



Mark Scheme (Results)

November 2021

Pearson Edexcel International GCSE
In Geography (4GE1)
Paper 02: 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.

Marking guidance for levels-based mark schemes

How to award marks

The indicative content provides examples of how students will meet each skill assessed in the question. The levels descriptors and indicative content reflect the relative weighting of each skill within each mark band.

Finding the right level

The first stage is to decide which level the answer should be placed in. To do this, use a 'best-fit' approach, deciding which level most closely describes the quality of the answer. Answers can display characteristics from more than one level, and where this happens, markers must use the guidance below and their professional judgement to decide which level is most appropriate.

Placing a mark within a level

After a level has been decided on, the next stage is to decide on the mark within the level. The instructions below tell you how to reward responses within a level. However, where a level has specific guidance about how to place an answer within a level, always follow that guidance. Statements relating to the treatment of students who do not fully meet the requirements of the question are also shown in the indicative content section of each levels-based mark scheme. These statements should be considered alongside the levels descriptors.

Markers should be prepared to use the full range of marks available in a level and not restrict marks to the middle. Markers should start at the middle of the level (or the upper-middle mark if there is an even number of marks) and then move the mark up or down to find the best mark. To do this, they should take into account how far the answer meets the requirements of the level:

- if it meets the requirements fully, markers should be prepared to award full marks within the level. The top mark in the level is used for answers that are as good as can realistically be expected within that level
- if it only barely meets the requirements of the level, markers should consider awarding marks at the bottom of the level. The bottom mark in the level is used for answers that are the weakest that can be expected within that level
- the middle marks of the level are used for answers that have a reasonable match to the descriptor. This might represent a balance between some characteristics of the level that are fully met and others that are only barely met.

Question number	Answer	Mark
1(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> The difference between a country's rising demand for energy and its ability to produce that energy from its own resources (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>E Solar F Wind</p> <p>A, B, C, and D are all incorrect as they are non-renewable forms of energy.</p>	(2)

Question number	Answer	Mark
1(b)	<p style="text-align: center;">AO2 (1 mark) / A03 (1 mark)</p> <p>Award 1 mark for identification of adaptation method evident 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"> Runs on electricity (1) and so has reduced CO2 emissions compared to standard buses (1). Reduces emissions of CO2 (1) as it uses a rechargeable battery (1). It does not require fossil fuels to run (1) as it runs on electricity (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
1(c)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for any of the following:</p> <ul style="list-style-type: none"> Availability of suitable land (1). Good transport connections (1) Availability of labour (1). Reliable power source (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1 (c) (ii)	<p style="text-align: center;">AO2 (2 + 2 marks)</p> <p>Award 1 mark for a suitable reason and a further mark for a development of this point, up to maximum of 2 marks per explanation.</p> <ul style="list-style-type: none"> • Shift to tertiary sector industries (1) and a service based economy (1). • Global shift where secondary sector industries have moved (1) to countries where the labour and other costs are cheaper (1). • Reduced government support for secondary industries (1) which makes them less financially viable (1). <p>Ideas around automation or reduced employment due to mechanization can be credited for 1 mark unless linked to developed idea of declining secondary sector.</p> <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark																		
1 (d) (i)	<p style="text-align: center;">AO3 (1 marks)</p> <p>Award 1 mark for an X in the box above The Gambia (1).</p> <table border="1"> <caption>Percentage (%) employment in primary sector</caption> <thead> <tr> <th>Country</th> <th>1991 (%)</th> <th>2018 (%)</th> </tr> </thead> <tbody> <tr> <td>United Kingdom</td> <td>~2.0</td> <td>~1.0</td> </tr> <tr> <td>Japan</td> <td>~7.0</td> <td>~4.0</td> </tr> <tr> <td>Ukraine Country</td> <td>~16.0</td> <td>~14.0</td> </tr> <tr> <td>The Gambia</td> <td>~34.0</td> <td>~26.0</td> </tr> <tr> <td>Vietnam</td> <td>~75.0</td> <td>~40.0</td> </tr> </tbody> </table>	Country	1991 (%)	2018 (%)	United Kingdom	~2.0	~1.0	Japan	~7.0	~4.0	Ukraine Country	~16.0	~14.0	The Gambia	~34.0	~26.0	Vietnam	~75.0	~40.0	(1)
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Vietnam	~75.0	~40.0																		

Question number	Answer	Mark
1 (d) (ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D Vietnam</p> <p>A, B, C are all incorrect as the changes in employment are much smaller than in Vietnam.</p>	(1)

Question number	Answer	Mark
1 (d) (iii)	<p style="text-align: center;">AO2 (1 mark)</p> <ul style="list-style-type: none"> • Mechanisation (1) • Industrialisation (1) • Rural-urban migration (1) • Increased education (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1 (e)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for identification of a disadvantage of informal employment and an additional 1 mark for development through further explanation or exemplification.</p> <p>Different megacities could be chosen.</p> <ul style="list-style-type: none"> • Money earned from informal employment does not contribute to tax systems (1) so does not benefit overall economy (1). • Often involves unsafe work (1) and there are no regulations to protect workers in such conditions (1). • It is often poorly paid (1) and often holds no legal contract (1). • Does not provide the employee with health or unemployment benefits (1) and therefore does not provide security (1). • Where children are involved it prevents them from going to school (1) which damages their chance of gaining more skilled employment (1). <p>Accept any other appropriate response.</p>	(4)

Question	Indicative content
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number		
1 (f)	<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 the following.</p> <p>AO3</p> <ul style="list-style-type: none"> • Global energy production has changed over time due to the different development trajectories of countries, and an increased awareness of environmental consequences of energy use. • As country's economic development increases as indicated by GDP per capita, this has usually been accompanied by a growth in energy consumption, particularly from fossil fuels. • As sources of non-renewable fuels have been depleted, and the environmental consequences of using such fuels has been identified there have been efforts to shift towards the use of non-renewable energy sources. • While overall energy consumption may have increased, the sources of where this electricity is produced has changed. • International agreements which encourage governments to address energy production and climate change issues. <p>AO4</p> <ul style="list-style-type: none"> • Figure 1c shows a consistent increase in global GDP per capita across the time period. • Figure 1c shows how GDP increases from around US\$24,000 to US\$56,000 during this time period. • Figure 1c shows a slight increase in electricity production from renewable sources from around 2005. • Figure 1 shows a decline in electricity production from coal since around 2000, and a more marked decrease from 2010. 	
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)

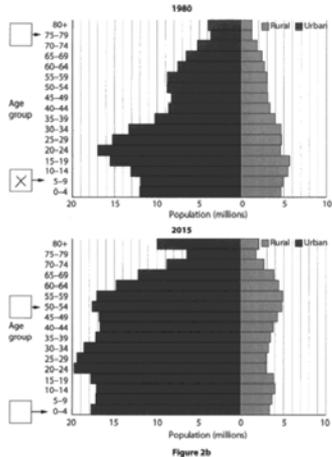
Question number	Answer	Mark
2(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> A natural environment that includes flora (plants) and fauna (animals) that live and interact within that environment (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
2(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>A Emission of oxygen D Recycling of nutrients</p> <p>B, C, E and F are incorrect as they are goods provided by ecosystems, not services.</p>	(2)

Question number	Answer	Mark
2(b)(i)	<p style="text-align: center;">AO2 (1 mark) /AO3 (1 mark)</p> <p>Award 1 mark for suitable reason using evidence 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"> Building created in the landscape (1) to create amenities for tourists (1). Transport routes (1) provide easy access to the countryside (1). Farmland to be repurposed (1) as value for some crops too low (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
2(b)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for any of the following:</p> <ul style="list-style-type: none"> Farm diversification (1). Changing employment patterns (1). Increased tourist pressures (1). Rural isolation (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
2(c)	<p style="text-align: center;">AO2 (2 +2 marks)</p> <p>Award 1 mark for a suitable way rural-urban migration affects rural areas with a further mark for explanation, up to maximum of 2 marks.</p> <ul style="list-style-type: none"> • Increased number of rural-urban migrants (particularly males) means many rural communities have a shortage of workers (1) which makes it difficult to manage farms (1). • Increased money being sent back to rural areas through remittances (1) as rural migrants are keen to support their families (1). • Loss of services (1) as not enough people to support their operation (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
2(d) (i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for an X in the box next to the 5-9 age category in the 1980 population pyramid (1).</p> <div style="text-align: center;">  <p>Figure 2b</p> </div>	(1)

Question number	Answer	Mark
2(d)(ii)	<p style="text-align: center;">AO2 (1 mark)</p> <p>B 20-24 Urban.</p> <p>All other options are less than the 20-24 age group so are incorrect.</p>	(1)

Question number	Answer	Mark
2(d)(iii)	<p style="text-align: center;">AO2 (1 mark)</p> <ul style="list-style-type: none"> • Cheaper land outside of city centres (1) • Decline of the inner city (1) • Transport links (1) • Crime rates (1) • Concerns about air pollution (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
(e)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for each initial explanation of a strategy used to improve quality of life in rural areas with an additional 1 mark for development through further explanation or exemplification.</p> <p>A range of countries could be used.</p> <ul style="list-style-type: none"> • NGOs providing assistance to improve farming methods (1) to increase yields meaning people can move beyond subsistence farming (1). • Increased funding for education facilities in rural areas (1) to ensure skilled workers are created to support economic growth (1). • Improved rural infrastructure (1) to reduce isolation and increase access to services (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content

2(f)	AO3 (4 marks)/AO4 (4 marks)	
<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 the following.</p>		
<p>AO3</p> <ul style="list-style-type: none"> • Humans have an impact on the landscape in various ways through their activities in family lives and as part of industry. • Primary industries involve extraction of materials from the natural environment. Primary industries have a significant impact on the forested rural landscapes. • Many forests are cleared for agriculture as well as for timber, both contributing to economic development. • Brazil's economic growth has benefitted greatly from the value provided by the forests. • In the case of the Amazon rainforest humans have had a significant impact clearing huge areas of land for various economic activities. Deforestation has taken place both to sell the timber, but also to create more land for agriculture and other industries. To access these areas, roads and transport infrastructure (Trans-Amazonian highway for example) also had to be built into the forest, creating further damage to the landscape. • Such can increase processes of soil erosion as the land becomes exposed, which can contribute to land degradation. 		
<p>AO4</p> <ul style="list-style-type: none"> • Figure 1c shows the rate of deforestation in Brazil have fluctuated greatly but with an overall decline from 1994 to 2016. • Figure 1c shows that crop yields fluctuated from 1994 to 2016 but experienced an overall increase. • Figure 1c shows a drop in deforestation from 2005-2012. • Figure 1c shows a slight increase in deforestation after 2014. • Figure 1c shows a peak in crop yield in 2015 at around 5,000kg per hectare. 		
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

		<p>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)</p> <ul style="list-style-type: none"> • 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)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <ul style="list-style-type: none"> The outward spread of an urban area, with greater proportion of people moving to the suburbs. (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
3(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>A Increased traffic congestion and D reduced access to health services.</p> <p>B, C, E and F as they are not problems associated with urban growth.</p>	(2)

Question number	Answer	Mark
3(b)(i)	<p style="text-align: center;">AO2 (1 mark) /AO3 (1 mark)</p> <p>Award 1 mark for suitable reason based on evidence 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"> Large amounts of green space (1) which suggests lots of farmland available (1). Dense urban area in the distance (1) which suggests this is far from the city centre (1). Large industrial development visible (1) which typical of an out of town development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
3(b)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>B Land that has been previously used, abandoned and now waits new use for industrial or commercial purposes.</p> <p>A, C, and D are incorrect as they do not refer to brownfield sites.</p>	(1)

Question number	Answer	Mark
3(c)	<p style="text-align: center;">AO2 (2 +2 marks)</p> <p>Award 1 mark for identification of a factor that can affect land use patterns and an additional 1 mark for development through further explanation or exemplification.</p> <ul style="list-style-type: none"> • Land value (1) high value land in the CBD for example tends to be used by businesses who can afford the higher rates. • Access to transport routes (1) as many people try to locate either their business or residential areas near efficient transport networks (1). • The amount of space required for an activity (1) business parks tend to be located in a large open area to accommodate all their facilities (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark																		
3(d)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for an X in the box above the columns for Shanghai (1).</p> <table border="1"> <caption>Annual mean PM (µg/m³)</caption> <thead> <tr> <th>City</th> <th>PM10 (µg/m³)</th> <th>PM2.5 (µg/m³)</th> </tr> </thead> <tbody> <tr> <td>Delhi</td> <td>~290</td> <td>~330</td> </tr> <tr> <td>Dhaka</td> <td>~100</td> <td>~150</td> </tr> <tr> <td>London</td> <td>~20</td> <td>~10</td> </tr> <tr> <td>Shanghai</td> <td>~50</td> <td>~90</td> </tr> <tr> <td>Tokyo</td> <td>~30</td> <td>~80</td> </tr> </tbody> </table>	City	PM10 (µg/m³)	PM2.5 (µg/m³)	Delhi	~290	~330	Dhaka	~100	~150	London	~20	~10	Shanghai	~50	~90	Tokyo	~30	~80	(1)
City	PM10 (µg/m³)	PM2.5 (µg/m³)																		
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London	~20	~10																		
Shanghai	~50	~90																		
Tokyo	~30	~80																		

Question number	Answer	Mark
3(d)(ii)	<p style="text-align: center;">AO2 (1 mark)</p> <p>A Delhi (149)</p> <p>B (Dhaka = 47), C (London = 11) and D (Shanghai = 14) are incorrect as they have a smaller difference.</p>	(1)

Question number	Answer	Mark
3(d)(iii)	<p style="text-align: center;">AO2 (1 mark)</p> <ul style="list-style-type: none"> • Traffic/vehicles/cars (1) • Industry/factories (1) <p>Accept any other appropriate response.</p>	(1)

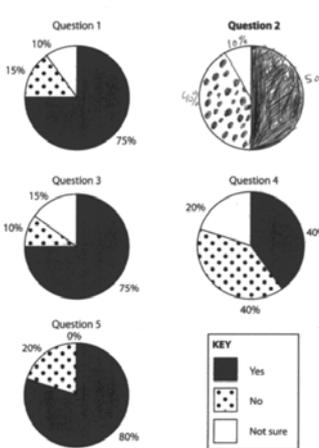
Question number	Answer	Mark
3(e)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for suitable identification of a strategy with a further mark for development or exemplification. Maximum of 2 marks for each strategy.</p> <p>A range of examples could be used, and responses could refer to strategies which target a range of issues (waste disposal, transport, education, health, employment and housing)</p> <p>Examples could include:</p> <ul style="list-style-type: none"> • Self-help schemes in favelas (1) to try and give people the opportunity to buy or rent land connected to city services to provide higher standard of housing (1). • NGOs working to improve water access to houses in informal settlements (1) which reduces the chance of spreading waterborne diseases (1). • Improve sustainable transport network (1) through the Curitiba Master plan which addressed transport network issues across the city and involves prioritizing public transport networks (1). • Increasing investment into the urban rail systems (1) to replace old colonial railways to improve reliability (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	
3(f)	<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 the following.</p> <p>AO3</p> <ul style="list-style-type: none"> • Megacities are cities with populations of over 10 million people. • The factors that affect their growth are those that affect urban areas more generally. • Population growth: The growth of megacities are fuelled by rural-urban migration, international migration and by demographic characteristics of their populations. Often cities are dominated by younger populations who are also the demographic age groups who tend to have children. In developing/emerging countries where birth rates are still high this can lead to rapid growth of populations. • Economic Development which is often concentrated in these cities and leads to the multiplier effect attracting more people and businesses to the city, in turn creating further growth. • Some of these cities appear to be close to coast because they have an advantage for import and export and associated trade. <p>AO4</p> <ul style="list-style-type: none"> • Figure 1c shows predicted population growth for several megacities across the globe by 2025. • Figure 1c shows how the global spread of the world's megacities, with a concentration in Asia. • Figure 1c shows how some of the megacities with the predicted highest growth will be in Asia. • Figure 1c indicates there are a lack of megacities in Africa. 	
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

		<p>understanding. Judgements that are supported by limited evidence. (AO3)</p> <ul style="list-style-type: none"> • 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 marks)</p> <ul style="list-style-type: none"> • Photos and sketches (1) • Information from newspapers/websites (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
4(a)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <ul style="list-style-type: none"> • Systematic (1) collecting data in an ordered or regular way. (1) • Random/opportunistic (1) collecting evidence where possible/appropriate (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>1 mark for each correctly drawing the lines and 1 mark for correctly shading or labelling the portions. Portions can be in any order. Yes: 50% No: 40% Not sure: 10% For example:</p>  <p>The pie charts show the following distributions:</p> <ul style="list-style-type: none"> Question 1: Yes 75%, No 15%, Not sure 10% Question 2: Yes 50%, No 40%, Not sure 10% Question 3: Yes 75%, No 10%, Not sure 15% Question 4: Yes 40%, No 40%, Not sure 20% Question 5: Yes 80%, No 20%, Not sure 0% <p>KEY ■ Yes ● No □ Not sure</p>	(2)

Question number	Answer	Mark
4(b)(ii)	<p style="text-align: center;">AO4 (1 mark)</p> <p>C Potential to generate a mixture of qualitative and quantitative data.</p>	(1)

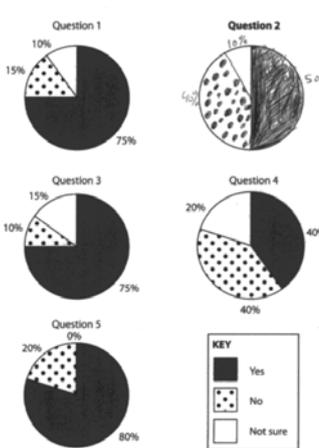
Question number	Answer	Mark
4(b)(iii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>B The mean percentage for people who answered 'not sure' was 11.</p>	(1)

Question number	Answer	Mark
4(b)(iv)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award one mark for each suitable suggestion of how to improve data collection, up a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Increase the number of questionnaires completed (1) in order to get a more representative sample (1). • Increase the number of sites where data was collected (1) to get different perspectives (1). • Acquire more secondary data (1) to be able to understand more about the area before primary data collection (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 an advantage of secondary data, with a further 2 marks for expansion.</p> <ul style="list-style-type: none"> • Secondary data can be compared to primary data (1) to check for any differences or similarities (1) and to confirm conclusions (1). • Increases sources of data (1) which can be used to form a more complete picture (1) which increases validity of the enquiry (1). • Can access different types of data that would otherwise be available (1) often with a much larger amount of data that could be collected by one student (1) expanding the types of data analysis that can be conducted (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
5(a)(i)	<p style="text-align: center;">AO3 (1 marks)</p> <ul style="list-style-type: none"> • Photos and sketches (1) • Information from newspapers/websites (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
5(a)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <ul style="list-style-type: none"> • Systematic (1) collecting data in an ordered or regular way. (1) • Random/opportunistic (1) collecting evidence where possible/appropriate (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>1 mark for each correctly drawing the lines and 1 mark for correctly shading or labelling the portions. Portions can be in any order.</p> <p>Yes: 50% No: 40% Not sure: 10%</p> <p>For example:</p>  <p>Question 1: 10% Not sure, 15% No, 75% Yes Question 2: 15% Not sure, 45% No, 40% Yes Question 3: 15% Not sure, 10% No, 75% Yes Question 4: 20% Not sure, 40% No, 40% Yes Question 5: 20% Not sure, 0% No, 80% Yes</p> <p>KEY ■ Yes ● No □ Not sure</p>	(2)

Question number	Answer	Mark
5(b)(ii)	<p style="text-align: center;">AO4 (1 mark)</p> <p>C Potential to generate a mixture of qualitative and quantitative data.</p>	(1)

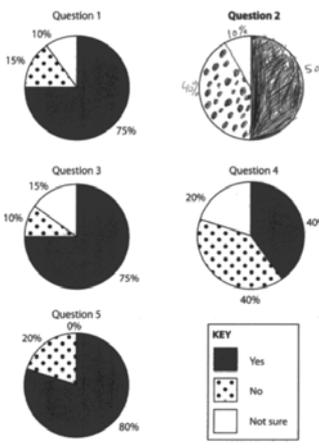
Question number	Answer	Mark
5(b)(iii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>B The average percentage for people who answered 'not sure' was 11.</p>	(1)

Question number	Answer	Mark
5(b)(iv)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award one mark for each suitable suggestion of how to improve data collection, up a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Increase the number of questionnaires completed (1) in order to get a more representative sample (1). • Increase the number of sites where data was collected (1) to get different perspectives (1). • Acquire more secondary data (1) to be able to understand more about the area before primary data collection (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 an advantage of secondary data, with a further 2 marks for expansion.</p> <ul style="list-style-type: none"> • Secondary data can be compared to primary data (1) to check for any differences or similarities (1) and to confirm conclusions (1). • Increases sources of data (1) which can be used to form a more complete picture (1) which increases validity of the enquiry (1). • Can access different types of data that would otherwise be available (1) often with a much larger amount of data that could be collected by one student (1) expanding the types of data analysis that can be conducted (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
6(a)(i)	<p style="text-align: center;">A03 (1 marks)</p> <ul style="list-style-type: none"> • Photos and sketches (1) • Information from newspapers/websites (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
6(a)(ii)	<p style="text-align: center;">A03 (2 marks)</p> <ul style="list-style-type: none"> • Systematic (1) collecting data in an ordered or regular way. (1) • Random/opportunistic (1) collecting evidence where possible/appropriate (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>1 mark for each correctly drawing the lines and 1 mark for correctly shading or labelling the portions. Portions can be in any order. Yes: 50% No: 40% Not sure: 10%</p> <p>For example:</p>  <p>KEY Yes No Not sure</p>	(2)

Question number	Answer	Mark
6(b)(i)	<p style="text-align: center;">AO4 (1 mark)</p> <p>C Potential to generate a mixture of qualitative and quantitative data.</p>	(1)

Question number	Answer	Mark
6(b)(iii)	<p style="text-align: center;">AO3 (1 mark)</p> <p>B The average percentage for people who answered 'not sure' was 11.</p>	(1)

Question number	Answer	Mark
6(b)(iv)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award one mark for each suitable suggestion of how to improve data collection, up a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Increase the number of questionnaires completed (1) in order to get a more representative sample (1). • Increase the number of sites where data was collected (1) to get different perspectives (1). • Acquire more secondary data (1) to be able to understand more about the area before primary data collection (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 an advantage of secondary data, with a further 2 marks for expansion.</p> <ul style="list-style-type: none"> • Secondary data can be compared to primary data (1) to check for any differences or similarities (1) and to confirm conclusions (1). • Increases sources of data (1) which can be used to form a more complete picture (1) which increases validity of the enquiry (1). • Can access different types of data that would otherwise be available (1) often with a much larger amount of data that could be collected by one student (1) expanding the types of data analysis that can be conducted (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
7(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A period of time with abnormally low rainfall (1).</p> <p>B, C, and D are all incorrect as they are not referring to the meaning of drought.</p>	(1)

Question number	Answer	Mark
7(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <ul style="list-style-type: none"> • The spread of desert conditions (1) and decline of soil quality (1). • Degradation of land/drying out of land (1) as a result of human activities/climate change (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
7(a)(iii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C Install water storage devices.</p> <p>A, B and D are all incorrect as they are not methods to manage the impacts of desertification.</p>	(1)

Question number	Answer	Mark
7(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>1970s, 1980s, 1990, 2000s, 2010s (1).</p> <p>Allow a range for example 1970-1980.</p>	(1)

Question number	Answer	Mark
7(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for the comparison using data Figure 7a and a further mark for additional development, up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • Global temperatures and CO₂ emissions continue to rise at fast rates (1) at times following similar growth trajectories (1). • Global temperatures have varied more than CO₂ emissions, with greater fluctuation in the 1970s (1), but with a more steady trajectory since 1995 (1). • CO₂ emissions have tripled since 1960 (1), while global 	

	<p>temperature anomalies have risen up to 0.725-0.8oC (1).</p> <p>Accept any other appropriate response.</p>	(2)
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Question number	Answer	Mark
7(b)(iii)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Award 1 mark (AO2) for identification of each reason up to a maximum of two marks.</p> <ul style="list-style-type: none"> • Increased use of cars burning fossil fuels (1) • Burning coal to produce energy (1) • Deforestation (1) • Volcanic eruptions (1) • Industrialisation (1) • Population increase (1) <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
7(b)(iv)	<p style="text-align: center;">AO2 (1 mark)/AO3 (1 mark)</p> <p>Award 1 mark (AO3) for identification of a reason and a further mark for development of the reason (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Data only presents patterns for a limited time period (1) which is not long enough to understand patterns of climate change (1). • The data does not show actual temperatures, but variations from a particular temperature (1) so not an accurate picture of actual changing climatic conditions (1). • The data does not show the fluctuations in temperatures that happen during the year (1) so may hide important variations in the pattern (1). • The data does not show other aspects of climate (1) such as rainfall patterns (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
7(c)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each characteristic identified:</p> <ul style="list-style-type: none"> • High annual rainfall (1) • High average temperature (1) • Nutrient poor soil (1) • High levels of biodiversity (1) • Dense shrub layer and canopy (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
7(d)	<p style="text-align: center;">AO1 (2 marks) /AO2 (2 marks)</p> <p>Award 1 mark (AO1) for identification of ways to manage rainforests and a further mark (AO2) for an explanation, up to a maximum of 2 for each way explained.</p> <ul style="list-style-type: none"> • Selective logging and replanting (1) to ensure areas affected by deforestation have tree replacement programmes to reduce overall loss (1). • Agroforestry to combine using trees and crops (1) to reduce the number of trees being removed for agriculture (1). • Increasing community involvement in forest conservation projects (1) to increase potential for sustainable management (1). • Creation of a biosphere reserve (1) in order to protect biodiversity (1). • Government regulations to conserve rainforest (1) limiting activities that can take place there (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	Mark
7(e)	<p style="text-align: center;">AO3 (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 the following.</p> <p>A03</p> <ul style="list-style-type: none"> • Global warming is thought to be contributing to sea level rise, with predictions of how much this going to be over future decades varying significantly. Whichever scenario takes place any amount of sea level rise has the potential to cause damage to the economic development of many countries. • Sea level rise will not only damage many coastal environments, and increase flooding and erosion, it has the potential to damage human lives for those in affected areas. • Those countries such as Bangladesh which are low lying have the greatest potential to have their economies damaged as rising waters would not only damage buildings and infrastructure but disrupt agricultural systems and ability to produce food for consumption and exports. <p>A04</p> <ul style="list-style-type: none"> • Figure 7b shows how Asia will be the continent that is most affected by either 0.15m sea level rise potentially affecting 60.2 million people. • Figure 7b shows in terms of total numbers Oceania has the lowest number at risk. • Figure 7b shows how North and South America have a similar level of risk ranging from 5.6-6.2 million people. 	(6)
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 are supported by limited evidence. (A03) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	4–6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (A03) • Uses geographical skills to obtain information that supports some aspects of the argument. (A04)

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 the following.</p> <p>A02</p> <ul style="list-style-type: none"> • Sea level rise poses a significant threat to the many countries around the world, particularly those with high populations living on coastal or low lying areas. • There are different scenarios for the potential level of sea level rise but even the smallest of these is likely to damage coastlines and cause greater flooding along coast and river courses. • Some of the worlds largest cities are at risk from sea level rise including New York and Tokyo which represent significant global financial centres. Damage in these locations would have a global effect. • There are a range of threats links to global climate change including sea level rise, desertification, changing weather patterns, ecosystem challenges, health challenges and changing patterns of food production. <p>A03</p> <ul style="list-style-type: none"> • Rising global temperatures as an indicator of global climate change will have wider impacts than just sea level rise. • Atmsopheric systems are likley to be altered as temperatures will have changed, and a different level of moisture in the air, which has the potential to cause more frequent and extreme weather events. • Rising global temperatures are likely to increase risk of desertification for areas of the globe, introducing desertification into some areas, and making it worse in others. Increased desertification has the potential to impact livelihoods across the globe in terms of the availability of land for agriculture. • Globla climate change will lead to a range of threats which will have various social, economic and environmental impacts. • Changing global temperatures may have an impact on the prevalence of insects, bacteria, and viruses which can affect animal and food crops in other countries. • Many of the threats from global climate change are interconnected and cannot be seen independently.

		<p>AO4</p> <ul style="list-style-type: none"> • Figure 7b shows the varied levels of population at risk from different levels of sea level rise. • Figure 7b shows how Asia will be the continent the most affected by either 0.15m sea level rise potentially affecting 60.2 million people. • Figure 7b presents a range of threats from global climate change in a rank order suggesting that global sea level rise is the greatest, but covers other economic, social and environmental threats. • Figure 7c shows how there a range of potential threats from climate change.
Level	Mark	Descriptor
	0	No rewardable material.
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 but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) <ul style="list-style-type: none"> • Uses geographical skills to obtain 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 between 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 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>D Tourism that considers all its current and future economic, social and environmental impacts.</p>	(1)

Question number	Answer	Mark
8(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each correct role up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Environmental damage (1). • Pollution (1). • Erosion of local cultures (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
8(a)(iii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C Increased disposable income.</p> <p>A, B, and D are incorrect as they are not reasons for the growth of global tourism.</p>	(1)

Question number	Answer	Mark
8(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>2000-2010 / 2005-2015 (1)</p>	(1)

Question number	Answer	Mark
8(b)(ii)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for the comparison using data Figure 8a (and a further mark for additional development, up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • In the 1990s the imports and export are similar (1), e.g. in 1990 around US\$420 billion compared to around US\$420 billion (1). • By 2010s exports were often much higher than imports (1) for example by 2014 exports were above 1775 US\$ billion compared to imports of around 1500 US\$ billion (1). • There has been an overall dramatic rise in the value of exports and imports over these decades (1), from 400 US\$ billion in 1990 to nearly 1800 US billion by mid 2010s (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
8(b)(iii)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Award 1 mark (AO2) for a suitable reason and a further mark (AO2) for development up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • The value of goods and services has fallen (1) so products not being imported (1). • As Germany has developed its secondary/tertiary/quaternary industries (1) there have been more goods and services to export (1). • Increased global trading relationships and global supply chains (1) mean more exports needed to take place (1). • Involvement in EU (1) lead to increased trading relationships and exports (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
8(b)(iv)	<p style="text-align: center;">AO2 (1 mark)/AO3 (1 mark)</p> <p>Award 1 mark (AO3) for identification of a reason and a further mark for development of the reason (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Increased exports indicate trading relationships with other countries (1) which suggest more interconnectedness of economies (1). • Increased volumes of money being involved in global trade (1) which indicates a more prosperous global economy (1). 	

	Accept any other appropriate response.	(2)
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Question number	Answer	Mark
8(c)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each way technology has encouraged growth of the global economy, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Internet access has increased global trade (1). • High tech industries have created high value goods and services (1). • Use of mobile phone technology has provided internet access for more people (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
8(d)	<p style="text-align: center;">AO1 (2 marks) / AO2 (2 marks)</p> <p>Award 1 mark for a suitable cost identified and an additional 1 mark for development through further explanation or exemplification. Maximum 2 marks for each cost explained.</p> <p>For example:</p> <ul style="list-style-type: none"> • Some TNCs might not have good environmental standards (1) creating more pollution or environmental damage (1). • Worker conditions may be poor (1) so not creating better livelihoods (1). • Some TNCs are often foreign owned (1) so the economic benefits do not stay within the host country (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	Mark
8(e)	<p style="text-align: center;">AO3 (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 the following.</p>	

	<p>A03</p> <ul style="list-style-type: none"> • International migration patterns vary across the globe, with some regions typically experiencing more out migration than in-migration. • Such patterns have varied impacts on both host and donor countries. • Donor countries may experience a loss of young people as these age groups tend to be more likely to be involved in migration. • This can leave some sectors of employment with a lack of workers. This can lead to rural decline if there are not enough worker to support primary industry. • Some migrants will send back remittances to their families so there may be some economic benefit for the donor country. <p>A04</p> <ul style="list-style-type: none"> • Figure 8b shows how some countries have a larger percentage of their population as international migrants which has implications for donor countries. • Figure 8b shows how certain regions have much lower levels of international migrants in their populations suggesting they are more likely to be donor countries. 	(6)
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 are supported by limited evidence. (A03) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	4–6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (A03) • Uses geographical skills to obtain information that supports some aspects of the argument. (A04)

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 the following.</p> <p>AO2</p> <ul style="list-style-type: none"> • Increased migration both internally and internationally has had a profound impact on the global economy. • The ability for many countries to develop has been through processes of industrialisation which is fuelled by rural-urban migration of particularly young people. The economic growth concentrated in cities fuelled by this movement of people provides the foundations for the global economy. • International migration has allowed the transfer of skilled people in and as such the potential for economic. <p>AO3</p> <ul style="list-style-type: none"> • The rise of the global economy has been fuelled by many different factors, and the movement of people is as important as the movement of goods. For many countries it is the access to suitably skilled workers which unlocks the countries potential to develop its industries, and as such their economy, and in turn the global economy. • The movement of people has also placed strain on some economies, which can restrict the potential for economic growth in some cases, as resources are focused on providing for growing populations. • The rise of the global economy has been fueled by processes of globalization which encompasses the movement of goods and people but also cultures. <p>AO4</p> <ul style="list-style-type: none"> • Figure 8b shows levels of international migration across the world. • Figure 8b shows that significant levels of migration affecting countries in South America to North America, and within Asia. • Figure 8c indicates a series of factors that have affected the rise of the global economy including not only migration but also information technology, transport networks, foreign investment, employment, and international aid. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and

		<p>the interrelationship between places, environments and processes. (AO2)</p> <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) • 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 but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) <ul style="list-style-type: none"> • Uses geographical skills to obtain 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 between 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 information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
9(a)(i)	AO1 (1 mark) C - Percentage of GDP spent on education (1).	(1)

Question number	Answer	Mark
9(a)(ii)	AO1 (2 marks) The number of deaths per 1,000 live births (1) of children under one year of age (1).	(2)

Question number	Answer	Mark
9(a)(iii)	AO1 (1 mark) B - Life expectancy (1) A, C and D are all incorrect as they are not components of the Human Development Index.	(1)

Question number	Answer	Mark
9(b)(i)	AO3 (1 mark) 1986 (allow 1985-1987) (1)	(1)

Question number	Answer	Mark
9(b)(ii)	AO3 (2 marks) Award 1 mark for the comparison using data from Figure 9a and a further mark for additional development, up to a maximum of 2 marks per idea. <ul style="list-style-type: none"> • The birth rate and the death rate have both experienced a decline, from different starting points (1). The birth rate has seen the largest decrease from 49 in 1960 to 22 in 2016 (1). • The birth rate experienced a smooth decline (1) while the death rate experienced a slight increase for a few years in the late 1960s (1). Accept any other appropriate response.	(2)

Question number	Answer	Mark
9(b)(iii)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Award 1 mark (AO3) for identification of a reason and a further mark for development of the reason (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Increased health services (1) which can reduce the infant mortality rate which can reduce the number of children people try to have (1). • Increased access to education for girls and women (1) which increases knowledge of contraception (1). • Increased access to education for girls and women (1) which means they are more likely to enter the labour market which can reduce the reproductive span (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
9(b)(iv)	<p style="text-align: center;">AO2 (1 mark)/AO3 (1 mark)</p> <p>Award 1 mark (AO3) for identification of a reason and a further mark for development of the reason (AO2), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Declining death rate suggests better health care (1) which could be due to greater investment from the government based on improved economic development (1). • Declining birth rates may indicate better education (1) particularly around family planning as a consequence of better economic development (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
9(c)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for each international strategy, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Bilateral aid (1) • International NGOs provide appropriate technology (1) • International trade agreements (1) • Top down including funding for major infrastructure (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
9(d)	<p style="text-align: center;">A01 (2 marks) /A02 (2 marks)</p> <p>Award 1 mark for initial identification of an advantage or disadvantage and an additional 1 mark for development through further explanation or exemplification. Maximum 2 marks for each advantage.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Microfinance lending schemes to women (1) have enabled families to start their own businesses and improve their quality of life (1). • Household solar panels (1) allow a more reliable energy supply for remote rural areas giving them access to more facilities (1). • Self-help schemes to improve housing conditions (1) which can have a positive impact on health (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	Mark
9(e)	<p style="text-align: center;">A03 (3 marks)/A04 (3 marks)</p> <p>Assess the importance of water security on the global pattern of development.</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 the following.</p> <p>A03</p> <ul style="list-style-type: none"> • Food security is an important factor that can affect a countries economic development. Food consumption is seen as a quality of life indicator. • If populations face food shortages, this can lead to health implications, which not only place greater stress on health care services, but also mean there is a less productive workforce that could otherwise be contributing to the economy. • Food security is one of many economic, social and environmental factors that affect global patterns of economic development. 	

	A04	
	<ul style="list-style-type: none"> • Figure 9b shows the global variation in global hunger via the Global Hunger Index but does not cover all regions as some of the more developed countries do not have calculated data. • Figure 9b shows that the majority of Africa and south east Asia are experiencing serious or alarming levels of hunger. • Figure 9b shows South America, and north and east Asia experience lower levels of hunger. • Figure 9b shows that the level of hunger is most varied in Africa compared to other continents. 	(6)
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 are supported by limited evidence. (A03) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (A04)
Level 2	4–6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (A03) • Uses geographical skills to obtain information that supports some aspects of the argument. (A04)

Question number	Indicative content
9(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 the following.</p> <p>AO2</p> <ul style="list-style-type: none"> • Economic indicators are useful for assessing levels of development as they indicate the level of prosperity a country has, and their involvement in the global economy. • GDP, GNP and PPP, are all indicators which can be used for clear comparison of a country's relative development. The value of goods and services and how it is divided by its population (per capita indicators) provide clear measure of the size of the economy which can be used to compare to other countries. • Inequality in wealth reveals more about a countries development than simply the size of it's economy but how evenly the wealth is spread across the population. • Economic structures (sectors) can indicate the strength of particular industries, with changes associated with increased levels of development. <p>AO3</p> <ul style="list-style-type: none"> • There are a wide range of fators that can affect economic development from availability of resources (natural resources, technology, enterprise, innovation and labour), external boosters (globalisation, presense of TNCs, and geopolitics), and internal situations (government policies, business culture). • The Human Development Index is comprised of a number of indicators (life expectancy, education, per capita income) – economic indicators are a key part of this but as a component of a more complex system. • Demographic characteristics including birth rate, death rate, infant mortality rate, maternal mortality rate etc are important factors that can affect a population's development pathway. Demographic characteristics are often used as an indicator of stage of development in the demographic transition model, but they are depicted more as a consequence of development stage rather than a factor affecting the development. • Some demographic characteristics act as a barrier to economic development processes including high death rates, and low life expectancy <p>AO4</p> <ul style="list-style-type: none"> • Figure 9b shows the global variation in global hunger via the Global Hunger Index. • Figure 9b shows that the majority of Africa and south east Asia are experiencing serious or alarming levels of hunger.

		<ul style="list-style-type: none"> Figure 9c display a selection of economic and social development indicators including GDP per capita, HDI, life expectancy, infant mortality rates, food consumption and literacy rate. This includes both individual indicators and composite indicators (such as HDI).
Level	Mark	Descriptor
	0	No rewardable material.
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 but understanding and connections are flawed. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) <ul style="list-style-type: none"> Uses geographical skills to obtain 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 between 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 information that supports all aspects of the argument. (AO4)