



Mark Scheme (Results)

Summer 2024

Pearson Edexcel International GCSE
In Geography (4GE1)
Paper 2R: 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> <p>D lack of education. (1)</p> <p>The answer cannot be A, B or C as these are not causes of informal employment.</p>	(1)

Question number	Answer	Mark
1(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable advantage:</p> <ul style="list-style-type: none"> • No taxes to pay (1) • Potential for flexibility in working hours (1) • Potential for income to support family (1) • Access to jobs with lack of formal education (1) • Less qualifications needed for jobs (1) • Access to cheaper goods and services (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
1(b)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D quaternary (1)</p> <p>It cannot be A, B or C as these are not the correct sector for a research scientist to be located.</p>	(1)

Question number	Answer	Mark
1(c)	<p style="text-align: center;">A02 (1 mark) / A03 (1 mark)</p> <p>Award 1 mark for basic evidence from the from the figure (A03) and a further 1 mark for extension through explanation (A02), up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Cars are being produced (1) and secondary sector involves the production of manufactured goods (1). <p>Car manufacturing (1) involves the conversion of raw materials to manufactured goods (1).</p> <p>Secondary sector involves manufacturing (1) and the figure shows cars being produced (1).</p> <ul style="list-style-type: none"> • Machinery involved in production (1) showing manufacturing which is a core activity of the secondary sector (1). • Few workers present (1) as a lot of work in secondary sector is completed by machines (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
1(d)	<p style="text-align: center;">A01 (1 mark)</p> <p>Award 1 mark for a suitable reason.</p> <ul style="list-style-type: none"> • Deindustrialisation (1) • Mechanisation/increase technology (1) • Population growth (1) • Change in demand for services (1). • Increased education (1). • Increase in disposable income (1) • Country development (1) • Urbanisation (1) • Investment by government/government policy (1) <p>Accept any other reasonable response.</p>	(1)

Question number	Answer	Mark
1(e)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for a suitable positive and negative impact and a further expansion mark, up to a maximum of 2 marks each. Maximum 2 marks for the positive or negative impact.</p> <p>Range of developed countries may be used. Shift to tertiary or quaternary sector will usually be used as context.</p> <p>Positive:</p> <ul style="list-style-type: none"> • Greater employment from tertiary jobs/services (1) which leads to higher income (1) • Greater employment in quaternary sector (1) due to increased innovation/increased availability of technology (1) <p>Negative:</p> <ul style="list-style-type: none"> • Decrease in primary/secondary (1) means imported goods so loss of jobs (1) • Deindustrialisation (1) unemployment/negative economic multiplier/spiral of decline (1) <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
1(f)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark (AO1) for reference to the level of investment shown in figure, and a further 2 marks (AO3) for extension with possible reference to the resource, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • Greater investment in renewable energy to increase energy security (1) and reduce reliance on fossil fuels (1) to reduce carbon emissions (1). • Increase in investment in electric vehicles to reduce use of petrol engine vehicles (1) to reduce carbon emissions (1) to mitigate against climate change (1). • Consistent levels of investment in low carbon fuels because they are expensive (1) and it is more cost efficient to invest in renewable power (1) which means more energy can be produced (1). • Increased in renewable energy resources (1) from around US\$300 to 450 billion (1) due to countries trying to meet requires of international agreements on carbon emissions (e.g. Paris Agreement)(1). • Increased investment overall (1) due to increased development of countries (1) which requires more energy resources (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
1(g)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for an advantage and for a disadvantage of using solar panels and a further expansion mark, up to a maximum of 2 marks each.</p> <p>Advantage:</p> <ul style="list-style-type: none"> • Relies on the power of the sun (1) which means areas of the world are suitable for power generation through solar panels (1). • Can be used to supply electricity off grid (1) which means more remote rural locations can be provided with electricity (1). • Renewable energy (1) will not run out like fossil fuels/ does not contribute to climate change/does not increase carbon emissions (1). <p>Disadvantage</p> <ul style="list-style-type: none"> • High installation costs (1) which may be prohibitive for places/people with lower incomes (1). • Only generate power during hours of sunlight (1) which means a battery needed to store energy (1). • In some countries are not as sunny (1)/which means they don't operate fully at all times (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
1 (h)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • The world continues to rely on fossil fuels for the production of energy. • Increased population growth is associated with increased demand for energy which in most countries cannot be met by renewable energy alone. • Industrialisation in developing and emerging economies has led to increased demand for energy. • Despite international pressures to reduce the use of fossil fuels, many countries still rely on fossil fuels for a large proportion of their

	<p>energy, in part due to availability of resources, but also to ensure energy security.</p> <ul style="list-style-type: none"> The rate of fossil fuel use growth may be beginning to slow as the realisation of climate change and international agreements require governments to reduce carbon emissions and begin to reduce reliance on fossil fuels. <p>AO4</p> <ul style="list-style-type: none"> Figure 1c shows increased production of energy from fossil fuels from 1981-2021. Figure 1c shows that coal has increased from around 20,000TWh to over 40,000 Twh. Figure 1c shows how the relative proportion of gas production has increased since 1981. Figure 1c shows there have been periods short reductions in the use of fossil fuels in 2010 and 2020. 	
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> <p>C interaction of living organisms with their environment (1)</p> <p>The answer cannot be A, B or D as these are not definitions of a natural ecosystem.</p>	(1)

Question number	Answer	Mark
2(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for suitable service.</p> <ul style="list-style-type: none"> • Tourism/named tourist activity/recreation/employment (1) • Nutrient/water cycling (1) • Health/wellbeing (1) • Climate regulation (1) • Carbon sink/storage/removing CO2 from the atmosphere/oxygen production (1) • Storm protection (1) • Habitat for species (1) • Energy production (1) <p>Accept any other appropriate responses.</p>	(1)

Question number	Answer	Mark
2(b)	<p style="text-align: center;">AO2/AO3 (2 marks)</p> <p>Award 1 mark for identification of characteristics of a specific biome, and a further mark for description or development.</p> <p>The response must relate to one of the biomes shown in Figure 2a.</p> <p>The characteristics may refer to the climate or the flora/fauna that can be found there.</p> <ul style="list-style-type: none"> • Tropical rainforest: high density forests (1) with high annual rainfall (1) • Desert: high temperatures (1) which only supports plants like cacti (1). • Tundra: cold environments (1) due to high altitude (1) • Temperate forests: regular rainfall (1) that support the growth of trees (1). • <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
2(c)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D farming that is dependent on animals (1).</p> <p>The answer cannot be A, B or C as these are not definitions of pastoral farming.</p>	(1)

Question number	Answer	Mark
2(d)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable way provided.</p> <ul style="list-style-type: none"> • Water pollution/contamination/eutrophication (1) • Deforestation (1) • Soil erosion (1) • Provides employment (1) • Lack of soil fertility/damage soil (1) • Overgrazing/overcultivation (1) • Desertification (1) • Increased productivity/output (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
2(e)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for identification of an impact, and a further expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • Can lead to building on greenfield land (1) which can lead to increased traffic/air/water/noise/light pollution (1). • Can lead to population growth in rural areas (1) as people seek to move away from cities (1). • Loss of biodiversity (1) as new buildings/roads in rural areas can damage habitats (1). • Deforestation (1) to clear land to build new houses (1). • Increase in housing prices (1) due to increased demand in the area (1). • Improved accessibility (1) due to investment in infrastructure/improvement in public transport (1). • Keeping local businesses to be viable (1) due to increase in local spending (1). • Can lead to the development of more services being built (1) as population increases so does demand for services (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
2(f)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark for an identification of way investment in rural environments can improve quality of life, a further 2 marks for extension through explanation with reference to the resource, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • Increased investment in rural transportation can ensure people can still access goods and services (1) which can prevent rural decline (1) and support livelihoods (1). • Investment in schools ensures that rural populations can maintain their education (1) which means they are more likely to be in employment later in life (1) which reduces chance of poverty (1). • Investment in cultural activities may lead to increased tourism (1) which could create more jobs for local people (1) which could improve household incomes (1). • Investment of 5.6% in clean water could increase availability of water (1) which could be used for irrigation (1) to increase agricultural output (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
2(g)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for initial explanation of how rural-urban migration has affected rural areas, and an additional 1 mark for development through further explanation or exemplification, up to a maximum of 2 marks for each.</p> <p>A range of countries could be chosen.</p> <ul style="list-style-type: none"> • High levels of rural-urban migration to the growing cities have left many surrounding rural areas with less working age adults (1) which means agricultural production is reduced (1). • With increased populations in the cities less investment for some services takes place in rural areas (1) which means some remote rural areas may find it difficult to access healthcare services (1). • Negative multiplier effect (1) due to loss of younger workers (1). • Less pressure on services/food supplies (1) due to smaller population (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content	
2 (h)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • Farm diversification provides the opportunity to develop other income streams. • Some farms adopt several diversification strategies because one on its own is not always sustainable. • There are a range of farm diversification strategies which could be used alongside holiday rentals or solar energy, including GM crops, agritourism, using land for renewable energy. • Many farms move to diversification in order to counter reduction in profit from more traditional income streams such as crop and livestock production. <p>AO4</p> <ul style="list-style-type: none"> • Figure 2c shows there has been an increase in the percentage of farms with diversified activities. • Figure 2c shows how there has been some fluctuation in overall diversified activity. • Figure 2c shows how farm producing solar energy have grown from around 1% to around 22% by 2021/2022. • Figure 2c show how there has been over half of farms that have diversified activities and there have been no significant decreases. 	
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,

		<p>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> <p>C - Lahore, Pakistan 11.1 million people (1)</p> <p>The answer cannot be A, B or D as the populations are below 10 million which is the minimum for a megacity.</p>	(1)

Question number	Answer	Mark
3(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for any suitable definition.</p> <ul style="list-style-type: none"> • The movement of people / employment from major cities to smaller cities and towns/ to rural areas. (1) • Movement away from urban areas (1). <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
3(b)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C – existing roads and electricity present (1)</p> <p>The answer cannot be A, B or D as these are not reasons for building on a brownfield site.</p>	(1)

Question number	Answer	Mark
3(c)	<p style="text-align: center;">AO2 (1 mark) / AO3 (1 mark)</p> <p>Award 1 mark for basic evidence from the from the resource (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"> • Accessibility (1) as there are clear access by road (or by river) (1). • High density buildings (1) suitable for commercial office blocks (1). • Land value (1) which favours commercial / business land uses (1). • Evidence of piers/waterside/port (1) which allows access by boat/transporting goods by boat (1). • Limited space (1) which has driven the need for high-rise housing (1). • Limited green space (1) due to rapid urbanisation (1). • Green spaces (1) used for leisure (1). <p>Accept any other appropriate response</p>	(2)

Question number	Answer	Mark
3(d)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable source of air pollution.</p> <ul style="list-style-type: none"> • Cars / vehicles/ lorries/ traffic /trains (1) • Factories (1) • Construction (1) • Wood burners (1) • Burning fossil fuels/power plants (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
3(e)	<p style="text-align: center;">AO2 (2+2 marks)</p> <p>Award 1 mark for an initial idea of how urbanisation can lead to housing challenges, with a further mark for expansion mark, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • High levels of rural to urban migration can lead to rapidly growing populations (1) which can outstrip supply leading to the growth of informal settlements (1). • Urbanisation can lead to increase in the value of land/housing (1) which can mean some people can no longer afford to live in the urban area (1). • High demand for housing (1) can lead to very cramped living conditions/creates high density housing (1). • Increased number of people when services (e.g. waste disposal) are inadequate (1) can lead to unsanitary conditions/disease/shortage of available clean water (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
3(f)	<p style="text-align: center;">AO1 (1 mark) / (AO3) 2 marks</p> <p>Award 1 mark for an identification of the pattern shown and a further 2 marks for extension through explanation or description, up to a maximum of 3 marks.</p> <ul style="list-style-type: none"> • There are high levels of informal employment in the African countries shown (1) which may have been caused by rapid rural-urban migration (1) which may have been faster than the growth in jobs (1). • Between 63-86% of employment in the African cities shown was informal (1) this may be due to lack of education of some of the people who moved to the city (1) which meant they could not access formal employment (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Answer	Mark
3(g)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Award 1 mark for initial idea and an additional 1 mark for development through further explanation or exemplification.</p> <p>A range of countries and examples could be chosen.</p> <ul style="list-style-type: none"> ○ Improve public transport (1) to reduce congestion and improve accessibility (1). ○ Congestion charges (in cities like London) (1) to improve air quality/plants remove more CO2 (1). ○ Increasing green spaces/recreational areas (such as the High line in New York) (1) to improve mental wellbeing (1). ○ Introducing affordable home schemes (1) so people can afford to live in cities and not commute such long distances (1). ○ Increase taxes (1) to pay for healthcare/waste collection (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Indicative content
3(h)	<p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO3</p> <ul style="list-style-type: none"> • More than half the world’s population lives in urban areas. By 2050 it is predicted that more than two thirds of the world’s population will live in urban areas. • For some areas of the world that have already gone through industrialisation and shifts to tertiary and quaternary sectors, rapid urbanisation took place decades ago. Many European countries have seen the rate of urbanisation slow down, and experience counter-urbanisation. • Many developing or emerging economies that are undergoing industrialisation are experiencing more rapid urbanisation, in part due to the development of their economy and the associated rural-urban migration. • Rapid urbanisation driven by rural-urban migration as people move in search of jobs, the possibility of higher incomes, and greater access to services.

	<ul style="list-style-type: none"> Investment often concentrates in urban areas leading to greater development of industries and business which further fuels rural-urban migration as well as urban sprawl. <p>AO4</p> <ul style="list-style-type: none"> Figure 3c shows how urban growth rates have differed between Africa and Europe. Figure 3c shows how Europe has had higher proportions of urban populations since 1950, with predictions this will continue until 2050. Figure 3c shows how Europe rises from around 50% urban in 1950 to around 80% by 2050, whereas it is about 13% to 55% for Africa in this time period. Figure 3 shows how Africa passes 50% of population being urban in around 2035, whereas this was already at 50% for Europe before 1950. Figure 3c shows that by 2050 it is expected that both regions will have over 50% of populations living in urban areas. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4–6	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	7–8	<ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3) Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
4(a)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award one mark for a suitable type of sampling.</p> <ul style="list-style-type: none"> • Random (1) • Stratified (1) • Systematic (1) • Opportunistic (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
4(b)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The risks managed will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy.</p> <ul style="list-style-type: none"> • We crossed the road safely (1) to avoid getting hit by cars/bikes/buses (1). • Conducted a risk assessment before travelling to fieldwork site (1) to ensure we were aware of risks we could face (1). • Provided team members with phone numbers (1) so we could regroup if we got lost (1). • Wore suncream/lots of layers (1) to avoid sunburn/avoid hypothermia (1). • We stayed in our group/took a map/took our phone (1) to avoid getting lost (1). • Carried water supplies (1) to avoid dehydration (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(c)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The equipment used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy.</p> <ul style="list-style-type: none"> • Mobile phone (1) to plot data on a map/take photos (1). • Questionnaire (1) to gather views from local people (1). • Sound meter (1) to explore changes in noise around the area (1). • Stopwatch (1) for timing a minute to count pedestrians (1). • Pencil (1) to draw annotated field sketches/diagrams (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
4(c)(ii)	<p style="text-align: center;">AO3 (4 marks)</p> <p>Award 1 mark for each advantage and disadvantage, and a further mark for explanation, up to a maximum of 2 marks for each.</p> <p>The data collection methods used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Survey was a quick way of collecting data (1) which meant we could collect a bigger sample (1). • Taking photographs provided an accurate visual record of the area (1) which meant I could refer back to them when doing the data analysis (1). • Environmental quality surveys create quantitative data (1) which makes easy to compare (1). <p>Disadvantages:</p> <ul style="list-style-type: none"> • People didn't want to fill in our surveys (1) which meant we had a small sample (1). • Photographs do not capture the sounds and smells of the sites (1) so cannot be used to recollect all details about the environmental quality of the area (1). • Environmental quality surveys are subjective (1) so different people may get different data about the same site (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
4(d)	<p style="text-align: center;">A03 (3 marks)</p> <p>Award 1 mark for an initial point, and further 2 marks for explanation.</p> <ul style="list-style-type: none"> • I took photographs as well as field sketches (1) to make sure I did not miss any details (1) this meant I could refer to these images when analysing the data (1). • I chose several sites around the area (1) to make sure that I collected data from a range of people (1) to try and get a representative sample of people (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Indicative content
4(e)	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • Evaluation is likely to be linked to the data presentation methods used and how these linked to the aims for the enquiry. • Evaluation will most likely be linked to how effective the data presentation methods are for displaying the chosen data, and the level of detail provided in these data presentation methods. • Recognition of the extent to which aim could be met with the chosen data presentation methods. • A supported judgement should be reached about the suitability and quality of the data presentation methods, such as the strength and weaknesses of these methods, using relevant examples from the figures provided. <p>A04</p> <ul style="list-style-type: none"> • Figure 4a shows a bar graph of total environmental quality scores, but does not show what elements were used to create this total score. • Figure 4a is accurately labelled axis and has a title. • Figure 4b is a pie chart where it is easy to see the proportions of how people responded. • Figure 4b does not have any percentage labels so it is difficult to know the exact percentages.

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

Question number	Answer	Mark
5(a)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award one mark for a suitable type of sampling.</p> <ul style="list-style-type: none"> • Random (1) • Stratified (1) • Systematic (1) • Opportunistic (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
5(b)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The risks managed will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: rural environments.</p> <ul style="list-style-type: none"> • We crossed the road safely (1) to avoid getting hit by cars/bikes/buses (1). • Conducted a risk assessment before travelling to fieldwork site (1) to ensure we were aware of risks we could face (1). • Provided team members with phone numbers (1) so we could regroup if we got lost (1). • Wore suncream/lots of layers (1) to avoid sunburn/avoid hypothermia (1). • We stayed in our group/took a map/took our phone (1) to avoid getting lost (1). • Carried water supplies (1) to avoid dehydration (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5(c)(i)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The equipment used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: rural environments.</p> <ul style="list-style-type: none"> • Mobile phone (1) to plot data on a map/take photos (1). • Questionnaire (1) to gather views from local people (1). • Sound meter (1) to explore changes in noise around the area (1). • Stopwatch (1) for timing a minute to count pedestrians (1). • Pencil (1) to draw annotated field sketches/diagrams (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
5(c)(ii)	<p style="text-align: center;">A03 (4 marks)</p> <p>Award 1 mark for each advantage and disadvantage, and a further mark for explanation, up to a maximum of 2 marks for each.</p> <p>The data collection methods used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: rural environments.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Survey was a quick way of collecting data (1) which meant we could collect a bigger sample (1). • Taking photographs provided an accurate visual record of the area (1) which meant I could refer back to them when doing the data analysis (1). • Environmental quality surveys create quantitative data (1) which makes easy to compare (1). <p>Disadvantages:</p> <ul style="list-style-type: none"> • People didn't want to fill in our surveys (1) which meant we had a small sample (1). • Photographs do not capture the sounds and smells of the sites (1) so cannot be used to recollect all details about the environmental quality of the area (1). • Environmental quality surveys are subjective (1) so different people may get different data about the same site (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
5(d)	<p style="text-align: center;">A03 (3 marks)</p> <p>Award 1 mark for an initial point, and further 2 marks for explanation.</p> <ul style="list-style-type: none"> • I took photographs as well as field sketches (1) to make sure I did not miss any details (1) this meant I could refer to these images when analysing the data (1). • I chose several sites around the area (1) to make sure that I collected data from a range of people (1) to try and get a representative sample of people (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Indicative content
5(e)	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • Evaluation is likely to be linked to the data presentation methods used and how these linked to the aims for the enquiry. • Evaluation will most likely be linked to how effective the data presentation methods are for displaying the chosen data, and the level of detail provided in these data presentation methods. • Recognition of the extent to which aim could be met with the chosen data presentation methods. • A supported judgement should be reached about the suitability and quality of the data presentation methods, such as the strength and weaknesses of these methods, using relevant examples from the figures provided. <p>A04</p> <ul style="list-style-type: none"> • Figure 5a shows a bar graph of total environmental quality scores, but does not show what elements were used to create this total score. • Figure 5a is accurately labelled axis and has a title. • Figure 5b is a pie chart where it is easy to see the proportions of how people responded.

		<ul style="list-style-type: none"> • Figure 5b does not have any percentage labels so it is difficult to know the exact percentages. • Figure 5b shows there are overlaps on the categories of distances recorded.
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Mark
6(a)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award one mark for a suitable type of sampling.</p> <ul style="list-style-type: none"> • Random (1) • Stratified (1) • Systematic (1) • Opportunistic (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
6(b)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The risks managed will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: urban environments.</p> <ul style="list-style-type: none"> • We crossed the road safely (1) to avoid getting hit by cars/bikes/buses (1). • Conducted a risk assessment before travelling to fieldwork site (1) to ensure we were aware of risks we could face (1). • Provided team members with phone numbers (1) so we could regroup if we got lost (1). • Wore suncream/lots of layers (1) to avoid sunburn/avoid hypothermia (1). • We stayed in our group/took a map/took our phone (1) to avoid getting lost (1). • Carried water supplies (1) to avoid dehydration (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6(c)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for initial point, and a further mark for explanation, up to a maximum of 2 marks.</p> <p>The equipment used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: urban environments.</p> <ul style="list-style-type: none"> • Mobile phone (1) to plot data on a map/take photos (1). • Questionnaire (1) to gather views from local people (1). • Sound meter (1) to explore changes in noise around the city (1). • Stopwatch (1) for timing a minute to count the cars (1). • Pencil (1) to draw annotated field sketches/diagrams (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Answer	Mark
6(c)(ii)	<p style="text-align: center;">AO3 (4 marks)</p> <p>Award 1 mark for each advantage and disadvantage, and a further mark for explanation, up to a maximum of 2 marks for each.</p> <p>The data collection methods used will vary depending on the nature and context of the fieldwork, but it must be plausibly linked to the focus: urban environments.</p> <p>Advantages:</p> <ul style="list-style-type: none"> • Survey was a quick way of collecting data (1) which meant we could collect a bigger sample (1). • Taking photographs provided an accurate visual record of the area (1) which meant I could refer back to them when doing the data analysis (1). • Environmental quality surveys create quantitative data (1) which makes easy to compare (1). <p>Disadvantages:</p> <ul style="list-style-type: none"> • People didn't want to fill in our surveys (1) which meant we had a small sample (1). • Photographs do not capture the sounds and smells of the sites (1) so cannot be used to recollect all details about the environmental quality of the area (1). • Environmental quality surveys are subjective (1) so different people may get different data about the same site (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
6(d)	<p style="text-align: center;">A03 (3 marks)</p> <p>Award 1 mark for an initial point, and further 2 marks for explanation.</p> <ul style="list-style-type: none"> • I took photographs as well as field sketches (1) to make sure I did not miss any details (1) this meant I could refer to these images when analysing the data (1). • I chose several sites around the area (1) to make sure that I collected data from a range of people (1) to try and get a representative sample of people (1). <p>Accept any other appropriate response.</p>	(3)

Question number	Indicative content
6(e)	<p style="text-align: center;">A03 (4 marks)/A04 (4 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>A03</p> <ul style="list-style-type: none"> • Evaluation is likely to be linked to the data presentation methods used and how these linked to the aims for the enquiry. • Evaluation will most likely be linked to how effective the data presentation methods are for displaying the chosen data, and the level of detail provided in these data presentation methods. • Recognition of the extent to which aim could be met with the chosen data presentation methods. • A supported judgement should be reached about the suitability and quality of the data presentation methods, such as the strength and weaknesses of these methods, using relevant examples from the figures provided. <p>A04</p> <ul style="list-style-type: none"> • Figure 6a shows a bar graph of total environmental quality scores but does not show what elements were used to create this total score. • Figure 6a is accurately labelled axis and has a title.

		<ul style="list-style-type: none"> • Figure 6b is a pie chart where it is easy to see the proportions of how people responded. • Figure 6b does not have any percentage labels so it is difficult to know the exact percentages. • Figure 6b shows there are overlaps on the categories of distances recorded.
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)
Level 3	7-8	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity and uses relevant geographical terminology consistently. (AO4)

Question number	Answer	Mark
7(a)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable location of a fragile environment:</p> <ul style="list-style-type: none"> • Amazon (rainforest) (1) • Sahara/Sahel (desert) (1) • Great barrier reef (1) <p>Accept any other appropriate response. This could be a specific local region or a larger region such as the Amazon. Do not accept just the name of the fragile environment.</p>	(1)

Question number	Answer	Mark
7(b)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C soil erosion (1)</p> <p>The answer cannot be A, B or D as these are all causes of desertification.</p>	(1)

Question number	Answer	Mark
7(b)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C water spreading weirs (1)</p> <p>The answer cannot be A, B or D as these are not strategies that can be used to reduce the risk of desertification.</p>	(1)

Question number	Answer	Mark
7(c)(i)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark each of the following answers.</p> <ul style="list-style-type: none"> • Nicaragua (1) • Egypt (1) 	(2)

Question number	Answer	Mark
7(c)(ii)	<p style="text-align: center;">AO2/AO3 (4 marks)</p> <p>Award 1 mark for pattern identified, and a further mark for explanation of the reason, up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • Most of Europe is experiencing increases in forest cover (1) as many governments seeking to plant more trees to combat rising CO2 emissions (1). • Many African and South American Countries are experiencing loss of 0 to -2% (1) as trees are an important natural commodity that can support their economies (1). • Large amount of LICs have loss (1) due to rising populations/need to clear forest for farmland (1). • Many HICs have a gain in forest (1) as government encourage afforestation (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
7(d)	<p style="text-align: center;">AO1/AO2 (4 marks)</p> <p>Award 1 mark for identification of a suitable management strategy, and a further mark for an explanation or development, up to a maximum of 2 marks each.</p> <ul style="list-style-type: none"> • Requirement for logging permits (1) to reduce illegal logging (1). • Afforestation schemes (1) to try and reduce overall loss of forests (1). • Legal protection of some areas (1) to try and reduce the rates of deforestation (1). • Ecotourism (1) designed to support local incomes without damaging the forest (1). • Selective logging (1) which ensures whole forest areas are not cleared (1). • Sustainability certifications (1) designed to raise awareness/protect forest areas (1). • Agroforestry (1) which mixes farming and trees/which maintains soil structure (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
7(e)(i)	<p style="text-align: center;">AO4 2 marks</p> <p>Award 1 mark for the correct method, and 1 mark for the correct answer.</p> <ul style="list-style-type: none"> • 145-16 (1) Larger number – small number • 129 (1) <p>Accept answers that answers that range from 126-32.</p>	(2)

Question number	Answer	Mark
7(e)(ii)	<p style="text-align: center;">AO2 (1 mark) /AO3 1 mark</p> <p>Award 1 mark for initial point, and further mark for further description which could include the use of data, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Rise in sea level (1) 215 mm (1) • General rising trend (1) but with some fluctuations between years (1). • Sea level increases (1) from around 0mm to 215mm (1) <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
7(f)	<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:</p> <p>A03</p> <ul style="list-style-type: none"> • The potential impacts of climate change are wide ranging. While some of the most discussed impacts are increased temperatures related to global warming, and rising sea levels due to melting of the ice caps there are many more which have potential to impact the environment, people and economies. • Climate change, linked with changes in temperatures but also differences in extreme weather events can mean that the ability to grow some crops is becoming more challenging. This creates issues of food security but also creates problems for ensuring secure livelihoods. • It is estimate there could be 1.2 billion climate refugees by 2050, with many being forced to move from coastal areas that experience flooding, or more hazardous weather events (from flooding to wildfires). • Many of these impacts are interrelated, the increased flooding can link to food insecurity, the changing growing seasons links to food insecurity. Depending on the location on the planet, the severity of these potential impacts will differ.

	AO4	<ul style="list-style-type: none"> • Figure 7c shows there are 6 potential impacts of climate change. • Figure 7c shows how there are a range of potential impacts which could affect both people and the environment. • Figure 7c shows how climate change may lead to environmental hazards.
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content
7(g)	<p style="text-align: center;">AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO2</p> <ul style="list-style-type: none"> • Fragile environments such as forests and deserts are at risk of damage and destruction through a range of human and natural causes. • Climate change has the potential to affect such fragile environments in various ways including: increased desertification, wildfires, changing habits conditions, increased extreme weather events, flooding. • Deforestation by human activity has had considerable impact on the tropical rainforests of Brazil. An area equivalent to the size of Qatar was cleared between 2021 -2022. <p>AO3</p> <ul style="list-style-type: none"> • Figure 7b shows how there has been continued sea level rise over previous decades and the impacts of this are already being experienced. If this is to continue as a result of climate change then these impacts will continue and potentially worsen. • Fragile environments are affected by human activity directly through practices such as deforestation (for mining, agriculture, settlement/infrastructure building), agriculture and tourism. Human activity can lead to increased pollution of water, air and land. • Given the global nature of climate change it may be considered the greatest threat because it has such a wide range of impacts on different environments. <p>AO4</p> <ul style="list-style-type: none"> • Figure 7b shows how there has been continued sea level rise since 1900. • Figure 7b shows how there are fluctuations in sea levels. • Figure 7b shows how sea levels have continued to rise despite efforts to curb the impact of climate change. • Figure 7c shows there are 6 potential impacts of climate change. • Figure 7c shows how there are a range of potential impacts which could affect both people and the environment. • Figure 7c shows how climate change may lead to environmental hazards.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5-8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9-12	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
8(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>C faster transport.</p> <p>The answer cannot be A, B or D as these are not factors that have encouraged the growth of mass tourism. A & B (impact of mass tourism), D (related to trade not tourism).</p>	(1)

Question number	Answer	Mark
8(a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>D limiting numbers of tourists (1)</p> <p>The answer cannot be A, B or C as these are not strategies designed to make tourism more sustainable.</p>	(1)

Question number	Answer	Mark
8(a)(iii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable environmental impact.</p> <ul style="list-style-type: none"> • Litter/land pollution (1) • Air pollution (1) • Water pollution (1) • Soil erosion (1) • Damage to wildlife habitats (1) • Destroys coral reefs (1) • Deforestation (1) • Increased carbon emissions/increased greenhouse gases/climate change (1) <p>Accept any other appropriate response.</p> <p>Do not accept pollution on its own.</p>	(1)

Question number	Answer	Mark
8(b) (ii)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark each of the following answers in this order.</p> <ul style="list-style-type: none"> • Highest: China (1) • Lowest: Chad (1) 	(2)

Question number	Answer	Mark
8(b)(ii)	<p style="text-align: center;">AO2/AO3 (4 marks)</p> <p>Award 1 mark for pattern identified, and a further mark for explanation of the reason, up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • There are very few countries with less than \$5billion of exports of goods and services (1) this is likely due to the nature of the globalised economy (1). • North America and Europe have the most countries with higher values of exports (1) likely to be due to the advanced economies where goods and particularly services are likely to be of higher value (1). • Africa tends to have many countries with \$50 billion and below (1) because many of the exports here will be natural resources which do not have as much value as processed goods (1). • Landlocked countries such as Chad have lower exports (1) due to more expensive costs of transport/lack of access to the coast (1). • High levels in Europe (US\$100.1+billion) (1) due to trade agreements reducing costs of exports (1). • Many countries in Africa have relatively low value (US\$5.1-10) (1) due to low value of natural resources exported (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
8(c)	<p style="text-align: center;">AO1/AO2 (4 marks)</p> <p>Award 1 mark for each way identified, and a further mark for an explanation or development, up to a maximum of 2 marks for each.</p> <p>Trade:</p> <ul style="list-style-type: none"> • Trade can be increased through trade blocs (1) as these promote relationships between member countries/often reduce trade barriers/tariffs (1). • Historical relationships such as former colonies (1) lead to continued patterns of trade for resources (1). • Where there are shared languages (1) this makes trade deals easier to negotiate (1). <p>Tourism:</p> <ul style="list-style-type: none"> • Where there are positive relationships between countries through trade tourism may be encouraged (1) and an increase in travel routes (1). • Preferable visa schemes/lack of visas (1) encouraging/discouraging tourism to particular countries (1). • Conflict zones (1) discourages travel to particular countries (due to safety) (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
8(d)(i)	<p style="text-align: center;">AO4 2 marks</p> <p>Award 1 mark for the correct method, and 1 mark for the correct answer.</p> <p>144-112 (1) Higher number – lower number 32 (1)</p> <p>Accept answers using figures to lead to 29-35</p>	(2)

Question number	Answer	Mark
8(d)(ii)	<p style="text-align: center;">AO2 (1 mark) / AO3 1 mark</p> <p>Award 1 mark for identification fo a trend, and further mark for further description which could include the use of data, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Increase in overall number of migrants (1) with males continuing to be higher than female across the years shown (1). • Both male and female migrants have increased since 2000 (1) by about a quarter (1). • Consistent more male migrants (1) with greatest difference in 2020 (1). • Increased in both migrants (1) but males always slightly higher (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
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:</p> <p>AO3</p> <ul style="list-style-type: none"> • In 2021, the global trade value of goods exported throughout the world was approximately US\$ 23 trillion up from around US\$6 trillion in 2000. This indicates the size of the growth of the global economy. • Indicators of the global economy are usually considered in economic terms provided by trade between different countries. • TNCs are often considered facilitators of the global economy because their supply chains are often global with operations in many different countries. • A key facilitator of the growth of the global economy has been the ease with which trade can take place, which has been driven by the internet (and smart phone use), as well as developments in modern transport to facilitate the faster movement of goods and people.

	AO4	<ul style="list-style-type: none"> • Figure 8c shows there 6 factors that can affect the global economy. • Figure 8c shows how there are a range of potential factors that can affect engagement with, and development of, the global economy. • Figure 8c shows how the global economy is affected by technology, trade as well as people.
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)

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Question number	Indicative content
8(f)	<p data-bbox="555 271 1262 300" style="text-align: center;">A02 (4 marks), A03 (4 marks), A04 (4 marks)</p> <p data-bbox="411 344 722 374">Marking instructions</p> <p data-bbox="411 387 1342 479">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 data-bbox="411 533 831 562">Indicative content guidance</p> <p data-bbox="411 575 1393 667">The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p data-bbox="411 721 475 750">A02</p> <ul data-bbox="459 752 1398 1111" style="list-style-type: none"> • Globalisation is the process of increased integration across different countries around the world. • Globalization has led to the increase trade of good and services. The pattern of trade is uneven depending on resources and services available. This is also influenced by geopolitical relations between countries, and activities trade blocs. • Globalization has led to the shifts in some part of supply chain processes from developed to developing/emerging countries. This increases investment in these areas, and can lead to greater employment. <p data-bbox="411 1160 475 1189">A03</p> <ul data-bbox="459 1191 1398 1774" style="list-style-type: none"> • While primarily an economic process, it also can impact different cultures and global interaction increases. • The growth of the global economy may be measured in terms of trade, but its processes are driven by the people that do the work. • The organisations/businesses that drive the global economy are driven by its labour force. Some of these people move around the world for work. • While more integration in the global economy may bring greater investment, jobs and services, it also has impacts on the local cultures. • In the modern day the internet has facilitated communication between people around the world. This not only provides people with information about different aspects of the global economy necessary to understand how to increase trade, but also provides exposure to different global cultures. <p data-bbox="411 1823 475 1852">A04</p> <ul data-bbox="459 1854 1417 2020" style="list-style-type: none"> • Figure 8b shows how there has an increased in international migration from around 165 million in 2000 to around 280 million in 2020. • Figure 8b shows how there are usually more male international migrants than females.

Question number	Indicative content	
	<ul style="list-style-type: none"> • Figure 8b shows that the proportion of male international migrants has risen slightly since 2000. • Figure 8c shows there 6 factors that can affect the global economy. • Figure 8c shows how there are a range of potential factors that can affect engagement with, and development of, the global economy. • Figure 8c shows how the global economy is affected by technology, trade as well as people. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

Question number	Answer	Mark
9(a)(i)	<p style="text-align: center;">AO1 (1 mark)</p> <p>B – number of deaths before age 1, per 1,000 live births in a year.(1)</p> <p>The answer cannot be A, C or D as these are not correct definitions of infant mortality rate.</p>	(1)

Question number	Answer	Mark
9 (a)(ii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>A – birth rate (1)</p> <p>The answer cannot be B, C or D as these are not factors that directly affect natural increase in a population.</p>	(1)

Question number	Answer	Mark
9(a)(iii)	<p style="text-align: center;">AO1 (1 mark)</p> <p>Award 1 mark for a suitable reason:</p> <ul style="list-style-type: none"> • Colonialism (1) • Patterns of migration (1) • Resource availability (e.g. minerals/forests) (1) • War (1) <p>Accept any other appropriate response.</p>	(1)

Question number	Answer	Mark
9(b)(i)	<p style="text-align: center;">A03 (2 marks)</p> <p>Award 1 mark each of the following answers.</p> <ul style="list-style-type: none"> • India (1) • Venezuela (1) 	(2)

Question number	Answer	Mark
9(b)(ii)	<p style="text-align: center;">AO2/AO3 (4 marks)</p> <p>Award 1 mark for a pattern identified, and a further mark for explanation of the reason, up to a maximum of 2 marks per idea.</p> <ul style="list-style-type: none"> • Higher fertility rates tend to be concentrated in central Africa (1) this may be due to need for family members to work/this may be due to lack of access to contraception (1). • Lower fertility rates in North America (1) due to access to contraception/education/increased focus on career (1). • North America and Europe/HICs have comparatively lower fertility rates (1) this may be due to cultural norms of having small families (1). • Middle East and North Africa range from 2.1-6 (1) potentially due to differences in cultural norms (1). • Low fertility rates in East Asia, like China and Japan (1) as people spend more time caring for ageing relatives rather than having children (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
9(c)	<p style="text-align: center;">AO1/AO2 (4 marks)</p> <p>Award 1 mark for identification of an advantage, and a further mark for an explanation or development, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Bottom-up development projects tend to be more focused on including local people (1) which means they are more likely to have some control of the impact of the project (1). • Bottom-up projects often work with NGOs (1) who will provide not only financial assistance but technical expertise (1). • Bottom-up projects tend to be more sustainable (1) because they focus on the needs of the local communities (1). • Tend to be lower in cost than top down (1) which avoids creating debts (1). • Smaller scale projects (1) which can be completed quickly to support people (1). <p>Accept any other appropriate response.</p>	(4)

Question number	Answer	Mark
9(d)(i)	<p style="text-align: center;">AO4 (2 marks)</p> <p>Award 1 mark for the correct method, and 1 mark for the correct answer.</p> <ul style="list-style-type: none"> • 1.58-0.36 (1) Larger number – smaller number • 1.22 (1) <p>Accept answer that range from 1.19-1.25</p>	(2)

Question number	Answer	Mark
9(d)(ii)	<p style="text-align: center;">AO2 (1 mark) /AO3 1 mark</p> <p>Award 1 mark for identification of a trend, and further mark for further description which could include the use of data, up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • GDP for all countries shown has increased (1) but the size of growth is largest for Australia and Indonesia (1). • Ghana has experienced the lowest growth (1) rising from 0.02 to 0.07 US\$ billion (1). • Australia increased (1) with a more rapid increase in 2008 to 2011 (1). <p>Accept any other appropriate response.</p>	(2)

Question number	Indicative content
9(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:</p> <p>A03</p> <ul style="list-style-type: none"> • Human welfare has many different aspects. It can be defined as a general condition of a population or society, but it is more difficult to define than this. It is essentially a consideration of the quality of life for people in a society. • There are different physical (e.g. diet, housing), social (e.g. education), economic (e.g. income and employment) and psychological (e.g. health and happiness) aspects to human welfare.

	<ul style="list-style-type: none"> • The factors that affect human welfare are often interrelated, for example availability of a secure reliable job will affect someone's ability to have a stable income and therefore ability to buy nutritious food. • It is difficult to measure human welfare overall, but considering indicators which relates to some of the factors above may indicate aspects of human welfare. <p>AO4</p> <ul style="list-style-type: none"> • Figure 9c shows there 6 potential factors that can affect human welfare. • Figure 9c shows how human welfare can be affected by social, economic and environmental factors. • Figure 9c shows how there could be many routes to improving human welfare. 	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	4-6	<ul style="list-style-type: none"> • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)

Question number	Indicative content
9 (f)	<p data-bbox="512 266 1219 300" style="text-align: center;">AO2 (4 marks), AO3 (4 marks), AO4 (4 marks)</p> <p data-bbox="368 342 679 376">Marking instructions</p> <p data-bbox="368 383 1299 479">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 data-bbox="368 490 791 524">Indicative content guidance</p> <p data-bbox="368 530 1350 627">The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p data-bbox="368 672 432 705">AO2</p> <ul data-bbox="416 705 1350 1317" style="list-style-type: none"> • There are a range of economic, demographic, social, cultural, political and environmental indicators which can be used to measure development. • Progress in development can be understood using a range of different indicators which may relate to economic (GDP) or social (literacy rate) aspects of society or a mixture (e.g. HDI). • Economic indicators of development often include: GDP, GDP per capita, GNP, and employment levels. • Gross Domestic Product (GDP) is a measure of economic activity in a country. It is calculated by adding the total value of a country's output of goods and services in one year. • Different factors contribute to the development of a country / region: cultural, technological, social, economic as well as wider measures such as stability and water availability. • Human Development Index which uses several indicators (years of schooling/life expectancy and GDP per capita) to understand overall levels of development. <p data-bbox="368 1323 432 1357">AO3</p> <ul data-bbox="416 1357 1385 1870" style="list-style-type: none"> • Many economic measures such as GDP do not take into account the living standards which are an important social aspect of development. • Some composite measures such as HDI recognise that the criteria for measuring development should be more than just economic growth alone. Trends in HDI show progress in development across the world (with minor reductions in 2019-20), although this doesn't necessarily match the trend shown by GDP. • Most economic indicators do not even capture all economic activity. For example GNP per capita does not take in to account the value of subsistence production. • Many indicators which are used to understand global development use measurements for the national scale. This masks uneven development within countries. There may be regions of some countries which have seen great progress, but these are not usually presented through national economic indicators. <p data-bbox="368 1906 432 1939">AO4</p> <ul data-bbox="416 1939 1267 2000" style="list-style-type: none"> • Figure 9b shows how have been increases in GDP for many countries around the world since 1990.

Question number	Indicative content	
	<ul style="list-style-type: none"> • Figure 9b shows how the level of GDP growth varies significantly around the world. • Figure 9b shows how higher rates of growth are not only experienced by developed countries, but developing and emerging countries too. • Figure 9c shows there 6 potential factors that can affect human welfare. • Figure 9c shows how human welfare can be affected by social, economic and environmental factors. • Figure 9c shows how there could be many routes to improving human welfare. 	
Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)
Level 3	9–12	<ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provides logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)

