

INTERNATIONAL A-LEVEL GEOGRAPHY GG04

Paper 4 Human Geography 2

Mark scheme

January 2025

Version: 1.0 Final



Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same, correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

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International A-level Geography mark scheme

How to mark

Aims

When you are marking your allocation of scripts your main aims should be to:

- recognise and identify the achievements of students
- place students in the appropriate mark band and in the appropriate part of that mark band (high, low, middle) for **each** Assessment Objective
- record your judgements with brief notes, annotations and comments that are relevant to the mark scheme and make it clear to other examiners how you have arrived at the numerical mark awarded for each Assessment Objective
- ensure comparability of assessment for all students, regardless of question or examiner.

Approach

It is important to be **open-minded** and **positive** when marking scripts.

The specification recognises the variety of experiences and knowledge that students will have. It encourages them to study geography in a way that is relevant to them. The questions have been designed to give them opportunities to discuss what they have found out about geography. It is important to assess the quality of **what the student offers**.

Do not mark scripts based on the answer **you** would have written. The mark schemes have been composed to assess **quality of response** and not to identify expected items of knowledge.

Assessment Objectives

This component requires students to:

AO1	Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.
AO2	Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.
AO3	Use a variety of relevant quantitative, qualitative and fieldwork skills to: • investigate geographical questions and issues • interpret, analyse and evaluate data and evidence • construct arguments and draw conclusions.

The marking grids

Do not think of levels equaling grade boundaries.

Depending on the part of the examination, the levels will have different mark ranges assigned to them. This will reflect the different weighting of Assessment Objectives in particular tasks and across the examination as a whole.

Using the grids

Having familiarised yourself with the descriptors and indicative content, read through the answer and annotate it (as instructed below) to identify the qualities that are being looked for and that it shows. You can now check the levels and award a mark.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptors for that level. The descriptors for the level indicate the different qualities that might be seen in the student's answer for that level. If it meets all the descriptors for the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptors and the answer. With practice and familiarity you will find that for better answers you will be able to skip through the lower levels of the mark scheme quickly.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best-fit approach for defining the level and then use the variability of the response to help decide the mark within the level.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark.

It is often best to start in the middle of the level's mark range and then check and adjust. If there is a lot of indicative content fully identifiable in the work you need to give the highest mark in the level. If only some is identifiable or it is only partially fulfilled, then give the lower mark.

The exemplar materials used during standardisation will also help. There will be an answer in the standardising materials that will correspond with each level of the mark scheme. This answer will have been awarded a mark by the lead examiner. You can compare the student's answer with the example to determine if it is of the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the lead examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

In addition to the levels descriptors, question specific indicative content is provided as a guide for examiners. This is not intended to be exhaustive and you must credit other valid points.

An answer that contains nothing of relevance to the question must be awarded no marks.

Annotating scripts

You should write a summative comment at the end for each Assessment Objective and indicate the marks for each Assessment Objective being tested at the end of the answer in the margin in sequence. It is vital that the way you arrive at a mark should be recorded on the script. This will help you with making accurate judgements and it will help any subsequent markers to identify how you are thinking. Please do not write negative comments about students' work or their alleged aptitudes.

Section A – Changing Places**Total for this section: 40 marks**

Question	Part	Marking guidance	Total marks
01	1	‘A person who doesn’t feel like they belong in a new place’ is an example of which of the following? Key – D: An outsider perspective	1 AO1=1

Question	Part	Marking guidance	Total marks
01	2	Which of the following is an example of a past process influencing the economic characteristics of a place? Key – B: Deindustrialisation has increased rates of unemployment in an area.	1 AO1=1

Question	Part	Marking guidance	Total marks
01	3	‘A place that feels physically or emotionally close to a person, for example, the town in which they were born.’ This is an example of which of the following? Key – D: A near place	1 AO1=1

Question	Part	Marking guidance	Total marks
01	4	‘The depth of feeling we have for a place, affected by our knowledge and understanding of it.’ Which of the following does this statement describe? Key – A: An attachment to a place	1 AO1=1

Question	Part	Marking guidance	Total marks
01	5	Which of the following are BOTH examples of a person directly experiencing a place? Key – A: Collecting primary fieldwork data from a place and travelling to a place for a job interview	1 AO1=1

Question	Part	Marking guidance	Total marks
02		Analyse the changes in land use in Doha from 1997–2010 shown in FIGURES 1a and 1b.	6 AO3=6

Level	Marks	Descriptor
2	4–6	AO3 – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support. Clear connections between different aspects of the data.
1	1–3	AO3 – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support. Basic or limited connections between different aspects of the data.
0	0	No creditable content.

Indicative Content

There are a variety of ways of approaching this unseen material.

This question requires the analysis of the changes to land use in Doha between 1997–2010 evident in **Figures 1a** and **1b**. Level 2 answers must provide clear evidence of change in land use and use specific evidence from the figures to support these connections. Specific evidence may include calculations of area or distance using the scale. No credit for place knowledge not evident in the figures provided.

AO3

- In 1997 open space was the main land use, whereas in 2010, the main land use is buildings.
- The area occupied by buildings has become more continuous, with fewer gaps of open space between buildings in 2010 compared to 1997.
- The area occupied by buildings has spread up to 6 km northwards, 6 km southwards and 4 km further westwards in 2010 than in 1997.
- The largest area of park and gardens (to the north of the city in 1997) has reduced in size (from approximately 5 km² to 3 km²) but in 2010 there are new, larger areas of parks and gardens (up to approximately 20 km²), especially on the southern and southwestern edges of the city.
- The smaller areas of industry that were spread throughout the city in 1997 have disappeared in 2010 where industry is now focused in one large area (18–20 km²) on the southern edge of the city.
- Farmland was found in small areas of land (approximately 1–2 km²), mainly towards the western edge of the city in 1997 which were largely surrounded by open space, whereas in 2010, although the areas of farmland are in similar areas, they are now surrounded by buildings or parks and gardens and the largest farm is approximately three times larger at 6 km².
- The area occupied by transport is larger in 2010 than in 1997. The largest area of growth is in the far east of the area, which has approximately tripled in size in 2010 compared to 1997. There is also some growth in areas of open space in the northwest of the area.
- Overall, there are significantly larger amounts of buildings, transport and parks and gardens, less open space and similar amounts of farmland and industry in 2010 compared to 1997.

Credit any other valid analysis.

Question	Part	Marking guidance	Total marks
03		Assess the extent to which relationships and connections have had positive impacts on lived experience in the local place you have studied. AO1 – Knowledge and understanding of the ways in which the nature of places and lived experience are positively affected by relationships and connections. AO2 – Application of knowledge and understanding to assess the impact relationships and connections have on lived experience.	9 AO1=4 AO2=5

Level	Marks	Descriptor
3	7–9	AO1 – Demonstrates detailed knowledge and understanding of the ways in which the nature of places and lived experience are positively affected by relationships and connections. AO2 – Applies knowledge and understanding to the novel situation, offering detailed analysis and assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.
2	4–6	AO1 – Demonstrates clear knowledge and understanding of the ways in which the nature of places and lived experience are positively affected by relationships and connections. AO2 – Applies knowledge and understanding to the novel situation, offering clear analysis and assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident and relevant.
1	1–3	AO1 – Demonstrates basic knowledge and understanding of the ways in which the nature of places and lived experience are positively affected by relationships and connections. AO2 – Applies limited knowledge and understanding to the novel situation, offering some basic analysis and assessment. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and assessment are basic and of limited relevance.
0	0	No creditable content.

Indicative Content

This question links elements of ‘changing places’, namely the ‘relationships and connections’ part of the specification. The question requires knowledge of relationships and connections between people and places and how this positively affects lived experience in the local place studied. Candidates should assess the extent to which relationships and connections have positively affected lived experience.

AO1

- Knowledge and understanding of the concept of place and the importance of place in human life and experience.
- Knowledge and understanding of the nature of places, including their demographic, cultural and economic characteristics.
- Knowledge and understanding of people’s lived experience of place.
- Knowledge and understanding of the relationships and connections between their local place and other places.
- Knowledge and understanding of the ways in which relationships and connections affect the nature of places and in turn the lived experience of people in the place.

AO2

- Assessment that relationships and connections between people and places will have a range of impacts on the characteristics of places at a range of scales.
- Assessment that relationships and connections between people and places affect different places in different ways; in turn affecting people’s lived experience.
- Assessment that relationships and connections between people and places can positively affect the demographic characteristics of places and in turn, the lived experience. Relationships and connections between people and places could attract a younger demographic to a university town. This could in turn, reduce the effects of an ageing population. This could positively affect the lived experience of young people, who benefit from the growth in amenities aimed at students, eg cinemas and entertainment facilities.
- Assessment that relationships and connections between people and places can positively affect the cultural characteristics of places and in turn, the lived experience. Relationships and connections between people and places could attract migrants to a place. This could in turn diversify food and music culture in the area. This could positively affect the lived experience of job seekers and entrepreneurs, who could gain employment in specialist food stores, in response to the changing demand.
- Assessment that relationships and connections between people and places can positively affect the economic characteristics of places and in turn, the lived experience. Relationships and connections between people and places could attract tourists to a place. This could in turn create employment opportunities in the tourism sector, helping to grow the economy. This could positively affect the lived experience of hotel, AirBnB and restaurant owners, who will earn increased profits due to higher demand for their services.
- Assessment that relationships and connections between the candidate’s local place and other people and places can have a positive impact on their life. Candidates or their family members may have gained employment related to the tourism, university or entertainment sectors and report an improvement to their lived experience as a result. Candidates may have been exposed to new food and music as a result of relationships and connections with different people and places which have positively affected them. The quality of the environment in their local place may have been improved as a result of the revenue that has been brought in from relationships and connections with different people and places – enhancing their enjoyment of that place.

- Awareness that different groups may view the impacts of relationships and connections with people and places in different ways. There could be difference in insider and outsider viewpoints. Which some relationships and connections having positive impacts on the lived experience of some groups and negative impacts on the lived experience of others.
- Awareness that relationships and connections with people and places may bring about changes at different rates and scales, which may affect the extent to which they are considered positive.
- Awareness that impacts may have a seasonality; for example, during tourist seasons, which could affect the extent to which they are considered positively.
- Some students may identify that places do not require relationships and connections with people and places to bring about positive impacts to their lived experience and that this may change as a result of endogenous factors or factors such as age and length of time spent in a place.
- An overall conclusion that assesses the extent to which relationships and connections have had positive impacts on lived experience in the local place studied.

Question	Part	Marking guidance	Total marks
04		To what extent do flows of people and goods influence the cultural characteristics of places? Use your DISTANT PLACE example to support your answer. AO1 – Knowledge and understanding of how cultural characteristics are shaped by shifting flows of people and goods. AO2 – Application of knowledge and understanding to assess the impact of shifting flows of people and goods in shaping the cultural characteristics of places.	20 AO1=10 AO2=10

Level	Marks	Descriptor
4	16–20	AO2 – Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question. AO2 – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout. AO2 – Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout. AO1 – Full and accurate knowledge and understanding of key concepts and processes throughout. AO1 – Detailed awareness of scale and temporal change which is well integrated where appropriate.
3	11–15	AO2 – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question. AO2 – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding. AO2 – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Generally clear and relevant knowledge and understanding of place(s) and environments. AO1 – Generally clear and accurate knowledge and understanding of key concepts and processes. AO1 – Generally clear awareness of scale and temporal change which is integrated where appropriate.

2	6–10	AO2 – Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question. AO2 – Some partially relevant analysis and evaluation in the application of knowledge and understanding. AO2 – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Some relevant knowledge and understanding of place(s) and environments which is partially relevant. AO1 – Some knowledge and understanding of key concepts, processes and interactions and change. AO1 – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.
1	1–5	AO2 – Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question. AO2 – Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence. AO2 – Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Very limited relevant knowledge and understanding of place(s) and environments. AO1 – Isolated knowledge and understanding of key concepts and processes. AO1 – Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies.
0	0	No creditable content.

Indicative Content

This question links elements of 'changing places' topic, namely the 'relationships and connections' and 'place studies' parts of the specification. Some may make links to elements of 'global systems and global governance' or 'people and contemporary urban environments' to exemplify the impacts on cultural characteristics of flows of goods and people. Credit links that are relevant and support the response. The question requires knowledge of the nature of flows of people and goods to places, including their distant place, and how these affect the cultural characteristics of those places. Candidates should assess the extent of the influence of these flows and reach a conclusion.

Max level 3 for responses that only address people **or** goods.

Max level 2 for responses with no specific reference to their distant place.

AO1

- Knowledge and understanding of the impact of relationships and connections on place.
- Knowledge and understanding of the cultural characteristics of a place.
- Knowledge and understanding of the factors influencing shifting flows of people and how these operate at a range of scales.
- Knowledge and understanding of the factors influencing shifting flows of goods and how these operate at a range of scales.
- Knowledge and understanding that shifting flows of people and goods can affect the cultural characteristics of place such as language, religion and food.
- Knowledge and understanding that shifting flows of people could be both short-term or temporary, eg daily commuting or the termly movement of students as well as longer-term or permanent migrations.
- Knowledge and understanding that shifting flows of goods could be both short-term or temporary, eg for the purposes of disaster relief or humanitarian efforts as well as longer-term shifts in patterns of trade.

AO2

- Analysis that shifting flows of people and goods will have a range of consequences on the cultural characteristics of a place.
- Analysis that shifting flows of people can lead to changes to religious buildings, changes to languages spoken and changes to festivals celebrated.
- Analysis that shifting flows of people can lead to changes in dominant culture, eg areas which have been gentrified and now catering for affluent incomers, ignore the existing culture of the area, creating social polarisation and growing tensions between groups of people.
- Analysis that shifting flows of goods can lead to the growing use of technologies, eg mobile phones, linking places globally and allowing them to become more culturally connected.
- Assessment that shifting flows of people can affect cultural characteristics at a range of scales eg from small scale emergence of specialist food shops to meet demand to larger scale tensions between migrants and original residents.
- Assessment that shifting flows of goods can affect cultural characteristics at a range of scales eg from smaller scale impacts such as increased product choices for consumers to larger scale threats of cultural dilution due to the influx of 'western' products.
- Assessment that shifting flows of people and goods will affect cultural characteristics in both positive and negative ways.
- Assessment that shorter-term flows of people, such as daily commuters may have smaller impacts than more permanent flows of people, such as migrants.

- Assessment that shorter-term flows of goods, such as for the purposes of humanitarian aid may have smaller impacts than more permanent flows of goods, such as through established patterns of international trade.
- Assessment that the influence of shifting flows of people and goods can change over time due to societal changes or external factors such as famine or conflict.
- Some students may identify the role of factors in globalisation, such as transport and communication improvements, have had an increasing impact on the flows of people and goods and hence the extent to which cultural characteristics can be affected by them.
- Analysis that places are constantly changing due to shifting flows of people and goods; many of which are influenced by external factors. Change is inevitable in an ever-connected world.
- Some students may identify that in some cases the cultural characteristics of places that live a more isolated existence may well change more slowly, such as indigenous tribes who will choose to limit the contact with other places.

Section B – People and Contemporary Urban Environments Total for this section: 40 marks

Question	Part	Marking guidance	Total marks
05	1	Which of the following is a summary of global patterns of urbanisation since 1945? Key – A: Highest in North America, lowest in Africa and increasing the most in South-east Asia and Africa	1 AO1=1

Question	Part	Marking guidance	Total marks
05	2	‘The level of illness or poor health of a population.’ This is the definition of which of the following? Key – B: Morbidity	1 AO1=1

Question	Part	Marking guidance	Total marks
05	3	Which of the following are ALL factors encouraging the formation of photo-chemical pollution? Key – A: Dry weather, high levels of sunshine and high levels of vehicle emissions	1 AO1=1

Question	Part	Marking guidance	Total marks
05	4	Which of the following are BOTH factors pushing people out of rural areas in the developing world? Key – B: Limited access to education and low-paid jobs	1 AO1=1

Question	Part	Marking guidance	Total marks
05	5	Which of the following are ALL common features of a town centre mixed development? Key – B: It has multiple functions within a short distance, a wide range of land uses and is easily accessed by walking.	1 AO1=1

Question	Part	Marking guidance	Total marks
06		Analyse the data shown in FIGURES 2a and 2b.	6 AO3=6

Level	Marks	Descriptor
2	4–6	AO3 – Clear selection and analysis of the evidence that has been provided which makes appropriate use of data to support. Clear connections between different aspects of the data.
1	1–3	AO3 – Some basic selection and analysis of the evidence that has been provided which makes limited use of data to support. Basic or limited connections between different aspects of the data.
0	0	No creditable content.

Indicative Content

There are a variety of ways of approaching this unseen material.

This question requires analysis of the spatial variation in the size and composition of the ecological footprints of 10 cities shown in **Figures 2a** and **2b**. Level 2 answers must provide clear evidence of analysis of both spatial variation and composition and use specific evidence from the figures to support these connections. No credit for knowledge or analysis that is not evident in the figures provided.

AO3

- **Figure 2a** shows spatial variations in the size of a city's ecological footprint.
- Generally northern/western cities have higher ecological footprints, compared southern/eastern cities.
- Northern/western cities also have a considerably smaller range than southern/eastern cities.
- Despite southern/eastern cities having generally smaller ecological footprints than northern/western cities, the city with the largest ecological footprint (Athens) is actually in the south/east.
- 4 out of 5 of the largest ecological footprints are found in the north/west whereas 4 out of 5 of the smallest ecological footprints are found in the south/east.
- The overall range from largest to smallest footprint is 2.36, with the largest city having almost double the footprint of the smallest.
- **Figure 2b** shows some noticeable trends in the composition of each city's footprint.
- In 8 out of 10 cities, the largest component is the carbon footprint, taking up between 40–50% of the total footprint in these cities.
- In 8 out of 10 cities, land for buildings is the smallest or joint smallest component, taking up less than 5% of the total footprint in these cities.
- Farmland is the second-largest component in most cities, generally making up between 1.1–1.9 gha of each footprint regardless of total size.
- Cairo and Alexandria (both in Egypt) appear to have the largest differences in footprint composition compared to the other cities, with the largest proportions of land for buildings and smallest proportions of carbon footprint.

- The overall proportion of the different components tends to remain similar across cities, regardless of whether they are southern/eastern or northern/western.

Credit any other valid analysis.

Question	Part	Marking guidance	Total marks
07		To what extent do physical factors affect patterns of economic inequality in ONE OR MORE urban areas you have studied? AO1 – Knowledge and understanding of how patterns of economic inequality are affected by physical factors. AO2 – Application of knowledge and understanding to assess the impact of physical factors in affecting patterns of economic inequality.	9 AO1=4 AO2=5

Level	Marks	Descriptor
3	7–9	AO1 – Demonstrates detailed knowledge and understanding of how patterns of economic inequality are affected by physical factors. AO2 – Applies knowledge and understanding to the novel situation, offering detailed analysis and assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are thorough and relevant.
2	4–6	AO1 – Demonstrates clear knowledge and understanding of how patterns of economic inequality are affected by physical factors. AO2 – Applies knowledge and understanding to the novel situation, offering clear analysis and assessment, drawn appropriately from the context provided. Connections and relationships between different aspects of study are evident within and relevant.
1	1–3	AO1 – Demonstrates basic knowledge and understanding of how patterns of economic inequality are affected by physical factors. AO2 – Applies limited knowledge and understanding to the novel situation, offering some basic analysis and assessment. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and assessment are basic and of limited relevance.
0	0	No creditable content.

Indicative Content

This question links elements of ‘people and contemporary urban environments’, namely the ‘urban forms’ and ‘social and economic issues associated with urbanisation’ parts of the specification. Candidates may also draw ideas from ‘the nature and importance of places’ from ‘changing places’ to support their responses. The question requires knowledge of the physical characteristics of urban form and how this affects patterns of economic inequality. Candidates should assess the extent to which physical factors have affected patterns of economic inequality. Candidates may draw evidence from one or more urban areas. Max Level 2 if no specific urban area is referred to.

AO1

- Knowledge and understanding of physical factors influencing urban forms; such as relief, proximity to rivers and coastlines, climate, natural hazards and natural resource availability.
- Knowledge and understanding of spatial patterns of economic inequality in one or more urban areas.
- Knowledge and understanding of factors influencing patterns of economic inequality in one or more urban areas.
- Knowledge and understanding of issues associated with economic inequality in one or more urban areas.

AO2

- Analysis that physical factors will have a range of effects on patterns of economic inequality.
- Assessment that physical factors can affect patterns of economic inequality at a range of scales.
- Eg Singapore’s coastal location has brought large scale and widespread benefits to the urban area due to the ease of trade. Contrastingly, on a smaller scale, challenges of the physical environment include issues such as the difficulty that Rocinha’s residents have in accessing employment in other parts of Rio de Janeiro due to the steepness of the slopes on which Rocinha is built, increasing inequality between the area and those with better access.
- Assessment that physical factors will affect economic inequality in positive and negative ways.
- Assessment that physical factors can reduce economic inequality eg a coastal location can provide a source of income for people in urban areas at all levels, from fishing right through to 5-star beach resorts, thus reducing unemployment for all.
- Assessment that physical factors can increase economic inequality eg an urban area that is cut off by a storm or flood event, or experiences damage to key infrastructure due to an earthquake or volcanic eruption may experience a reduction in economic activity, increasing economic inequality.
- For example, 95% of buildings in Tacloban were damaged by Typhoon Haiyan in 2013, along with the fishing fleet, hugely reducing the economic productivity of the area relative to other parts of the Philippines that were unaffected by the storm.
- Assessment that the influence of physical factors can change over time due to other factors such as population growth, climate change and the role of technology in overcoming physical challenges.
- For example, the discovery of oil in Qatar and the arrival of technology to be able to extract it, has help Doha overcome the challenges of the hot desert climate, that had previously limited economic growth in the area, relative to cities in other parts of the world.
- Some may conclude that human factors also affect patterns of economic inequality in urban areas and that these work in combination with physical factors.
- An overall conclusion of the extent to which physical factors affect patterns of economic inequality in one or more urban areas.

Question	Part	Marking guidance	Total marks
08		To what extent is water quality the most important factor affecting the health of people in urban areas? Use examples from CONTRASTING URBAN AREAS to support your answer. AO1 – Knowledge and understanding of how urban water quality affects the health of people in contrasting urban areas. AO2 – Application of knowledge and understanding to assess the importance of water quality in affecting the health of people in urban areas.	20 AO1=10 AO2=10

Level	Marks	Descriptor
4	16–20	AO2 – Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question. AO2 – Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout. AO2 – Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout. AO1 – Full and accurate knowledge and understanding of key concepts and processes throughout. AO1 – Detailed awareness of scale and temporal change which is well integrated where appropriate.
3	11–15	AO2 – Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question. AO2 – Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding. AO2 – Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Generally clear and relevant knowledge and understanding of place(s) and environments. AO1 – Generally clear and accurate knowledge and understanding of key concepts and processes.

		AO1 – Generally clear awareness of scale and temporal change which is integrated where appropriate.
2	6–10	AO2 – Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question. AO2 – Some partially relevant analysis and evaluation in the application of knowledge and understanding. AO2 – Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Some relevant knowledge and understanding of place(s) and environments which is partially relevant. AO1 – Some knowledge and understanding of key concepts, processes and interactions and change. AO1 – Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies.
1	1–5	AO2 – Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question. AO2 – Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence. AO2 – Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts. AO1 – Very limited relevant knowledge and understanding of place(s) and environments. AO1 – Isolated knowledge and understanding of key concepts and processes. AO1 – Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies.
0	0	No creditable content.

Indicative Content

This question links elements of ‘people and contemporary urban environments’, namely the ‘urban environments, health and well-being’ and ‘other contemporary urban environmental issues’ parts of the specification. The question requires knowledge of the links between water quality and health. Candidates are likely to explore these links via discussion of the prevalence of malaria and/or a named non-communicable disease but this is not a requirement. Candidates should assess the importance of water quality in affecting the health of people in urban areas. Candidates may assess the importance of water quality relative to other physical and socio-economic characteristics of the urban environment such as air quality and lifestyle, though this is not a requirement. Candidates should draw their evidence from contrasting urban areas. These may come from within the same urban setting. Max Level 3 if only one urban area is referred to.

AO1

- Knowledge and understanding of spatial patterns of health, mortality and morbidity in cities in contrasting urban areas.
- Knowledge and understanding of the relationship between water quality and health.
- Knowledge and understanding of the relationship between factors other than water quality, such as air quality and lifestyle, and health.
- Knowledge and understanding of the changing prevalence, distribution and seasonal incidence of malaria, a biologically transmitted disease; its links to the physical and socio-economic characteristics of environments within urban areas including impacts of environmental variables on transmission vectors; impact on health and well-being.
- Knowledge and understanding of the distribution of one named non-communicable disease (eg a specific type of cancer, coronary heart disease, asthma) within urban areas; its links to physical and socio-economic environment including impact on health and well-being.
- Knowledge and understanding of health problems in contrasting urban areas.
- Knowledge and understanding of strategies to manage health problems in contrasting urban areas.

AO2

- Analysis that water quality will have a range of effects on the health of people in urban areas such as increased incidence of malaria, cholera, typhoid, diarrhea and their associated health issues.
- Assessment that water quality can affect health of people in urban areas at a range of scales eg from the large-scale issue of high incidences of water-borne diseases like cholera and typhoid due to city-wide poor sanitation infrastructure, to the more localised issues of poor water quality in local neighbourhoods, where industrial effluent is discharged.
- Assessment that water quality can affect the prevalence of communicable diseases such as malaria, eg by attracting vectors of disease, such as mosquitos and in turn influence the health of people in urban areas.
- Assessment of the extent of the problem of water pollution in contrasting urban areas eg rapid population growth in cities in the developing world has outpaced formal housing, so many informal settlements in urban areas lack basic sanitation. In Dakar, capital of Senegal, rapid population growth has led to 1.2 million people living in homes that are not connected to a sewer. This has led to water quality being very difficult to manage – leading to significant health issues associated with drinking or coming into contact with unclean water.
- Assessment of the strategies used to manage water pollution and in turn, reduce associated health issues eg the EU’s UWWTD has markedly improved water quality in many European cities, therefore reducing associated health issues such as diarrhea.

- Assessment that the effects on the health of urban populations, due to water quality issues, are greater than other types of issues eg air quality and lifestyle.
- Eg a comparison of mortality rates between malaria (influenced by water quality) and asthma (influenced by air quality) would indicate that water quality has a larger impact on health as mortality rates are higher from malaria than they are from asthma.
- Assessment that factors other than water quality, such as air quality and lifestyle, can affect the prevalence of non-communicable diseases such as asthma or cancer, through the exposure of particulates or carcinogens in the air or due to lifestyle choices, and in turn, influence the health of people in urban areas.
- Assessment of the extent of the problem of factors other than water quality, such as air quality, and lifestyle in contrasting urban areas.
- Eg rapid rise in car ownership has outpaced developments in transport infrastructure. Coupled with poorly enacted pollution legislation this has led to air quality being very difficult to manage – leading to significant health issues associated with breathing in photo-chemical pollution.
- Eg high levels of smoking and alcohol consumption in Glasgow and Liverpool have led to some of the highest rates of lung cancer and coronary heart disease of all European cities, reducing life-expectancy significantly in these areas.
- Assessment that factors other than water quality, such as air quality, can affect health of people in urban areas at a range of scales.
- Eg from the large-scale issue of breathing difficulties due to city-wide photo-chemical pollution, to the more localised issues of poor air quality in homes due to particulate pollution from biomass burning.
- Assessment of the strategies used to manage factors other than water quality, such as air quality and in turn, reduce associated health issues.
- Eg clean air legislation has markedly improved air quality in many HDE cities, therefore reducing associated health issues such as breathing difficulties and eye irritation.
- Assessment that effects on health of urban populations due to issues other than water quality are greater than from water quality issues themselves.
- Eg a comparison of the geographical spread of disease would indicate that asthma and cancer (influenced by air quality) are more geographically widespread than the prevalence of malaria (influenced by water quality) therefore present a larger health issue for a greater number of urban areas.
- Assessment that the importance of water quality in affecting the health of people in urban areas may change over time due to other factors such as population growth, climate change and the role of technology in overcoming the challenges of managing these issues.
- Eg the omni-processor in Dakar, Senegal, removes germs from one third of the city's sewage, and produces clean drinking water as a bi-product, reducing the impact on people's health by reducing their chances of catching water-borne diseases.
- An overall conclusion of the importance of water quality either in isolation or relative to other factors.

Assessment Objective grid

	AO1	AO2	AO3	Total
Section A				
01.1	1			1
01.2	1			1
01.3	1			1
01.4	1			1
01.5	1			1
02			6	6
03	4	5		9
04	10	10		20
Section B				
05.1	1			1
05.2	1			1
05.3	1			1
05.4	1			1
05.5	1			1
06			6	6
07	4	5		9
08	10	10		20
Unit total	38	30	12	80