



Mark Scheme (Results)

June 2026

Pearson Edexcel International GCSE in Geography

Human Geography

4GE1/02

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at:

www.pearson.com/uk

June 2026

Question Paper Log Number P79004RA

Publication Code 4GE1_02_2606_MS

All the material in this publication is copyright

© Pearson

General Marking Guidance

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

Question Number	Identify one job that is part of the tertiary sector.	Mark
1(a)(i)	AO1 (1 mark) C restaurant waiter (1) The answer cannot be A, B or D as these are not jobs that are part of the tertiary sector. A, B and D (primary).	(1)

Question Number	State one impact of an economic shift to a larger workforce in the tertiary sector.	Mark
1(a)(ii)	AO1 (1 mark) Award 1 mark for a suitable impact. • More educated/skilled workforce (1) • Higher average wages (1) • Loss of jobs in the secondary/primary sector (1) • Deindustrialisation (1) • More educated/skilled workforce (1) • Higher average wages/greater disposable income (1) • Loss of jobs in the secondary/primary sector (1) • Raw material extraction reduction (1) • Deindustrialisation (1) • More money in the economy/development/increase in standard of living /Increased GNI/GDP (1). Accept any other appropriate response.	(1)

Question Number	Identify the stage in the Clark Fisher model with a high primary sector and low tertiary sector.	Mark
1(b)	AO1 (1 mark) D pre-industrial (1) It cannot be A (not a stage in the Clark Fisher model), B (high secondary), C (high tertiary).	(1)

Question Number	Study Figure 1a in the Resource Booklet. Suggest one reason for the trend of employment in the primary sector.	Mark
1(c)	AO2 (1 mark) / AO3 (1 mark) Award 1 mark for basic evidence from the from the figure (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks. • Decline in primary employment/roughly halved (1) due to mechanisation /(post-) industrialisation/education (1) • More crops are imported / reduced demand for crops (1) which leads to a decline from 5 million in 1975 to around 2.5 million in 2010 (1). • Steady decline from 1975 (1) owing to loss of agricultural land/Rural depopulation /rural-urban migration (1). Accept any other appropriate response.	(2)

Question Number	State one factor that affects the choice of site for a factory.	Mark
1(d)	AO1 (1 mark) Award 1 mark for a suitable factor. • Cost of land /size of land (1) • Access to utilities/transport connections /raw materials (1) • Access to labour supply (1) • Water (supply) (1) • Relief of/flat land (1) • Tax breaks/SEZ (1) • Closeness to market /consumers (1) • Traffic (1) Accept any other reasonable response.	(1)

Question Number	For a named megacity explain two causes of informal employment.	Mark
1(e)	AO2 (2+2 marks) Award 1 mark for a cause and a further mark for development, up to a maximum of 2 marks each. A range of megacities could be chosen as context for this response. <u>Karachi:</u> - Continued rural-urban migration (1) which has increased competition for jobs (1). - Some workers do not have suitable qualifications (1) so seek work in the informal sector to provide for their family (1) - Very large population (1) there are not enough roles for people so that they are forced into the informal sector (1). <u>Mexico City:</u> - To be able to avoid paying taxes (1) as informal employment does not usually have a contract (1). - Lack of formal employment roles/ formal jobs don't always pay well (1) so people turn to the informal sector to make an income (1). Accept any other appropriate response.	(4)

Question Number	Study Figure 1b in the Resource Booklet. Suggest one reason why it is important to reduce a household's carbon footprint.	Mark
1(f)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark (AO1) for basic point and a further 2 marks (AO3) for extension through use of the resource, up to a maximum of 3 marks. - Reducing energy consumption through reducing times in a hot shower or turning lightbulbs off (1) this can reduce carbon emissions (1) as these contribute to climate change/more extreme weather events (1). - There are many household activities that contribute to a carbon footprint such as using the oven and other electronics (1) which lead to higher energy use (1) which leads to carbon emissions (1). - Figure 1b shows overuse of resources in cars and showers (1) which is not sustainable (1) as resources are running out (1)	(3)

	Carbon-based fuels are expensive (1) and it can cut down on costs (1) so using the car less often and changing to public transport would achieve this (1) Accept any other appropriate response.	
--	---	--

Question Number	Explain one advantage and one disadvantage of a named renewable energy source.	Mark
1(g)	AO2 (2+2 marks) Award 1 mark for one advantage and one disadvantage, and a further expansion mark, up to a maximum of 2 marks each. Renewable energy sources could include: solar, wind, HEP, biomass, geothermal. Accept wood as renewable. For example: <u>Solar energy</u> Advantage: - Buildings can be retrofitted with solar panels (1) which means most buildings have the potential to generate energy (1). Disadvantage: - Only generates energy during hours of sunlight (1) which means it is not reliable (1). <u>Wind power</u> Advantage: - Energy produced is clean/does not create emissions (1) does not contribute to climate change (1) Disadvantage: - High up-front installation costs (1) means unavailable to LICs who lack funding (for infrastructure projects) (1) - Look ugly/make a lot of noise (1) unpopular with local populations living nearby (1) - Wind can be variable /unreliable (1) meaning power may not be available all of time/times it is needed most (1) Accept any other appropriate response.	(4)

Question Number	Study Figure 1c in the Resource Booklet. Analyse reasons for differences in electricity produced from non-renewable energy sources.
-----------------	--

1(h)	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 • The energy generation in different countries will vary due to the natural resources available, but also the demand. • Access to nuclear power requires high levels of investment which means that it is not always a suitable option for all countries. • Some countries have made commitments to lower carbon emissions in an effort to mitigate climate change which will require a reduction in the use of fossil fuels. • Many countries still rely heavily on fossil fuels to energy generation as it a cheaper option due to existing infrastructure, and high costs of transitioning to renewable energy. AO4 • Figure 1c shows there are large variations in how electricity is generated. • Figure 1c shows how for many countries such as South Africa, India and China fossil fuels still dominate for generating electricity (69%, 78%, and 65%) which is similar to the overall world trend. • Figure 1c shows how some countries are more reliable on renewable energy such as Brazil with 89%. • Figure 1c shows how some countries are more reliant on nuclear energy than others; France 65% compared to Japan 7.6%.	
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	Identify the feature most associated with intensive farming.	Mark
2(a)(i)	AO1 (1 mark) D use of fertilisers (1) The answer cannot be A, B or C as these are not features associated with intensive farming.	(1)
Question Number	State one way commercial farming affects ecosystems.	Mark
2(a)(ii)	AO1 (1 mark) Award 1 mark for suitable way provided. • Can cause loss of soil fertility/soil degradation (1) • Reduced biodiversity/damages habitats/destroys wildlife (1) • Deforestation/land clearing (1) • Water pollution/eutrophication (1) • Increases/decreases number of hedgerows (1) • Chemical leakages /eutrophication (1) • Pesticides/herbicides (1) • Bioaccumulation of chemicals (1) Accept any other appropriate responses.	(1)

Question Number	Identify the correct statement about organic farming.	Mark
2(b)	AO1 (1 mark) D It usually promotes biodiversity (1) The answer cannot be A, B or C as these are not features of organic farming.	(1)

Question Number	Study Figure 2a in the Resource Booklet. Suggest one reason for the changes in agricultural employment shown.	Mark
2(c)	AO2 (1 mark) / AO3 (1 mark) Award 1 mark for basic evidence from the figure (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks. - Decline in employment shown in all three countries (1) may be due to mechanisation of agriculture (1). - Steady decline (1) may be as a result of loss of jobs due to crops being imported (1) - Decline in farming jobs in Kazakhstan (1) Rural-to-urban migration/rural depopulation as people attracted to the city for higher wages/service jobs compared to low paid agricultural jobs. (1). - A decline of 46% to 29% in Indonesia (1) may be due to a shift towards greater industrialisation/urbanisation (1).	(2)

Question Number	Name one biome that typically has high annual precipitation.	Mark
2(d)	AO1 (1 mark) Award 1 mark for a suitable biome: (Tropical) rainforest/ Tropical forest (1) - Temperate forest/deciduous forest/coniferous forest (1)	(1)

Question Number	Explain how natural ecosystems can provide climate regulation and health services.	Mark
2(e)	AO2 (2+2 marks) Award 1 mark for initial point and a further mark for development up to a maximum of 2 marks for climate regulation and health services. Climate regulation - Trees/forests absorb carbon dioxide (through photosynthesis) (1) which reduces its concentration in the atmosphere mitigating the enhanced greenhouse effect (1). - Plants release water vapour (through evapotranspiration) (1) which can influence cloud formation/rainfall patterns (1).	

	• Trees/forests can provide shade/shelter (1) which can reduce temperature of the ground nearby (1). • Oceans act as a moderator to temperature (1) by providing cooler air in summer and warmer air in winter making climates milder (1) Health services • Plants can be used as raw materials for medicines (1) which can be used to save lives/treat illnesses (1). • Walking in forests can be seen as beneficial for mental health (1) which can improve wellbeing due to fresh air and interaction with nature (1). • Plants can absorb pollutants like CO₂/particulate matter/produce oxygen (1) which can reduce air pollution/act as an air purifier (1).	(4)
--	---	------------

Question Number	Study Figure 2b in the Resource Booklet. Suggest how one of the diversification strategies shown could support farmers.	Mark
2(f)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark for a reason and a further 2 marks for extension through explanation or description with references to the resource, up to a maximum of 3 marks. • Increasing variety of crops grown/animal breeds allowing production across seasons (1) can increase their income (1) as they are no longer reliant on just one crop (1). • Creating opportunities for new activities such as tourist visits/agritourism (1) creates different income streams (1) that is less reliable on the climatic conditions (1). • Selling produce to customers who visit directly for food-based products/wool/farm shop (1) can support farmers rather than retailers that buy in bulk for low prices (1) reducing transport costs/getting a better mark-up per item/use the additional profit to buy machinery (1) Accept any other appropriate response.	(3)

Question Number	For a named developing or emerging country explain how natural hazards and population growth have led to changes in rural areas.	Mark
2(g)	AO2 (4 marks)	

	Award 1 mark for initial explanation of how natural hazards and population growth can affect rural areas and an additional 1 mark for development through further explanation or exemplification, up to a maximum of 2 marks for each. A range of countries could be chosen. For example: Indonesia: Natural hazards: • Wildfires in the northern areas have damaged many areas (1) leaving land barren/reducing crop output (1). • Earthquakes have damaged basic infrastructure (1) making access for machinery more difficult (1). • Volcanoes have covered land with lava (1) rural depopulation/rural-to-urban migration/ forcing people to move to cities for work/better healthcare/better housing (1) Population growth • Birth rates in many rural areas remain high (1) which leads to a growing population/increased pressure on resources (1). • Improved medical facilities/access to family planning services in some rural areas (1) is leading to reduced birth rates reducing the rate of growth (1). • Urban sprawl encroaching on rural space (1) reducing farmland /forestry areas (1) • People moving to rural areas due to cheaper land/homes (1) increasing house prices/changing population demographics (1) • Decrease in young people in rural areas (1) leads to lack of production/leads to an aging population (1) Accept any other appropriate response.	(4)
--	--	-----

Question Number	Study Figure 2c in the Resource Booklet. Analyse how the strategies shown could make life in rural areas more economically sustainable.
2(h)	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

- Rural areas typically rely more heavily on jobs and income in the primary sector through variable forms of agricultural production. Therefore maintaining a sustainable income is important.
- Rural areas face a range of challenges which have the potential to affect their production including the impacts of climate change as well as pests/diseases/pollution.
- Strategies to ensure economic sustainability for people working in rural areas often help improve agricultural output through education and training, investment and monitoring.
- To ensure longevity of the soil quality it is important to try and prevent soil degradation and erosion.

AO4

- Figure 2c shows four different strategies used to support rural areas in different countries which all focus on supporting agricultural production.
- Figure 2c shows how a program to monitor water quality can maintain production on fish farms.
- Figure 2c shows how working with local communities can lead to a high number of trees being planted.
- Figure 2c shows how funding can be used to grow drought resistant crops.
- Figure 2c shows how medical treatments can be used with poultry.

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	Identify the process which involves people moving away from cities.	Mark
3(a)	AO1 (1 mark) A - counter-urbanisation (1) The answer cannot be B, C and D as these all involve people moving into city centres.	(1)

Question Number	State one economic factor which can reduce quality of life in urban areas.	Mark
3(b)	AO1 (1 mark) Award 1 mark for any suitable economic challenge: • Unemployment/lack of jobs/competition for jobs (1) • Poverty (1) • Low wage jobs/unreliable income (1) • High food prices / inflation (1) • High property prices (mean people live in small houses) (1) • Informal employment (1). Accept any other appropriate response.	(1)

Question Number	Identify one characteristic of the informal economy.	Mark
3(c)(i)	AO1 (1 mark) D unreliable income (1) The answer cannot be A, B, or C as they are not characteristics of the informal economy.	(1)

Question Number	Study Figure 3a in the Resource Booklet. Suggest one way the growth of informal settlements (squatter settlements) may create challenges for urban areas.	Mark
-----------------	--	------

3(c)(ii)	AO2 (1 mark) / AO3 (1 mark) Award 1 mark for basic evidence from the figure (AO3) and a further 1 mark for extension through explanation (AO2), up to a maximum of 2 marks. • Informal settlements may have a high percentage of temporary toilets (1) which could lead to health issues/increase the potential for the spread of disease (1). • Spread of informal settlements along roadways (1) may prevent development of areas (1). Accept any other appropriate response.	(2)
-----------------	--	------------

Question Number	Study Figure 3a in the Resource Booklet. State one way rapid urban growth can cause segregation in cities.	Mark
3(d)	AO1 (1 mark) Award 1 mark for a suitable way: • Increase in property prices (1) • People select housing in areas they can afford (1) • People are paid different amounts of money for different jobs (1) • Unequal infrastructure development (1) • Gentrification (1) • Clustering of migrant populations (1) Accept any other appropriate response.	(1)

Question Number	For a named developed country explain two ways of making urban living more environmentally sustainable.	Mark
3(e)	AO2 (2+2 marks) Award 1 mark for each initial point, with a further mark for expansion mark, up to a maximum of 2 marks each. A range of countries could be chosen. For example: <u>France:</u>	(4)

	• Paris is going through a process of 'Greening the City' planting trees across the city (1) to try and increase green spaces to improve air quality (1). • In Paris the concept of the 15 minute city has been promoted so people can walk, cycle or use public transport to things they need (1) reducing the amount of private vehicles on the road (1). • Paris aims to ban petrol vehicles by 2030 (1) encouraging the use of electric cars/buses/bikes to reduce carbon emissions (1). <u>UK</u> • In London the ULEZ/congestion zone has been created (1) to reduce carbon emissions/encourage public transport use promoting cleaner air (1) • Introducing cycle lanes encouraging people to commute by bike (1) reduces CO₂/does not create further climate change/global warming (1) • Use brownfield rather than greenfield sites (1) thereby reducing urban sprawl/ damaging habitats at the edge of city for urban growth (1) • Retrofitting homes with insulation (1) reducing energy loss/increasing energy conservation (1) Accept any other appropriate response.	
--	--	--

Question Number	Study Figure 3b in the Resource Booklet. Suggest one reason for the differences in the urban population shown between Africa and South America.	Mark
3(f)	AO1 (1 mark) / (AO3) 2 marks Award 1 mark for an identification of a trend and a further 2 marks for extension through explanation or description, up to a maximum of 3 marks. • Higher populations in cities in South America (1) as many cities have experienced rapid rural-urban migration (1) due to industrialisation/greater levels of development (1). • High populations in villages in Africa (1) as higher proportion of people may work in agriculture (1) and therefore need to be closer to rural areas (1). • Even percentages (allow 20–24%) of people live in cities in South America and Africa (1) owing to rural to urban migration (1) to access better/higher paid jobs in the cities (1) Accept any other appropriate response.	(3)

Question Number	Explain two reasons why land use varies within cities.	Mark
3(g)	AO2 (4 marks) Award 1 mark for initial explanation and an additional 1 mark for development through further explanation or exemplification. • Accessibility (1) as easy access by road and rail are important features of the central business district (1). • Land value (1) as city centre areas with banking and retail are likely to have much higher land values (1) • Demand for services (1) as more residential areas may require high levels of housing and a few shops (1). • Stage of development (1) HICs have brownfield sites /new builds where factories have closed in the transition zone/inner city/ old CBD but these are not found in NICs (1) • Age of buildings (1) older /historic buildings tend to be in the centre/CBD with newer builds nearer to the rural-urban fringe (1) Accept any other appropriate response.	(4)

Question Number	Study Figure 3c in the Resource Booklet. Analyse possible benefits of building on greenfield sites.
3(h)	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. Analyse possible benefits of building on greenfield sites. 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 • Greenfield sites are sites which have not previously been built on, which are usually found on the edge of towns and cities. • There are a range of potential benefits of building on a greenfield site: ○ They often have lower development costs because they do not require the clearance of existing buildings or treatment of any polluted land. ○ They usually have more spaces for buildings and potential future expansion. ○ They often have good transport links if they are built close to larger main roads that connect different settlements

	- These benefits are for those who are involved in the development. There is often local opposition to building on greenfield sites from local residents as it disrupts the environment, can lower biodiversity etc. AO4 - Figure 3c shows a proposed site for a greenfield development in India. - Figure 3c shows how the greenfield sites have good accessibility as it is close to a state highway. - Figure 3c shows how there are a range of green field areas for development. - Figure 3c shows how there are some water bodies present which may be useful for any greenfield developments.
--	---

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	State one risk you considered before collecting your data.	Mark
4(a)(i)	AO3 (1 mark) Award one mark for a suitable risk: - Getting lost (1) - Falls/slips/injuries (1)	

	• Loss of equipment (1) • Stranger danger / being mugged / assaulted / phone stolen (1) • Being in or near traffic/roads (1) • Weather risks like sunburn / ice on the pavement (1) • Phone running out of battery (1) • People not responding (1) • Lack of signal (1) Accept any other appropriate response.	(1)
--	---	-----

Question Number	Explain one type of sampling you used to choose sites for your primary data collection.	Mark
4(a)(ii)	AO3 (2 marks) Award 1 mark for suitable type of sampling, and a further mark for explanation, up to a maximum of 2 marks. • Systematic (sampling) (1) where sites were selected at 200m intervals (1). • Purposive (1) where sites were chosen that had relevant buildings included (1). • Random (1) where sites were selected using a random number generator (1). • Stratified (1) where sites were selected by dividing the data/area into subsets/by zone (1) • Convenience/opportunistic (1) where sites were selected by speed/ accessibility/close proximity to me (1) Accept any other appropriate response.	(2)

Question Number	Explain two ways you used maps in your fieldwork enquiry.	Mark
4(b)	AO3 (4 marks) Award 1 mark for each suitable way identified, and a further mark for development or explanation up to a maximum of 2 marks each. • Google maps/street view (1) allowed exploration of the area to choose sites for data collection (1) • GIS maps (1) were used to plot data to be able to identify patterns (1). • Sketch maps (1) used during data collection to make notes on observations (1).	

	• Ordnance Survey /OS /coordinates maps (1) using coordinates to select specific buildings/points to study, so we all looked at the same one (1) • We planned a route on a map (1) to ensure we did not get lost when moving along our transect/to avoid the largest/most dangerous roads (1) Accept any other appropriate response.	(4)
--	--	------------

Question Number	Explain one data presentation technique you used.	Mark
4(c)	AO3 (2 marks) Award 1 mark for a suitable data presentation method, and a further mark for explanation, up to a maximum 2 marks. The data presentation techniques will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy. • Pie chart (1) used to view of relative proportion of people's views (1) • Bar graph (1) to provide a summary of questionnaire data to be able to form conclusions/ to compare results between areas (1). • Annotated photographs (1) to be able to explain important details about the data collection sites (1). Accept any other appropriate response.	(2)
Question Number	Explain one limitation of your data analysis.	Mark
4(d)	AO3 (3 marks) Award 1 mark for an initial point, and further 2 marks for explanation. • Sample size was quite small/restricted (1) which meant any anomalies had a big effect on the data (1) which many mean the conclusion was not accurate (1). • Analysis could have been more systematic (1) with data collected at more regular points (1) to ensure the data included was representative of the area (1). • Analysis was based on data collected at one point in time (1). If data had been collected over different dates (1) this may have included data with a broader range of views (1).	

	The statistical analyses/mean/median/mode we did may have been inaccurate (1) as we may have inputted anomalous data /extreme values (1) making the conclusions drawn unreliable/skewed (1) Accept any other appropriate response.	(3)
--	---	------------

Question Number	Evaluate the accuracy and reliability of the data collected.	
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 - Evaluation is likely to be linked to the details of the data collection methods and the choices made around when to collect data and sampling. - Evaluation will most likely be linked to how the nature of fieldwork design included comparison to a previous study. - Recognition of how the data could be compared in the bar graph. - A supported judgement should be reached about how the data might have been accurate and reliable, as there were clear decisions made about sampling, but that there were limited details on other methods which will have affect analysis and formation of conclusions. AO4 - In Figure 4a there shows there is information about the students' methodology which includes data collected by random sampling . - In Figure 4a suggests data was collected at one specific point in times. - In Figure 4a it shows the students compared their data to a previous study. - In Figure 4b there is data presented from one aspect of the questionnaire. - In Figure 4b the data does not show what questions were asked.	

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 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)

Question Number	State one risk you considered before collecting your data.	Mark
5(a)(i)	AO3 (1 mark) Award one mark for a suitable risk: - Getting lost (1) - Falls/slips/injuries (1) - Loss of equipment (1) - Stranger danger / being mugged / assaulted / phone stolen (1) - Being in or near traffic/roads (1) - Weather risks like sunburn / ice on the pavement (1) - Phone running out of battery (1) - People not responding (1) - Lack of signal (1) Accept any other appropriate response.	(1)

Question Number	Explain one type of sampling you used to choose the sites for primary data collection.	Mark
5(a)(ii)	AO3 (2 marks) Award 1 mark for suitable type of sampling, and a further mark for explanation, up to a maximum of 2 marks. • Systematic (sampling) (1) where sites were selected at 200m intervals (1). • Purposive (1) where sites were chosen that had relevant buildings included (1). • Random (1) where sites were selected using a random number generator (1). • Stratified (1) where sites were selected by dividing the data/area into subsets/by zone (1) • Convenience/opportunistic (1) where sites were selected by speed/ accessibility/close proximity to me (1) Accept any other appropriate response.	(2)

Question Number	Explain two ways you used maps in your fieldwork enquiry.	Mark
5(b)	AO3 (4 marks) Award 1 mark for each suitable way identified, and a further mark for development or explanation up to a maximum of 2 marks each. • Google maps/street view (1) allowed exploration of the area to choose sites for data collection (1) • GIS maps (1) were used to plot data to be able to identify patterns (1). • Sketch maps (1) used during data collection to make notes on observations (1). • Ordnance Survey /OS /coordinates maps (1) using coordinates to select specific buildings/points to study, so we all looked at the same one (1) • We planned a route on a map (1) to ensure we did not get lost when moving along our transect/to avoid the largest/most dangerous roads (1) Accept any other appropriate response.	(4)

Question Number	Explain one data presentation technique you used.	Mark
5(c)	AO3 (2 marks) Award 1 mark for a suitable data presentation method, and a further mark for explanation, up to a maximum 2 marks. The data presentation techniques will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy. • Pie chart (1) used to view of relative proportion of people's views (1) • Bar graph (1) to provide a summary of questionnaire data to be able to form conclusions/ to compare results between areas (1). • Annotated photographs (1) to be able to explain important details about the data collection sites (1). Accept any other appropriate response.	(2)

Question Number	Explain one limitation of your data analysis.	Mark
5(d)	AO3 (3 marks) Award 1 mark for an initial point, and further 2 marks for explanation. • Sample size was quite small/restricted (1) which meant any anomalies had a big effect on the data (1) which many mean the conclusion was not accurate (1). • Analysis could have been more systematic (1) with data collected at more regular points (1) to ensure the data included was representative of the area (1). • Analysis was based on data collected at one point in time (1). If data had been collected over different dates (1) this may have included data with a broader range of views (1). • The statistical analyses/mean/median/mode we did may have been inaccurate (1) as we may have inputted anomalous data /extreme values (1) making the conclusions drawn unreliable/skewed (1) Accept any other appropriate response.	(3)

Question Number	Evaluate the accuracy and reliability of the data collected.
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 • Evaluation is likely to be linked to the details of the data collection methods and the choices made around when to collect data and sampling. • Evaluation will most likely be linked to how the nature of fieldwork design included comparison to a previous study. • Recognition of how the data could be compared in the bar graph. • A supported judgement should be reached about how the data might have been accurate and reliable, as there were clear decisions made about sampling, but that there were limited details on other methods which will have affect analysis and formation of conclusions. AO4 • In Figure 5a there shows there is information about the students' methodology which includes data collected by random sampling . • In Figure 5a suggests data was collected at one specific point in times. • In Figure 5a it shows the students compared their data to a previous study. • In Figure 5b there is data presented from one aspect of the questionnaire. • In Figure 5b the data does not show what questions were asked.

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 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)

Question Number	State one risk you considered before collecting your data.	Mark
6(a)(i)	AO3 (1 mark) Award one mark for a suitable risk: - Getting lost (1) - Falls/slips/injuries (1) - Loss of equipment (1) - Stranger danger / being mugged / assaulted / phone stolen (1) - Being in or near traffic/roads (1) - Weather risks like sunburn / ice on the pavement (1) - Phone running out of battery (1) - People not responding (1) - Lack of signal (1) Accept any other appropriate response.	(1)

Question Number	Explain one type of sampling you used to choose the sites for primary data collection.	Mark
6(a)(ii)	AO3 (2 marks) Award 1 mark for suitable type of sampling, and a further mark for explanation, up to a maximum of 2 marks.	

	• Systematic (sampling) (1) where sites were selected at 200m intervals (1). • Purposive (1) where sites were chosen that had relevant buildings included (1). • Random (1) where sites were selected using a random number generator (1). • Stratified (1) where sites were selected by dividing the data/area into subsets/by zone (1) • Convenience/opportunistic (1) where sites were selected by speed/ accessibility/close proximity to me (1) Accept any other appropriate response.	(2)
--	--	------------

Question Number	Explain two ways you used maps in your fieldwork enquiry.	Mark
6(b)	AO3 (4 marks) Award 1 mark for each suitable way identified, and a further mark for development or explanation up to a maximum of 2 marks each. • Google maps/street view (1) allowed exploration of the area to choose sites for data collection (1) • GIS maps (1) were used to plot data to be able to identify patterns (1). • Sketch maps (1) used during data collection to make notes on observations (1). • Ordnance Survey /OS /coordinates maps (1) using coordinates to select specific buildings/points to study, so we all looked at the same one (1) • We planned a route on a map (1) to ensure we did not get lost when moving along our transect/to avoid the largest/most dangerous roads (1) Accept any other appropriate response.	(4)

Question Number	Explain one data presentation technique you used.	Mark
6(c)	AO3 (2 marks) Award 1 mark for a suitable data presentation method, and a further mark for explanation, up to a maximum 2 marks.	

	The data presentation techniques will vary on the nature and context of the fieldwork, but it must be plausibly linked to the focus: economic activity and energy. • Pie chart (1) used to view of relative proportion of people's views (1) • Bar graph (1) to provide a summary of questionnaire data to be able to form conclusions / to compare results between areas (1). • Annotated photographs (1) to be able to explain important details about the data collection sites (1). Accept any other appropriate response.	(2)
--	--	------------

Question Number	Explain one limitation of your data analysis.	Mark
6(d)	AO3 (3 marks) Award 1 mark for an initial point, and further 2 marks for explanation. • Sample size was quite small/restricted (1) which meant any anomalies had a big effect on the data (1) which many mean the conclusion was not accurate (1). • Analysis could have been more systematic (1) with data collected at more regular points (1) to ensure the data included was representative of the area (1). • Analysis was based on data collected at one point in time (1). If data had been collected over different dates (1) this may have included data with a broader range of views (1). • The statistical analyses/mean/median/mode we did may have been inaccurate (1) as we may have inputted anomalous data /extreme values (1) making the conclusions drawn unreliable/skewed (1) Accept any other appropriate response.	(3)

Question Number	Evaluate the accuracy and reliability of the data collected.
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 • Evaluation is likely to be linked to the details of the data collection methods and the choices made around when to collect data and sampling. • Evaluation will most likely be linked to how the nature of fieldwork design included comparison to a previous study. • Recognition of how the data could be compared in the bar graph. • A supported judgement should be reached about how the data might have been accurate and reliable, as there were clear decisions made about sampling, but that there were limited details on other methods which will have affect analysis and formation of conclusions. AO4 • In Figure 6a there shows there is information about the students' methodology which includes data collected by random sampling. • In Figure 6a suggests data was collected at one specific point in times. • In Figure 6a it shows the students compared their data to a previous study. • In Figure 6b there is data presented from one aspect of the questionnaire. • In Figure 6b the data does not show what questions were asked.
--	---

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 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)
----------------	-----	---

Question Number	State one factor that can affect the distribution of fragile environments.	Mark
7(a)(i)	AO1 (1 mark) Award 1 mark for a suitable factor identified: - Temperature (1) - Rainfall/aridity/ water availability' (1) - Altitude (1) - Ocean temperature (1) - Climate change/global warming (1) - Urbanisation/ population density /human activity (1). - Distance from the Equator /latitude (1) Accept any other suitable response.	(1)

Question Number	Identify one greenhouse gas.	Mark
7(a)(ii)	AO1 (1 mark) C methane (1) The answer cannot be A, B, or D as these are not greenhouse gases.	(1)

Question Number	Identify which of the following is directly associated with desertification.	Mark
7(b)	AO1 (2 marks) A degradation of land (1) The answer cannot be B, C or D as these are not directly associated with desertification.	(1)

Question Number	Identify two labelled countries with the highest level of people suffering from severe hunger.	Mark
7(c)(i)	AO3 (2 marks) Award 1 mark for each of the following answer. • Madagascar (1) • Chad (1)	(2)

Question Number	Suggest two reasons for the pattern shown in Figure 7a.	Mark
7(c)(ii)	AO2/AO3 (4 marks) Award 1 mark for identification of a pattern shown on the resource, and a further mark for a reason for this pattern, up to a maximum of 2 marks per idea. • Low levels of hunger across North America and Europe (1) which could be linked to greater food security owing to higher GDP (1) . • Varied pattern of hunger across South America (1) as there may be climatic conditions across some countries which have affected crop output (1). • The majority of countries in Africa have above 5% of people experiencing chronic hunger (1) which could be because of socio-economic/environmental reasons such as drought/conflict/climate change (1). • Overpopulation in countries like Mexico and India (1) mean that 5-14.9% of people are suffering from severe hunger (1) • Landlocked countries like Chad and Mongolia/Bolivia/Afghanistan have a greater level of hunger of at least 15% (1) as they have less rainfall/cannot afford imports (1) • Equatorial/tropical countries have greater levels of hunger than mid-latitude countries (1) as there are lower level of desertification in mid-latitude areas (1) • HICs have a lower level of hunger than LICs (or vice-versa) (1) this is because they can afford to import food to alleviate shortages/use technology/irrigation to maximise yields (1) Accept any other appropriate response.	(4)

Question Number	Explain two causes of climate change.	Mark
-----------------	---------------------------------------	------

7(d)	AO2 (4 marks) Award 1 mark for identification of a cause of climate change and a further mark for an explanation or development, up to a maximum of 2 marks. - Increased CO₂ emissions (1) due to industrialisation/increased manufacturing/increased population burning fossil fuels /deforestation releasing carbon back to the atmosphere (1). - Increased use of vehicles using fossil fuels (1) which increases carbon emissions (1). - Deforestation (1) which had led to less CO₂ being absorbed by trees (1). - Cattle farming (1) which leads to enhanced methane in the atmosphere (1). - Milankovitch cycles (1) which can led to increased amount of sunlight reaching the earth (1). - Volcanic eruption (1) which can release particles into the air which can lead to cooling (1). Accept any other appropriate response.	(4)
-------------	---	------------

Question Number	Calculate the range in global carbon emissions for India between 1983 and 2023.	Mark
7(e)(i)	AO4 2 marks Award 1 mark for correct answer, and 1 mark for method. 3.06 – 0.35 (1) 2.71 (1) Award 2 mark for correct answer only 2.71 (2)	(2)

Question Number	Describe one other change in CO ₂ emissions show in Figure 7b.	Mark
7(e)(ii)	AO2 (1 mark) /AO3 (1 mark) 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. - Denmark has experienced a (slight) decline in CO₂ emissions (1) from 0.05 to 0.03 / 0.02 decline (1) - Pakistan has experienced a (small) increase in CO₂ emissions (1) at	

	0.016 between 1983 and 2023 (1) • Japan experienced a rise and then a fall in CO₂ emissions (1) from a high of 1.29 in 2003 to 0.99 by 2023 (1). • India has a smaller increase in CO₂ from 1983–2003 (1) from 0.35 to 1.07 (1) • USA decreased from 2003 to 2023 (1) from 6.01 to 4.91 (1) • USA increased then decreased (1) from 4.43 to 6.01 to 4.91 (1) • USA has an overall net increase (1) but increased and decreased within that time (1) Accept any other appropriate response.	(2)
Question Number	Study Figure 7c in the Resource Booklet. Assess the different causes of deforestation.	
7(f)	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 • Deforestation is the process of clearing forested land, often for forestry, agriculture, mining, settlement or transport route building. • Since 1990 around 420mha of forest have been lost due to human activities. Although the rate of deforestation has decreased in recent years it is still nearly around 10 million ha a year. • There are a range of causes deforestation that are primarily caused by human activities: these include: increased agriculture including cattle farming, logging, infrastructure development, mining, population growth and urbanisation. • Other causes can be linked to human activities including, climate change causing changes in temperature and wildfires. • The causes will vary in prominence depending on the location. AO4 • Figure 7c shows a range of causes of deforestation related to human activities. • Figure 7c shows how human activities are responsible for many of the causes of desertification which can be grouped into four categories: demand for timber and agricultural products, corruption, cultural factors, migration and population growth, and climate change. • Figure c shows how some of the agricultural activities can include cattle farming rather than just logging.	

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	Discuss the view: “Climate change presents the greatest challenge to fragile environments”.
7(g)	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 - Climate change has wide ranging impacts which will lead to challenges for fragile environments. This includes: - increased temperatures: nearly all areas of the globe are experiencing warmer temperatures. Global temperatures increased 1.1°C from 1850 to 2023. - Increased frequency of extreme weather events as changes in temperatures can cause changes in rainfall and more severe storms which can lead to heat waves or flooding. - Increased drought for some areas due to reduced rainfall or changes in temperature. - Fragile environments including tropical rainforests, coral reefs and mangroves.

AO3 • Climate change is a global issue with varying impacts in different locations. • For some locations the particular environmental conditions may present the greatest challenge at a particular time, for example extreme flooding events in Bangladesh, or severe wildfires in California. Although many of these environmental issues are exacerbated by climate change. • Human activities present some of the greatest threats to different fragile environments. Given climate change is exacerbated by human activities, it could be argued that it is human activities such as increased industrialisation and population growth which are the greatest challenge. AO4 • Figure 7b shows there have been significant changes in CO2 emissions from several countries between 1983 and 2023. • Figure 7b shows how for some countries like the USA the CO2 emissions have increased (by 0.48 billion tonnes). • Figure 7b shows how some countries have managed to reduce their CO2 emissions e.g. Denmark, but only by small amounts (0.02 billion tonnes). • Figure 7c shows a range of causes of deforestation related to human activities. • Figure 7c shows how human activities are responsible for many of the causes of desertification which can be grouped into four categories: demand for timber and agricultural products, corruption, cultural factors, migration and population growth, and climate change. • Figure c shows how some of the agricultural activities can include cattle farming rather than just logging.		
Level	Mark	Descriptor
	0	No rewardable material.
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, environment 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	Identify the best definition of a global commodity chain.	Mark
8(a)	AO1 (1 mark) B series of links between places of production and consumption (1) The answer cannot be A, C or D as these are not correct definitions for a global commodity chain.	(1)

Question Number	Identify one push factor for migration.	Mark
8(b)(i)	AO1 (1 mark) B lack of access to services (1) The answer cannot be A, C or D as these are not push factors for migration.	(1)

Question Number	State one impact of increased rural-urban migration.	Mark
8(b)(ii)	AO1 (1 mark) Award one mark for a suitable impact: • Competition for housing/jobs/services (1) • Urbanisation/urban sprawl (1) • Pressure on existing infrastructure (1) • Unemployment (1) • Air/noise/water pollution (1) • Increased traffic/ congestion (1) • Lack of rural workforce/aged rural population (1)	(1)

	Accept any other appropriate response.	
--	--	--

Question Number	Study Figure 8a in the Resource Booklet. Identify two labelled countries that have 80–100% of the population who use the internet.	Mark
8(c)(i)	AO3 (2 marks) Award 1 mark for each of the following: • Chile (1) • Spain (1)	(1)

Question Number	Suggest two reasons for the pattern shown.	Mark
8(c)(ii)	AO2/AO3 (4 marks) Award 1 mark for initial reason, and a further mark for development with reference to the resource, up to a maximum of 2 marks per idea. • Widespread high use of the internet in most continents except Africa (1) due to globalisation which has led to the spread of technology (1). • Economic development providing money for technology to use the internet (1) has led to high levels of internet use/80–100% in North America compared to lower levels in some emerging countries (1). • Disparity between level of internet users between Africa and Europe (1) due to lack of infrastructure in place in some countries which prevents some people from accessing internet connections (1). • Landlocked countries in Africa (1) are cut off and do not have access to high level infrastructure / have 0–19% of people online (1) Accept any other appropriate response.	(4)

Question Number	Explain two ways that investment from transnational corporations (TNCs) can lead to economic development.	Mark
8(d)	AO1/AO2 (4 marks)	

	Award 1 mark (AO1) for identification of suitable way TNC investment can lead to economic development a further mark (AO2) for an explanation of the impact, up to a maximum of 2 marks. • Job creation (1) which increases GDP/household income (1). • Skills jobs (1) can lead to a more skilled workforce which can benefit other organisations in the country (1). • Multiplier effect (1) if a TNC becomes successful, other may also then invest in the country (1). • Taxes paid by the TNC (1) can be used by the government to support economic development projects such as infrastructure development (1). • Can establish new trade networks (1) which many boost exports (1). Accept any other appropriate response.	(4)
--	---	------------

Question Number	Study Figure 8b in the Resource Booklet. Calculate the range in FDI in India between 1993 and 2023.	Mark
8(e)(i)	AO4 (2 marks) 47,102-532 (1) 46,570 (1) Award 2 marks for correct answer only. 46,570 (2). Do not accept any other answer	(2)

Question Number	Describe one other change shown in Figure 8b.	Mark
8(e)(ii)	AO3 (2 marks) Award 1 mark for a suitable trend identified, and a further mark for description which could include the use of data. • Most countries have experienced an increase (1) for example Japan has increased from 210 to 21,433 US\$ millions (1). • Some countries experienced a peak in 2008 (1) for example India reached 47,102 but declined to 28,163 by 2023 /for example Norway reached 8,959 but declined to 7,960 in 2023 (1). • All countries had their greatest change/increase in the 1993 to 2008 period (1) but only Greece and USA increased from 2008 to 2023/but all decreased except Greece and USA from 2008 to 2023 (1)	(2)

	Accept any other appropriate response.	
--	--	--

Question Number	Study Figure 8c in the Resource Booklet. Assess the potential impacts of an increase in global tourism.
8(f)	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: Increase in global tourism AO3 • Economic impacts: the global tourism sector supports around 330 million jobs which will contribute to individual livelihoods but also increased GDP. Although the profits of some tourist businesses will not always benefit the local communities involved. • Social impacts: it can lead to increased cultural awareness but can also lead to conflicts if tourists are not respectful of local cultures and practices. • Environmental impacts: environmental degradation if large numbers of tourists visit this can lead to damage such as trampling of habitats, over use of resources such as water. Although increased investment from tourism can lead to funding for projects which protect the environment. AO4 • Figure 8c shows how tourism may be considered a threat to some locations, but may have economic benefits (up to €17 billion a year). • Figure 8c shows how tourism can lead to pressure on local resources such as increased water use. • Figure 8c shows how tourists can have environmental impacts including disturbing habitats for wildlife or causes water pollution.

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	Discuss the view: “Globalisation has more positive than negative impacts.”	
8(g)	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 • Globalisation is the process of increasing integration of national markets into a single global system. • Globalisation can lead to greater economic and social integration of countries and people which can support greater international collaboration through international organisations as well as businesses. • Global GDP has grown from US\$34.7 trillion in 1980 to \$108 trillion by 2020 demonstrating that significant economic growth has taken place globally. AO3 • The positive impacts of globalisation can include: ○ Building trade links with other countries ○ Job creation and more formal job opportunities (and more skilled jobs) ○ Development of infrastructure ○ Foreign exchange increase through exports ○ Investment in new technologies. • The negative impacts of globalisation include: ○ The profit driven nature of enterprises in the global economy (e.g. TNCs)	

	○ Profits from TNCs often do not benefit host countries as much as they are sent back to where the headquarters is based. ○ There is the potential for exploitation of workers. ○ It can lead to exploitation of the environment. ○ New jobs may not always be given to local people but may lead to greater migration of workers from developed countries to support TNC development. • It should also be recognised that the positive and negative that relate to globalisation are often uneven with much of the economic benefit being centred in developed countries, often where TNC headquarters are located, but with more negative impacts experienced by developing/emerging countries. AO4 • Figure 8b shows how there has been growth in FDI for many countries since 1993. • Figure 8b shows how for some countries there has been a significant overall increase in FDI, for example Norway which has increased by US\$6,967 million. • Figure 8b shows how for some countries FDI has been quite changeable as seen in India which peaked in 2008 and reduced again by 2023. • Figure 8c shows how tourism may be considered a threat to some locations, but may have economic benefits (up to €17 billion a year). • Figure 8c shows how tourism can lead to pressure on local resources such as increased water use. • Figure 8c shows how tourists can have environmental impacts including disturbing habitats for wildlife or causes water pollution.
--	---

Level	Mark	Descriptor
	0	No rewardable material.
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, environment 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	Identify the project that is most likely to be a top-down development project.	Mark
9(a)(i)	AO1 (1 mark) C dam construction (1) The answer cannot be A, B or D as these are all bottom-up development projects.	(1)

Question Number	Identify one advantage of bottom-up development projects.	Mark
9(a)(ii)	AO1 (1 mark) B can involve local community members (1). The answer cannot be A, C or D as they are not advantages of bottom up development projects.	(1)

Question Number	Define the term international aid.	Mark
9(b)	AO1 (1 mark) Award 1 mark for a suitable definition. • Resources or money provided by one country or organization to another (1) • Help provided from one country to another (1)	(1)

	Accept any other appropriate response.	
--	--	--

Question Number	Study Figure 9a in the Resource Booklet. Identify two labelled states with the highest rate of poverty.	Mark
9(c)(i)	AO3 (1 mark) Award 1 mark for each of the following states. • Florida (1) • Kentucky (1)	(2)

Question Number	Suggest two reasons for the pattern shown in Figure 9a.	Mark
9(c)(ii)	AO2/AO3 (4 marks) Award 1 mark for identification of a reason, with a further mark for development with reference to the resource, up to a maximum of 2 marks. • There is significant variation in levels of poverty in the USA (1), which could be due to variable access to jobs which could lead to variable income (1). • There are higher levels of poverty towards the south and east of the USA (1) these may be states which have experienced loss of jobs in industry or agriculture/for historical or political factors such as previous discrimination (1). • There may be significant landlocked states like Kentucky/towards the SE (1) that have no easy access to ports for trade so remain poorer (1) • Coastal regions may be poorer (1) because weather events/hurricanes cause damage /rebuilding uses up resources (1) • Government policy in states like Florida (1) have reduced educational outcomes causing poor life chances (1) • Poorer states in the south/east are known for tourism (1) which has low paying jobs blocking economic prosperity (1)	(4)

	Lower housing costs in the North/Central/West (1) mean people live in less poverty than neighbouring states (1) Accept any other appropriate response.	
--	---	--

Question Number	Explain two reasons population structure may change as a country develops.	Mark
9(d)	AO1/AO2 (4 marks) Award 1 mark for identification of suitable reason, with a further mark for development or explanation, up to a maximum of 2 marks. - Fertility rate is likely to reduce/smaller proportion of young people (1) as women tend to engage more in the workforce / use family planning to limit family size (1). - Mortality rate reduces (1) due to greater access to healthcare (1). - Aging population/increased life expectancy (1) due to better diet/increased awareness of health issues (1). - Population pyramid shape tends to have a smaller base and wider mid/top (1) due to reduced mortality rates (1). Accept any other appropriate response.	(4)

Question Number	Study Figure 9b in the Resource Booklet. Calculate the range in water use capita in Morocco between 1980 and 2020.	Mark
9(e)(i)	AO4 (2 marks) Award 1 mark a suitable correct answer and 1 mark for correct method. 501-316 185 Award 2 marks if correct answer only is seen. 185 (2). Do not accept any other answer.	(2)

Question Number	Describe one other change shown in Figure 9b. You must refer to the resource in your answer.	Mark
9(e)(ii)	AO4 (2 marks)	

	Award 1 mark for the identification of suitable change and a further mark for description, which could include the use of data, up to a maximum of 2 marks. - Many countries have reduced their water withdrawal per capita during the time period (1) for example South Africa has reduced by 60m³ (1). - Some countries like Morocco have experienced a decrease (1). It changed from 477 in 1980 to 316 by 2020 (1). - One country (Norway) has increased the water use (1) increasing from 486 to 641 (1). Accept any other appropriate response.	(2)
--	--	-----

Question Number	Study Figure 9c in the Resource Booklet. Assess the factors that could affect the relationship between GDP and life expectancy.
9(f)	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: Assess the factors that could affect the relationship between GDP and life expectancy. AO3 - There are a range of factors that can affect GDP and life expectancy: - Economic development as this may impact finances available to be dedicated to healthcare by the governments. - Population growth as increases can lead to pressure on healthcare services. - Availability of resources such as food and water as these may impact life expectancy. - Education and literacy as these may affect awareness of health issues as well as ability to get more skilled employment which may generate higher GDP. - Many of these factors are interlinked, for example the ability to afford healthcare which can affect life expectancy can be linked to income and GDP. AO4 - Figure 9c shows how there is a strong correlation between life expectancy and GDP per capita across most regions of the world.

	- Figure 9c shows how some continents have a broad spread of GDP per capita with Asia ranging from around US\$1,500 to over \$100,000. - Figure 9c shows how there are some outliers to the pattern such as Nigeria which has slightly lower life expectancy (around 55) for its GDP per capita (US\$5,000).
--	---

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	Discuss the view: "Water security is the most important factor that affects human welfare."
9(g)	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. Water security is the most important factors that affects human welfare 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 - Human welfare is the overall well-being or quality of life of people in a particular country. - Human welfare can be measured through a number of different single indicators including GDP, life expectancy, literacy rates, and Gini equality index, as well as composite indicators such as HDI.

	- Human welfare typically is considered to be higher in more developed countries. - The different dimensions of human welfare will require different measurements for example the United Nations considers the health dimension through life expectancy. - Water security is an important issue affecting human welfare as it affects the ability of humans to take part in daily life. Around 50% of the world's population lives in areas experiencing high water stress for at least one month a year. AO3 - Variations in human welfare can be affected by a range of factors including economic, demographic, social, cultural, environmental and political. - Poverty and inequality which can include lack of food, access to services or suitable housing will have a direct impact on human welfare. In 2024 around 8.8% of the world was living in extreme poverty. This will have an impact on water security in terms of being able to afford clean water, but it is part of a wider mix of issues that contribute to overall welfare. - Water security issues are being made worse by issues such as climate change. There is a complex interplay of issues which affect human welfare. If there are increased temperatures this can lead to water shortages, as well as heatwaves which can have health implications. AO4 - Figure 9b shows how water withdrawals vary significantly between countries and have varied over time. - Figure 9b shows how some countries have experienced an increased in water withdrawals, such as Norway which has increased from 486 to 641. - Figure 9b shows how some countries have experienced a decline in water withdrawals, for example Japan has reduced by 103m³. - Figure 9c shows how there is a strong correlation between life expectancy and GDP per capita across most regions of the world. - Figure 9c shows how some continents have a broad spread of GDP per capita with Asia ranging from around US\$1,500 to over US\$100,000. - Figure 9c shows how there are some outliers to the pattern such as Nigeria which has slightly lower life expectancy (around 55) for its GDP per capita (US\$5,000).
--	--

Level	Mark	Descriptor
	0	No rewardable material.
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, environment 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)