation may be unequal, e.g. Botswana (1) since their people are grouped into “winners” and “losers” (1). • In countries / regions with high level of technology replacing jobs (1) which causes the some of the workforce to have a lower earning potential increasing inequality (1) • In countries with a large amount of resources (especially oil) (1), some people and their economies are richer as a result of this foreign exchange creating a more divided society (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"> • Decisions can be made and taken very quickly at a local level (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) is due to the local nature of the project with skilled understanding at a local level (1). • Some projects both in developing and developed world may support local skills and education (1) thereby adding extra benefits to the workforce and the local economy (1). <p>Accept any other appropriate response.</p>	(4)

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>Total change = 19.4 (accept 19.0-19.8) /6</p> <p>Mean = 3.2 (accept answers 3.0- 3.4) (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"> • South Asia 5.5% growth in 2016 (1), whereas west Africa -2.5% change for the same time period (1). • Both time periods in south Asia show growth (1), west Africa shows a decrease in 2016 and then a small increase in 2017-2019 of 0.5% (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"> • Perhaps the most important factor is political corruption or historical influences. But the importance and relevance of these will vary spatially and will depend on the geo-political arrangements in that country / region. • Longer term, the conditions for creating human development (e.g. climate limitations, food and water security) might be viewed as more important as they are precursors to knowledge, better standard of living etc. • Knowledge / education is a key enabler for development (not part of diagram) so some might argue that this is a factor in the future will likely be very significant. • There could be some other factors that in some regions which are not part of this diagram, e.g. availability of natural resources, but are still therefore significant. <p>A04</p> <ul style="list-style-type: none"> • Figure 9c shows a range of different dimensions / aspects which are all possible drivers of uneven global development. • Figure 9c shows the factors / drivers are ranked from most significant (trade and aid), to least (historical influences) • Figure 9c shows causes / drivers that can operate at different geographical scales. • Figure 9c indicates that there is only a limited number of causes.

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 ways to measure development and human welfare including HDI, GDP, and separate indices: education, inequality and measures of political corruption. • The Gini co-efficient can be used to measure inequality as it analyses the distribution of wealth across citizens in a country. • Different factors contribute to the development of a country / region: cultural, technological, social, economic as well as wider measures such as stability and water availability. <p>AO3</p> <ul style="list-style-type: none"> • The Gini co-efficient is not a measure of a particular country's income, rather it's distribution across citizens, so does not necessarily provide an indication of economic development. It also only focuses on wealth. • Patterns of inequality can vary temporally as well as spatially and are therefore not fixed. • A significant disadvantage of many indicators such as an index of income inequality or GDP is that they can go out of date. In addition, these indicators do not take into account living standards which is an important social measure to consider for human welfare. • 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. • Development and human welfare are complex, with different elements which can be measured. Using a range of indicators can provide a more complete understanding of the development of a country and the welfare of its residents. <p>AO4</p> <ul style="list-style-type: none"> • Figure 9a shows that there are large variations in income equality (indicated by the Gini coefficient).

Question number	Indicative content	
	<ul style="list-style-type: none"> • Figure 9a shows areas of sub-Saharan Africa along with parts of South America where inequality is the highest. • Figure 9a shows Australia, Canada, Europe and northern Africa is where income inequality is the lowest. • Figure 9c shows a range of different dimensions / aspects which are all possible drivers of uneven global development. • Figure 9c shows the factors / drivers are ranked from most significant (trade and aid), to least (historical influences). • Figure 9c shows causes that can operate at different geographical scales. 	
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) • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant

Question number	Indicative content	
		<p data-bbox="694 280 1420 353">understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</p> <ul data-bbox="646 362 1444 436" style="list-style-type: none"><li data-bbox="646 362 1444 436">• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

