



Mark Scheme (Results)

Summer 2019

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

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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.

How to award marks when level descriptions are used

1. Finding the right level

The first stage is to decide into 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.

For example, one stronger passage at L4 would not by itself merit a L4 mark, but it might be evidence to support a high L3 mark, unless there are substantial weaknesses in other areas. Similarly, an answer that fits best in L3 but which has some characteristics of L2 might be placed at the bottom of L3. An answer displaying some characteristics of L3 and some of L1 might be placed in L2.

2. Finding 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.

Levels containing 2 marks only

Start with the presumption that the work will be at the top of the level. Move down to the lower mark if the work only just meets the requirements of the level.

Levels containing 3 or more marks

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)	AO1 (1 mark) A pre-industrial A is the correct answer as the other options do not relate to the correct stage with agriculture.	(1)

Question number	Answer	Mark
1(b)	AO1 (1 mark) Award 1 mark for any of the following. • How the workforce is divided up between the three main employment sectors - primary, secondary and tertiary. (1). • The proportions / percentage of people in the primary, secondary and tertiary workforce. (1). Accept any other appropriate response.	(1)

Question number	Answer	Mark
1(c)	AO1 (1 mark) C Secondary C is the correct answer as the other options do not include manufacturing.	(1)

Question number	Answer	Mark
1(d)	AO3 (1 mark) / AO1 (1 mark) Award 1 mark (AO3) for a reason from the resource and a further mark (AO1) for extension through explanation, up to a maximum of 2 marks: • Tertiary and quaternary is the largest sector (1) because they have a well-educated labour force (1). • 27% of manufacturing (secondary) is the highest (1) because Turkey is developing its manufacturing economy as part of its industrialisation (1).	

	• Primary, e.g. agriculture is nearly $\frac{1}{4}$ of the GDP (1) because the economy is still reliant on the primary sector (1). • Globalisation has allowed the country to received more foreign investment (1) causing the growth of the tertiary and quaternary sectors (1). Accept any other appropriate response, e.g. growth in air travel, tourism, containerisation, high skilled workforce, rural urban migration etc. Note: Just stating the data, with no reason can get 1 mark.	(2)
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Question number	Answer	Mark
1(e)	AO1 (1 mark) Award 1 mark for any of the following. • Coal (1) • Oil / Tar sands (1) • Natural gas (1) • Shale gas (1) Accept nuclear.	(1)

Question number	Answer	Mark
1(f)	AO2 (2+2 marks) Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each. • Availability of energy resources (1) places which have a lot, e.g. oil, often consume in high amounts as its cheaper (1). • Price of energy within a country (1) will impact on supply and demand within a region or country (1).	

	- Some places countries have larger populations (1) therefore will demand more energy (1). - In some hot countries, they require more cooling to keep people comfortable (1) so more energy is needed to operate fridges and air-conditioning (1). Accept any other appropriate response, e.g. factors such as population density.	(4)
Question number	Answer	Mark
1(g)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark (AO3) for an idea from the resource and a further 2 marks (AO2) for extension through explanation, up to a maximum of 3 marks. - Employment costs may be cheaper overseas (1) due to the workforce being based in an emerging economy country (1) which means the manufacturer saves overall costs (1). - Advances in technology have allowed manufacturing to relocate overseas (1) which has stimulated the growth of new jobs in this industry (1) but still maintained the quality of the finished product (1). - Places such as China offer car manufacturers new markets (1) so they can sell more vehicles when manufactured locally (1) and ultimately make more profit for shareholders (1). - Ford's preference for China rather than Mexico is due to costs of production (1). China has a large labour supply and can offer competitive labour rates (1) so Ford is making a decision to move to the lowest cost country to maximise returns (1). Accept any other appropriate response.	(3)

Question number	Answer	Mark
1(h)	AO2 (4 marks) Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. Maximum of 2 marks (1 per way) when no named developing / emerging country is used in context, or a developed country is used instead. A range of countries and examples could be chosen, based on either increasing production, switching to using “greener” approaches, or reducing demand, e.g. with policies and incentives. • In China the government have promoted the use of solar panels to generate electricity (1) this is because they are environmentally low carbon and cheaper than non-renewable energy (1). • China have become much more energy self-sufficient through the use of government policies to encourage HEP (1). This is a cleaner technology which doesn't rely on harmful fossil fuel combustion (1). • In Beijing (China) the government has recently encouraged all new buildings to have better insulation for hot summer temperatures (1) therefore reducing electricity demand for electric A/C in the summer (1). Accept any other appropriate response. Note: Accept a city, e.g. Mumbai can be accepted as India.	(4)

Question number	Indicative content
1 (i)	AO3 (4 marks)/AO4 (4 marks) 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. 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:

AO3 • Malthus thought that if the human population continued to grow, food production would not be able to keep up with demand and there would not be enough food to go around. The result, he warned, would be a terrible famine that would kill many people. • Boserup suggested that food production can, and will, increase to match the needs of the population - Boserup described this change as 'agricultural intensification'. • Boserup used her knowledge of farming in the developing world, where populations were growing quickly, Boserup argued that the threat of starvation and the challenge of feeding more mouths motivates people to improve their farming methods and invent new technologies in order to produce more food. • In contrast Malthus was arguing that the human population was at risk of outgrowing its carrying capacity (the number of individuals that can be supported by a specific habitat). At the time when he was writing the Industrial Revolution had not yet arrived, and without developments such as pesticides and fertilisers the amount of food that could be produced per acre of land was much smaller than it is today. AO4 • Figure 1c shows the differences between two population theories, with both increasing demand for food and a growing population. • On Figure 1c, it can be seen that the models are very different to each other, with different assumptions about futures. • Figure 1c shows that Malthus assumes a linear or steady relationship between population and food resources, but where the population line (red) intersects the model (green line) then there is a collapse or catastrophe. • Figure 1c shows that the Boserup theory indicates that the food resource can keep pace with the increase in population, and the red line never intersects the blue line of the model. • Overall the population increases at an exponential rate.		
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	• 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	- 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	- 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)	AO1 (1 mark) A the outward growth of urban development A is the correct answer as the other options do not describe suburbanisation.	(1)

Question number	Answer	Mark
2(b)	AO1 (1 mark) A genetically modified (crop).	(1)

Question number	Answer	Mark
2(c)	AO1 (1 mark) C timber A is the correct answer as the other options do not include goods from natural ecosystems.	(1)

Question number	Answer	Mark
2(d)	AO3 (1 mark) / AO1 (1 mark) Award 1 mark (AO3) for evidence from the image and a further mark (AO2) for extension through explanation, up to a maximum of 2 marks: • A good supply of water (rainfall or irrigation) from the mountains (1) which means the plants have high yield (1). • The climate will be relatively hot during the day in Taiwan (1) so the plants grow well increasing productivity (1). • Appears to be a flat and possibly lowland area (1) so the field can be flooded / irrigated for the crop to thrive (1). • Large area (of open space) with few buildings in the foreground (1) so they can grow a large crop of rice (1) Accept any other appropriate response, e.g. able to use machinery, quality of soil, weather which can be inferred from the resource.	(2)

Question number	Answer	Mark
2(e)	AO1 (1 mark) Award 1 mark for any of the following. • Add nutrients (1) • Add fertilizers (1) • Drain fields (1) Accept any other appropriate response.	(1)

Question number	Answer	Mark
2(f)	AO2 (2+2 marks) Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each. • To increase farm income (1) by switching to an alternative system then more money can be generated (1). • Diversification can add value to farm products (1) e.g. selling meat grown on the farm to local markets / people (1). • Farmers are paid to transform their landscape (1), e.g. there are government subsidies available for managing woodland for conservation (1). Accept any other appropriate response, e.g. growing different crops to maintain soil health, avoid risk from climate change etc.	(4)

Question number	Answer	Mark
2(g)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark (AO3) for a trend from the resource and a further 2 marks (AO2) for extension through explanation, up to a maximum of 3 marks. • Decreasing employment in rural areas (1) which results in rural-urban migration (1) as people try to find better paid jobs in other sectors / the city (1). • There is a decrease in agricultural employment as people are finding different jobs (1) as alternative employment will likely pay better (1) which means the that the employee has a better overall quality of life (1). • The increase in non-agriculture employment comes as a result of changing employment structures (1) which has stimulated the growth of new jobs in industry (1) and there are also more jobs in the tertiary sector as the country develops (1). Accept any other appropriate response, including ideas linked to urbanisation, agricultural mechanisation, changing crop types and structural employment changes.	(3)

Question number	Answer	Mark
2(h)	AO2 (4 marks) Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. Maximum of 2 marks (1 per way) when no named developing / emerging country is used in context, or a developed country is used instead. A range of countries and challenges could be chosen, based on either increasing production, switching to using “greener” approaches, or better soil management etc, e.g. with policies and incentives. • In rural China the government have promoted the use of solar panels to generate electricity (1) this is because they are environmentally low carbon and cheaper than non-renewable energy (1). • In the Vietnam Programme 133 has provided credit to farmers (1) and this is linked to local investment in infrastructure to help reduce poverty (1). • In Vietnam the government have also paid for better rural health and education services (1) which have been aided by NGOs and have lifted some people out of poverty (1). Accept any other appropriate response, but must be rural in context. Note group can be implicit (i.e. through the answer) or explicit for credit. Note: Country (or area within a country) must be developing or emerging for full credit.	(4)

Question number	Indicative content
2 (i)	AO3 (4 marks)/AO4 (4 marks) 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. 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:

	AO3 • Biomes are large scale or global scale ecosystem units. • Climate is the most important factor (precipitation and temperatures) in controlling the distribution in Figure 2c • There is a complex relationship between soils, climate and vegetation which affect this overall distribution pattern; for example climates with seasonal rainfall may have different biomes compared to those with more year-round precipitation. • The pattern of biomes can be interrupted locally by people, e.g. agricultural systems which can modify the vegetation, although this map (Figure 2c) is unable to show these local scale effects. AO4 • Figure 2c shows the overall distribution of the worlds biomes is largely controlled by latitude • On Figure 2c, it can be seen that there are also more local effects of altitude or continentality that disrupt the pattern of vegetation. • Figure 2c shows that deserts for example are common in North Africa and central Australia, whereas much of northern Russia and Canada has a large belt of tundra. • The large mountain ranges of the Andes, Himalayas and Rockies affect the patterns with tundra and taiga common at high altitude.	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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	• 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	• 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) A increasing proportion of people living in urban areas A is the correct answer as the other options do not describe urbanisation.	(1)

Question number	Answer	Mark
3(b)	AO1 (1 mark) A city with a population of over 10 million people (1). Accept a population of 10 million.	(1)

Question number	Answer	Mark
3(c)	AO1 (1 mark) C a location that has illegally built housing C is the correct answer as the other options do not describe characteristics of informal housing / squatter settlements.	(1)

Question number	Answer	Mark
3(d)	AO3 (1 mark) / AO1 (1 mark) Award 1 mark (AO3) for evidence from the image and a further mark (AO2) for extension through explanation, up to a maximum of 2 marks: - Heavily congested roads are slow (1) which means that people will likely take a long time to travel any distance / its hard to travel around (1) - The rickshaws are packed together (1) which is dangerous / there are likely a lot of traffic injury's and even deaths (1) - Appears to be no evidence of traffic management, e.g. lines on the road (1) so this can lead to more accidents and congestion (1).	

	The photograph shows lots of traffic congestion (1) as there are many cars / taxis tightly packed together / not really moving (1). Accept any other appropriate response, e.g. pollution and emissions, dangerous etc inferred from resource	(2)
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Question number	Answer	Mark
3(e)	AO1 (1 mark) Award 1 mark for any of the following. - Air pollution (1) - Waste management / disposal (1) - Clean water (1) Accept any other appropriate response.	(1)

Question number	Answer	Mark
3(f)	AO2 (2+2 marks) Award 1 mark for a reason and a further expansion mark, up to a maximum of 2 marks each. - Prices of land typically increase towards the city centre (1) therefore only certain land-uses and activities can afford the rents / spaces (1). - Historic reasons such as growth of urban areas next to a river (1) can mean that the core CBD is in a particular / unusual location (1). - Transport routeways and nodes can influence land-use patterns (1) as these offer points of access which means that housing or industry can develop next to points of accessibility (1). Accept any other appropriate response, e.g. other linked factors such as density, pollution, desirability, planning etc.	(4)

Question number	Answer	Mark
3(g)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark (AO3) for an idea from the resource and a further 2 marks (AO2) for extension through explanation, up to a maximum of 3 marks. - Englewood has much lower household income compared to Clearing (1) which means that people have lower levels of disposable income (1) which means that they can spend less on entertainment for instance so a lower overall quality of life (1). - Clearing has a much higher poverty rate compared to Englewood (1) which means that people cannot afford many luxuries (1) and therefore are experiencing a lower quality of life in Englewood compared to Clearing (1). Accept any other appropriate response, e.g. ideas related to population and jobs being hard to find etc.	(3)

Question number	Answer	Mark
3(h)	AO2 (4 marks) Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. Maximum of 2 marks (1 per way) when no named developing / emerging country is used in context, or a developed country is used instead. A range of countries and examples could be chosen, based on either waste management, water supply, transport etc, e.g. with policies and incentives. - In urban Brazil, the government have promoted the use of solar panels to generate electricity (1) this is because they are environmentally low carbon and cheaper than non-renewable energy (1). - In the Sao Paulo an NGO has provided credit to people in squatter settlements (1) and this is linked to local investment in infrastructure to help reduce pollution from car transport (1).	

	In Curitiba (Brazil), a group of companies have also paid for better urban health and education services (1) which have been aided by NGOs and have lifted some people out of poverty so they can afford better urban housing (1). Accept any other appropriate response, but must be urban in context. Can be generic. Note group can be implicit (i.e. through the answer) or explicit for credit. Country must be developing or emerging for credit.	(4)
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Question number	Indicative content
3 (i)	AO3 (4 marks)/AO4 (4 marks) 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. 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: AO3 - Historically cities such as New York, Paris and London have developed because of trade links (especially the Colonialism influence) – the “Old World”. - The complex pattern may be controlled by migration, both with countries (especially SE Asia and rural urban migration) or between countries – as set of push and pull factors operating. - Physical geography and access to trade and markets would have controlled population growth and expansion especially in the last 200 years. - Political governance influences patterns of trade and growth and has influence the pattern and distribution shown, e.g. growth of Chinese megacities and the country has developed and opened its borders to more trade. - The megacities of the wealthier countries in have much lower growth rates or even declining populations in future, so this is a factor of more recent urbanisation. AO4 - Figure 3c shows the megacities are distributed across the surface of the earth. - On Figure 3c, it can be seen that there is a concentration of megacities around India and China especially.

		- Figure 3c shows that Africa has a few megacities based on its land area. - Australia is notable without any megacities and much of Europe does not have any.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	- 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	- 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	- 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)	AO3 (1 mark) Award 1 mark for any of the following. • Newspapers (1) • GIS map / paper map (1) • Book / magazine (1) • Government report / policy document (1) • Blog / forum / social media (1) Accept any other appropriate response.	(1)

Question number	Answer	Mark
4(a)(ii)	AO3 (2 marks) Award 1 mark for a reason further mark for extension through explanation, up to a maximum of 2 marks: • It allowed find out about the spatial variation in the area of study (1) so that we knew that we would get good spatial coverage to minimise bias (1). • Stratified sampling was used as we had census data about the towns population (1) so we could design a fair sampling frame for the questionnaire about energy that we were using (1). Accept any other appropriate response. Note: no credit for just restating the secondary data type.	(2)

Question number	Answer	Mark
4(b)	AO3 (2 marks) Award 1 mark for identifying a reason and a further expansion mark up to a maximum of 2 marks. Nature of risk, and risk management will vary depending on the location as well as the context of the investigation. • It was linked to an urban area close to school (1). Therefore, the data we collected would help answer the initial question set (1). • The model of coastal sand dune succession allowed us to test a theory (1), so the title and focus was established to challenge the assumptions in the model (1). • The title was both manageable and achievable. (1). Meaning that our primary data could be designed to fully answer the title set (1). Accept any other appropriate response.	(2)

Question number	Answer	Mark
4(c)	AO4 (3 marks) Award 1 mark for identification of a reason and a further mark(s) for an explanation of the reason, up to a maximum of 3 marks: The EQA scale only goes from -5 to + 5 and it is uncalibrated (1). This means that scores recorded by different people vary (1) which caused inaccuracies in the comparison between sites (1). A poor quality closed questions questionnaire used would have potential for errors to be introduced (1) for example by an inappropriate sequencing of questions (1) which would cause inaccurate findings to be recorded (1). Accept any other appropriate response.	(3)

Question number	Answer	Mark
4(d)	AO3 (4 marks) Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each. Nature of qualitative techniques utilised will vary depending on the location as well as the context of the investigation. • We used quantitative tools such as mean and median (1) so we could find measures of centrality in our data (1). • Annotated sketches based on photographs from the fieldwork were used (1) and the selected annotations were able to highlight processes operating in the area (1). • A computer spreadsheet was used to calculate the spread and range in our questionnaire data (1) so that we could compare the outcomes between the two sample sites (1). Accept any other appropriate response. Note: allow presentation in the context of analysis.	(4)

Question number	Indicative content
4(e)	AO3 (4 marks)/AO4 (4 marks) 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. 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: AO3 • 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 incomplete as the nature of the questions asked is not present on the key so it's difficult to draw conclusions.

		- Figure 4b only shows one picture, so this might be biased as some could have been missed, therefore this technique is limited in its appropriateness. - Recognition of issue in presentation (both Figure 4a and b) may be flawed in terms of approach and usage. - An evaluation of how far the presentation techniques can be trusted may be provided. AO4 - In Figure 4a there is no totals column for the Peoples Responses - In Figure 4a there is no strongly agree category - In Figure 4a the colours may be the wrong choice of plot technique - In Figure 4b only 2 opinions are shown (there may have been more). They may have been edited. - In Figure 4b there is no idea as to how the responses were selected - In Figure 4b show anything about the area / context of where the interview took place and when.
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- 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	- 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	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)
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Question number	Answer	Mark
5(a)(i)	AO3 (1 mark) Award 1 mark for any of the following. • Newspapers (1) • GIS map / paper map (1) • Book / magazine (1) • Government report / policy document (1) • Blog / forum / social media (1) Accept any other appropriate response.	(1)

Question number	Answer	Mark
5(a)(ii)	AO3 (2 marks) Award 1 mark for a reason further mark for extension through explanation, up to a maximum of 2 marks: • It allowed find out about the spatial variation in the area of study (1) so that we knew that we would get good spatial coverage to minimise bias (1). • Stratified sampling was used as we had census data about the villages population (1) so we could design a fair sampling frame for the questionnaire about energy that we were using (1). Accept any other appropriate response. Note: no credit for just restating the secondary data type.	(2)

Question number	Answer	Mark
5(b)	AO3 (2 marks) Award 1 mark for identifying a reason and a further expansion mark up to a maximum of 2 marks. Nature of risk, and risk management will vary depending on the location as well as the context of the investigation. • It was linked to a village close to school (1). Therefore, the data we collected would help answer the initial question set (1). • The model of rural-urban fringe allowed us to test a theory (1), so the title and focus was established to challenge the assumptions in the model (1). • The title was both manageable and achievable. (1). Meaning that our primary data could be designed to fully answer the title set (1). Accept any other appropriate response.	(2)

Question number	Answer	Mark
5(c)	AO4 (3 marks) Award 1 mark for identification of a reason and a further mark(s) for an explanation of the reason, up to a maximum of 3 marks: • The EQA scale only goes from -5 to + 5 and it is uncalibrated (1). This means that scores recorded by different people vary (1) which caused inaccuracies in the comparison between sites (1). • A poor quality closed questions questionnaire used would have potential for errors to be introduced (1) for example by an inappropriate sequencing of questions (1) which would cause inaccurate findings to be recorded (1). Accept any other appropriate response. Allow secondary as a type of data.	(3)

Question number	Answer	Mark
5 (d)	AO3 (4 marks) Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each. Nature of qualitative techniques utilised will vary depending on the location as well as the context of the investigation. • We used quantitative tools such as mean and median (1) so we could find measures of centrality in our data (1). • Annotated sketches based on photographs from the fieldwork were used (1) and the selected annotations were able to highlight processes operating in the area (1). • A computer spreadsheet was used to calculate the spread and range in our questionnaire data (1) so that we could compare the outcomes between the two sample sites (1). Accept any other appropriate response. Note: allow presentation in the context of analysis.	(4)

Question number	Indicative content
5(e)	AO3 (4 marks)/AO4 (4 marks) 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. 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: AO3 • 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's difficult to draw conclusions.

		- Figure 5b only shows one picture, so this might be biased as some could have been missed, therefore this technique is limited in its appropriateness. - Recognition of issue in presentation (both Figure 5a and 5b) may be flawed in terms of approach and usage. - An evaluation of how far the presentation techniques can be trusted may be provided. AO4 - In Figure 5a there is no totals column for the Peoples Responses - In Figure 5a there is no strongly agree category - In Figure 5a the colours may be the wrong choice of plot technique - In Figure 5b only 2 opinions are shown (there may have been more). They may have been edited. - In Figure 5b there is no idea as to how the responses were selected - In Figure 5b show anything about the area / context of where the interview took place and when.
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- 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	- 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	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)
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Question number	Answer	Mark
6(a)(i)	AO3 (1 mark) Award 1 mark for any of the following. • Newspapers (1) • GIS map / paper map (1) • Book / magazine (1) • Government report / policy document (1) • Blog / forum / social media (1) Accept any other appropriate response.	(1)

Question number	Answer	Mark
6(a)(ii)	AO3 (2 marks) Award 1 mark for a reason further mark for extension through explanation, up to a maximum of 2 marks: • It allowed find out about the spatial variation in the area of study (1) so that we knew that we would get good spatial coverage to minimise bias (1). • We used census data about the towns population (1) so we could design a fair sampling frame for the questionnaire about energy that we were using (1). • The urban area has lots of people / activity (1) so that makes it idea / title measurable and achievable (1) Accept any other reasonable idea. Note: no credit for just restating the secondary data type.	(2)

Question number	Answer	Mark
6(b)	AO3 (2 marks) Award 1 mark for identifying a reason and a further expansion mark up to a maximum of 2 marks. • It was linked to a place close to school (1). Therefore, the data we collected would help answer the initial question set (1). • The urban model allowed us to test a theory (1), so the title and focus was established to challenge the assumptions in the model (1). • The title was both manageable and achievable. (1). Meaning that our primary data could be designed to fully answer the title set (1). • The urban area has lots of people / activity (1) so that makes it idea / title measurable and achievable (1) Accept any other appropriate response, including ideas around why the location was appropriate, or manageability – “straightforward” etc. Note: no credit for just stating the title of the enquiry.	(2)

Question number	Answer	Mark
6(c)	AO4 (3 marks) Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each. • The EQA scale (1) only goes from -5 to + 5 and it is uncalibrated (1). This means that scores recorded by different people vary (1). • A poor-quality closed questions questionnaire (1) used would have potential for errors to be introduced (1) for example by an inappropriate sequencing of questions (1). • When counting the number of vehicles (1) its possible to easily miss some cars out (1) making the results less reliable (1). • The language barrier was the language barrier (1) which means that have to use other people for the questionnaire (1) therefore taking more time to deliver it (1)	

	Accept any other appropriate response, including sampling as well as techniques in the context of “method”. Note: interviews and photographs are qualitative, so no credit. Accept questionnaires as quantitative.	(3)
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Question number	Answer	Mark
6(d)	AO3 (4 marks) Award 1 mark for a method and a further expansion mark, up to a maximum of 2 marks each. • We used quantitative tools such as mean and median (1) so we could find measures of centrality in our data (1). • Annotated sketches based on photographs from the fieldwork were used (1) and the selected annotations were able to highlight processes operating in the area (1). • A computer spreadsheet was used to calculate the spread and range in our questionnaire data (1) so that we could compare the outcomes between the two sample sites (1). Accept any other appropriate response, linked to analysis. Note: allow presentation in the context of analysis.	(4)

Question number	Indicative content
6(e)	AO3 (4 marks)/AO4 (4 marks) 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. 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:

	AO3 - 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 draw conclusions. - Recognition of issue in presentation (both Figure 6a and 6b) may be flawed in terms of approach and usage. - An evaluation of how far the presentation techniques can be trusted may be provided. AO4 - In Figure 6a there is no totals column for the Peoples Responses - In Figure 6a there is no strongly agree category - In Figure 6a the colours may be the wrong choice of plot technique - In Figure 6b only 2 opinions are shown (there may have been more). They may have been edited. - In Figure 6b there is no idea as to how the responses were selected - In Figure 6b show anything about the area / context of where the interview took place and when.	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	- 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	- 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	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)
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Question number	Answer	Mark
7(a)(i)	AO1 (1 mark) C volcanoes C is the correct answer as the other options include the impacts from people.	(1)

Question number	Answer	Mark
7(a)(ii)	AO1 (1 mark) D additional heat trapped as a result of human activities D is the correct answer as the other options include options not related to the enhanced greenhouse effect.	(1)

Question number	Answer	Mark
7(b)(i)	AO1 (1 mark) Award 1 mark for any of the following • Clearance / removal of a forest or stand of trees where the land is thereafter converted to a non-forest use (1) • Removal from tress into a different land use (1) • Cutting down of trees or woodland (1) • The destruction of forests or woodlands (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. • Brazil (1) • Zimbabwe (1)	(2)

Question number	Answer	Mark
7(b)(iii)	AO2 (2 marks) / AO3 (2 marks) Award 1 mark for the identification of a pattern shown on the map (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2 marks per idea. • Reforestation in some places (blue), e.g. USA has been caused by government policy which has encouraged replanting of forest cover (1). • Net increase in forest in China (1) is due to Low population densities e.g. in parts of China (1). • Deforestation e.g. south America (1) is caused by land conversion to agriculture as this is a profitable use of the productive farmland in this area (1) • Poor management of the forest reserve in Zimbabwe (1) is as a result of government corruption (1). Accept any other appropriate response. Note: Pattern can refer to individual countries, data from key or regions, e.g. Europe, EU etc.	(4)

Question number	Answer	Mark
7(c)	AO1 (2 marks) / AO2 (2 marks) 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: • Deaths from increased heat and heatwaves (1) so this means increased temperatures will greatly affect places like France and Spain (1). • Sea level rise affecting many low lying coastal areas and world cities (1). Linked effects of salinization and loss of agricultural productivity (1). • Droughts, and prolonged drought for some areas (1) leading to loss of health and livelihood (1). • Knock-on effects may be increased tensions over natural resources at risk from climate change (1) and even greater risk of conflict in areas of political instability (1).	

	Accept any other appropriate response, e.g. can be linked effects on people through environmental degradation.	(4)
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Question number	Answer	Mark
7(d)(i)	(AO4) 2 marks Award 1 mark for a correct answer and one mark for working: 2004 = 27.8 and 2012 = 4.7 (1) or working out with similar numbers, i.e. understands idea of difference / subtraction (highest and lowest values). Range = 23.1 (1) or 23100 (1) Note units not required.	(2)

Question number	Answer	Mark
7(d)(ii)	AO3 (2 marks) Award 1 mark for the identification of a pattern and 1 mark for further detail through description, up to a maximum of 2 marks. - Overall rates of loss have decreased in the time period (1) and the slowing the rate of deforestation has been roughly even (1). - Overall rates of loss have decreased (1) but the most significant slowing of the total loss occurs between 2004 and 2005 (1). Accept any other appropriate response. Data or data manipulation can be used as part of development to support an additional point.	(2)

Question number	Indicative content
7(e)	AO3 (3 marks)/AO4 (3 marks) 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. 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: AO3 The most important factors locally are likely to be conversion of forest to agriculture, illegal logging and mining. But the impacts of these will vary

		spatially and will depend on the geo-political arrangements in that country / region. • Longer term climate-change is a worrying factor because of its scale of impacts and the positive feedback / amplification mechanism. • Forest fires can be localised, and in some places controlled, but with increase temperatures and aridity, this is a factor that in the future will likely be very significant. • Causes are often interlinked and there can be a chain of causes that increase the pressure on the resource. AO4 • Figure 7c shows a range of different causes which are all linked to human activity. • Figure 7c shows causes that can operate at different geographical scales. • Figure 7c shows forest fires are natural but their impact damages ecosystems. • Figure 7c indicates that there is only a limited number of causes, but for some places there may be more.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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	• 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)	AO2 (4 marks), AO3 (4 marks), AO4 (4 marks) 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. Indicative content guidance

Question number	Indicative content
	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: AO2 • The term ‘sustainable’ can be defined in a range of ways, often to suit different arguments • Deforestation will have an impact on biodiversity, livelihoods, soil quality, hydrology etc so it is very important to consider a range of management options. • Rainforest structure will be threatened by rising sea levels caused by climate change; rainforest biodiversity could be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat. AO3 • A main cause of deforestation is poor management locally. However, different groups of people have different opinions about which strategy is the best/most effective – so this is complex • The challenge of global management of the issue is that crosses international boundaries – and therefore international cooperation is crucial– but these agreements are never straight forward to arrive at, or to implement • Attempts to mitigate against climate change threats, for example through sustainable management, can vary significantly for different fragile environments (judgements will depend on case studies). • A specific ecosystem’s natural ability to respond to management can vary, which means that management solutions often have to be tailored locally or regionally, so the global aspect is difficult • The development of alternative income streams for rural people may reduce deforestation, but the development of each type of strategy has its own advantages and disadvantages. AO4 • Figure 7a shows red “hotspots” of Brazil and Indonesia • Figure 7a shows some countries have had net forest gains between 1990 and 2015. • Figure 7b shows decrease in the annual rate of deforestation • Figure 7b shows the rate of deforestation slows between 2008 and 2012 • Figure 7c shows a range of different causes which are all linked to human activity. • Figure 7c shows causes that can operate at different geographical scales. • Figure 7c shows forest fires are natural but their impact damages ecosystems.

Question number	Indicative content	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	• 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	• 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	• 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) C technology C is the correct answer as the other options are not main factors linked to the rise of the global economy.	(1)

Question number	Answer	Mark
8(a)(ii)	AO1 (1 mark) D World Trade Organisation D is the correct answer as the other options are the incorrect abbreviations.	(1)

Question number	Answer	Mark
8(b)(i)	AO1 (1 mark) • Involves capital / money flows from one country to another (1). • Investment made by a firm / company / TNC / individual in one country into business interests located in another country (1). • Investment from one country into another country (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. • Norway (1) • Australia (1)	(2)

Question number	Answer	Mark
8(b)(iii)	AO2 (2 marks) / AO3 (2 marks) Award 1 mark for the identification of a pattern shown on the map (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2 marks per idea. • In the north hemisphere there is generally high globalisation (1) as there has been government trade policy promoting adoption of technology (1). • In much of Africa there is low globalisation index (1) since there is often low levels of technology penetration (1).	

	- Place such as south Africa have high globalisation (1) due to their access by port / is on the coast (1). - Norway has a high level of globalisation (1) as ether are very low levels of political interference and corruption (1). Accept any other appropriate response. Note: Pattern can refer to individual countries, data from key or regions, e.g. Europe, EU etc.	(4)
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Question number	Answer	Mark
8(c)	AO1 (2 marks) / AO2 (2 marks) Award 1 mark (AO1) for identification of an impact and a further mark (AO2) for an explanation of the reason, up to a maximum of 2 marks per idea: - More efficient market operation (1) so this means increased trade and money in economies (1). - Increased competition between producers (1) so consumers and business can get goods and services from any place / country, given the right price. (1). - More wealth equity throughout the world (1) as many people have created low-cost start-ups thanks to the global market-place (1). - Knock-on effects may be increased global security (1) as many government agencies now work alongside each other from different countries. (1). - Cultural exchange (1) with better communication technology people / families are able to more easily keep in touch (1) Accept any other appropriate response.	(4)

Question number	Answer	Mark
8(d)(i)	AO4 (2 marks) Award 1 mark for a correct answer and one mark for working:	

	Spain = 12.7 (1) and Italy = 3.0 (1) or working out with similar numbers, i.e. understands idea of difference / subtraction (highest and lowest values). Numbers may be in millions as well. Range = 9.7 (1) or 9 900 000 (1) Allow 9.5 – 9.9 (or in millions) Note units not required.	(2)
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Question number	Answer	Mark
8(d)(ii)	AO3 (2 marks) 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. • There is considerable variation in holiday visits across all countries (1) with Spain topping the list and Malta at the bottom (1). • Spain has more than twice the holiday visits compared to the next highest which is France (1) whereas Malta is the lowest (1). • Visiting friends and relatives shows less variation across countries (1), Irish Republic is highest and France is similarly high (1). • Business visits are a low proportion of all visit types (1) compared to holiday for example (1). Accept any other appropriate response. Note: candidates can compare 'Holiday' visit data with other visits as part of development.	(2)
Question number	Indicative content	
8(e)	AO3 (3 marks)/AO4 (3 marks) 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. 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: AO3	

		• The most important factors are likely to be technology and the media. But the effects of these will vary spatially and will depend on the geo-political arrangements in that country / region. • Longer term more disposable income and longer holiday time are important as nations become both more developed and more populous – therefore the scale of this one is large. • Range of holiday times may be more localise din some makers and some places, but with increased globalisation, this is a factor that in the future will likely be very significant. • Causal factors are often interlinked and there can be a chain of events that encourage mass tourism. • There could be some factors that in some regions are local or cultural which are not on this list and should not be overlooked. AO4 • Figure 8c shows a range of different causes which are all possible drivers of global mass tourism. • Figure 8c shows causes that can operate at different geographical scales. • Figure 8c indicates that there is only a limited number of causes, but for some places there may be more.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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	• 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)	AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)
	Marking instructions

Question number	Indicative content
	Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. 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: AO2 • The term ‘sustainable’ can be defined in a range of ways, often to suit different arguments • There are a range of impacts of tourism, some negative and some positive affecting people and their economies. • Many coastal resorts and cities which are tourism hotspots will be threatened by rising sea levels caused by climate change; local biodiversity could be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat. AO3 • A main cause of impact of tourism is overcrowding and disturbance. However, different groups of people have different opinions about which strategy is the best/most effective – so this is complex to manage. • The challenge of global management of the issue is that crosses international boundaries – and therefore international cooperation is crucial – but these agreements are never straight forward to arrive at, or to implement. Different countries and places will have different approaches to sustainability. • Attempts to mitigate against increased air travel for example, for example through carbon taxes and pricing, can vary significantly for different places (judgements will depend on case studies). • Globalisation and movement of people is very strongly linked to mass and international tourism. In the future as people become more connected, then tourism will increase globally. • Tourism impacts can vary spatially and temporally, which means that management solutions often have to be tailored locally or regionally, so the global aspect is difficult. • The development of alternative income streams for people (if tourism is reduced) may reduce some effects, but the development of each type of strategy has its own advantages and disadvantages. AO4 • Figure 8a shows red “not-spots” of central Africa and parts of the Middle East and SE Asia

Question number	Indicative content	
	- Figure 8a shows that Europe, N America and Australia for example have high scores of globalisation. - Figure 8b Shows there is considerable variation in holiday visits across all countries - Figure 8b Spain has more than twice the holiday visits compared to the next highest which is France (1) whereas Malta is the lowest (1). - Figure 8c shows a range of different causes which are all possible drivers of global mass tourism. - Figure 8c shows causes that can operate at different geographical scales. - Figure 8c indicates that there is only a limited number of causes, but for some places there may be more.	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	- 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	- 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	- 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	
		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)	AO1 (1 mark) C index of political corruption C is the correct answer as the other options do not include relevant measures of development	(1)

Question number	Answer	Mark
9(a)(ii)	AO1 (1 mark) D the number of births per woman in a population D is the correct answer as the other options are incorrect in relation to the options	(1)

Question number	Answer	Mark
9(b)(i)	AO1 (1 mark) • The (reliable) availability of water with an acceptable quantity (and quality) for health and livelihoods (1). • A place has enough water that is drinkable / the right quality (1). • Having access to clean available water (1). • Sustainable amount of water of acceptable quality (1) • A country is able to meet its water demands (1) Accept any other appropriate response. Must have idea of availability or “enough” for credit.	(1)

Question number	Answer	Mark
9(b)(ii)	AO3 (2 marks) Award 1 mark for any of the following, up to a maximum of 2 marks. • Ethiopia (1) • Madagascar (1)	(2)

Question number	Answer	Mark
9(b)(iii)	AO2 (2 marks) / AO3 (2 marks) Award 1 mark for the identification of a pattern shown on the map (AO3) and a further mark for an explanation of the reason (AO2), up to a maximum of 2 marks per idea. • In the north hemisphere there is generally high HDI (1) as there has been government policy promoting education and training (1). • In much of Africa there is low HDI (1) since there is often low levels of technology penetration (1). • Place such as South Africa have a medium HDI (1) as they tend to have more political stability (1). • Much of Europe has a high level of HDI (1) as there are very low levels of political interference and corruption (1). Accept any other appropriate response. Note: Pattern can refer to individual countries, data from key or regions, e.g. Europe, EU etc.	(4)

Question number	Answer	Mark
9(c)	AO1 (2 marks) / AO2 (2 marks) 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: • Uneven development within a country can lead to cores and periphery (1) so this means inequality in terms of incomes and employment opportunity (1).	

	- Poverty may be unequal at a range of different scales within a country (1) so consumers and businesses are split into the “haves” and “have-nots”. (1). - Spatial disparities can often be seen in terms of physical infrastructure, e.g. road and rail networks (1) and places can either feel connected or distant and inaccessible (1). Accept any other appropriate response.	(4)
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Question number	Answer	Mark
9(d)(i)	AO4 (2 marks) Award 1 mark for a correct answer and one mark for working: 1960 = 250 and 2012 = 60 (1) or working out with similar numbers, i.e. understands idea of difference / subtraction (highest and lowest values). Numbers may be in millions as well. Range = 190 (1) Allow 185 – 195 Note units not required.	(2)

Question number	Answer	Mark
9(d)(ii)	AO3 (2 marks) 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. - In all regions (countries) IMR have decreased (1) but rates of decrease vary considerably (1). - Some regions show even / linear rates of decrease in IMR over time, e.g. N America (1) whereas Sub-Saharan Africa shows a more variable rate 1963-2012 (1). - The biggest absolute decline is in the Middle East and North Africa (260-30 – 1960-2012) (1), whereas North America has seen a very low decline over the same time period (1). Accept any other appropriate response. Note: explicit use of data not required for max 2 marks.	(2)

Question number	Indicative content	
9(e)	AO3 (3 marks)/AO4 (3 marks) 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. 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: AO3 • The most important factors are likely to be world trade and the availability of resource. But the effects of these will vary spatially and will depend on the geo-political arrangements in that country / region. • Longer term, climate change and cultural factors are important as nations become both more developed and more populous – therefore the scale of this one is large. • Food availability may be more localised in some regions and some places, but with increased globalisation, this is a factor that in the future will likely be very significant. • Causal factors are often interlinked and there can be a chain of events that encourage uneven development • There could be some factors that in some regions are local or political which are not on this list and should not be overlooked. AO4 • Figure 9c shows a range of different causes which are all possible drivers of uneven global development. • Figure 9c shows causes that can operate at different geographical scales. • Figure 9c indicates that there is only a limited number of causes, but for some places there may be more.	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	• 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	• 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)
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Question number	Indicative content
9 (f)	AO2 (4 marks), AO3 (4 marks), AO4 (4 marks) 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. 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: AO2 • There are a number of strategies, some local, some regional, some national and some international that can reduce the development gap. • Strategies include: aid, fair-trade, trade, debt relief, investment as well as political reform and freedom of speech. • There are several groups (players) involved in the management of different strategies, e.g. governments, World Bank, UNESCO, Oxfam and the Red Cross. AO3 • A main cause of inequality / uneven is lack of available and access to resources. However, different groups of people have different opinions about how important this factor might be. • A challenge of global management of the issue is that crosses international boundaries – and therefore international cooperation is crucial– but these agreements and strategies are never straight forward to arrive at, or to implement. • Fertility and IMR is very strongly linked to uneven development, but arguably are not the main cause, so some could argue the resources are a symptom of uneven development, not the cause. • Knowledge and access to education are seen as keen enablers to development through improving people's quality of life. Others argue that economic development is very significant. • Longer term the conditions for creating human development may not be the same as the shorter term, i.e. improving quality of life, access to service, employment. They may in fact be more linked to reducing political corruption through better governance.

Question number	Indicative content	
	- Development can vary spatially and temporally, which means that management solutions often have to be tailored locally or regionally. AO4 - Figure 9a shows that big differences in global fertility rates - Figure 9a shows red “hotspots” of central Africa and parts of the Middle East and SE Asia, whereas the lowest rates are in parts of North America and Eurasia - Figure 9b Shows there is considerable variation in IMR across all countries. - Figure 9b shows in all cases IMR drops over time - Figure 9b shows South Asia has the largest drop over the 1960-2012 period. - Figure 9c shows a range of different causes which are all possible drivers of uneven global development. - Figure 9c shows causes that can operate at different geographical scales. - Figure 9c indicates that there is only a limited number of causes, but for some places there may be more.	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	- 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	- Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) - Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) - Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content	
Level 3	9–12	• 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)

