

Mark Scheme (Results)

Summer 2026

Pearson Edexcel International Advanced Level in Geography
Contested Planet
WGE03/01

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General Marking Guidance

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

Question Number	Using Figure 1, explain the influence of ocean circulation on the climate and weather patterns.	Mark
1(a)	<p style="text-align: center;">AO1 (4 marks)/AO2 (6 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> • Candidates should make some use of Figure 1, either by naming currents shown, referring to their direction of movement, or linking the pattern of warm/cold currents to named regional climates/weather patterns. • Ocean circulation consists of warm and cold currents • These redistribute heat around the planet as part of the climate system • Ocean circulation and atmospheric circulation (cells) are parts of the same larger system • On a global scale temperatures are evened-out between the equator and the poles by the circulations. <p>AO2:</p> <ul style="list-style-type: none"> • Cold currents, broadly, move cold water from the poles towards the equator (Benguela, Peru, Labrador) where it is warmed up by the sun and mixing with warmer waters. • Warm currents move towards the poles (Brazil, South / North Equatorial) so water as heat energy moves poleward warming the mid- and high-latitudes. • The overall impact is to reduce equatorial heat and decrease intense polar cold. • Depressions and rainfall tend to follow the paths of warm currents e.g. Gulf Stream / NAD bringing warm and wet weather to mid-latitudes (Northern Europe, New Zealand, Japan). • Tropical cyclone tracks are largely determined by warm currents along the equator moving west, and then swinging north; these move seasonally as the ITCZ moves, so bringing tropical cyclone seasons (credit 27 C/ 26.5 C idea). • Rainfall patterns are also influenced because cold currents (Benguela, Peru) lead to high pressure and aridity in some 	(10)

	<p>places (Atacama Desert, Namib) whereas warm currents influence low pressure and rainfall (East Africa, SE Asia)</p> <ul style="list-style-type: none"> • Warm currents can raise temperatures and increase moisture availability for adjacent coastal areas, while cold currents can lower temperatures and reduce evaporation, contributing to drier coastal climates. • Credit ENSO where candidates explain altered Pacific Ocean temperatures/currents and link these to changes in rainfall, drought or flood patterns. <p>NB: Do not credit discussion of atmospheric circulation alone unless it is clearly linked to ocean circulation. Statements about “wind moving heat” or “air currents” without reference to ocean currents should receive limited credit.</p> <p>NB: We don’t expect <i>climate</i> and <i>weather</i> to be specifically differentiated, but some good candidates will do this.</p>	
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)
Level 2	5–7	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 3	8–10	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding to geographical information logically to find fully relevant connections/relationships between stimulus material and the question. (AO2)

		<ul style="list-style-type: none"> Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)
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Question Number	Assess the importance of prediction and evacuation in reducing the human and economic impacts of tropical cyclones.	Mark
1 (b)	<p style="text-align: center;">AO1 (5 marks)/AO2 (10 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1</p> <ul style="list-style-type: none"> Tropical cyclones cause widespread damage due to storm surges, hurricane force winds and intense rainfall. Human impacts include death, injury, loss of homes and livelihoods. Economic losses include damage / destruction of property, businesses and infrastructure as well as insurance losses. Prediction implies a timely statement of time and place, so that evacuation (moving people away from risk) can be carried out before a tropical cyclone arrives. Prediction and evacuation are part of a broader range of cyclone response (preparation, planning, aid). Credit evacuation planning, shelters, transport routes, public education, drills and warning communication systems where they are linked to the success or failure of evacuation. <p>AO2</p> <ul style="list-style-type: none"> Accurate prediction could be argued as the most important part of cyclone response because it allows places at risk to be identified and action taken; however, it has little impact on economic losses, whereas the impact on human losses can be substantial (Helene, USA 2024). However, prediction is only as good as the evacuation that follows it and this is not always possible (2008 Cyclone Nargis, Haiyan 2013) due to lack of planning, suitable shelters and evacuation routes. Prediction and evacuation might be argued as better in developed / emerging countries who have the technology 	(15)

	<p>and systems to implement all stages – but there have been exceptions to this (Katrina, 2005).</p> <ul style="list-style-type: none"> • In terms of economic losses other approaches such as land use zoning, building codes and defences (sea walls, flood embankments, levees) might be seen as more important because prediction and evacuation do not generally prevent much economic loss; however, the costs are substantial and such an approach is not possible everywhere (Bangladesh). • Despite the success of evacuation, a rescue, aid and relief response is always required and can substantially reduce human losses – but is sometimes accused of poor management; long-term rebuilding and reconstruction is also needed – so overall prediction and evacuation are just important parts of wider response. • Credit the idea that long-term, action on climate change mitigation is needed as science suggests more intense future cyclones (albeit possibly fewer of them). • Prediction and evacuation may be less effective where there is poverty, weak governance, poor communications, limited transport, low trust in authorities, few shelters, or where people are unwilling/unable to leave homes, livestock or livelihoods. <p>NB: Stronger answers are likely to distinguish between human and economic impacts. Prediction and evacuation can significantly reduce deaths and injuries, but they do not usually prevent damage to homes, businesses, crops, roads, power supplies or coastal infrastructure.</p>	
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)

		<ul style="list-style-type: none"> • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3	9-12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4	13-15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Question Number	Using Figure 2, suggest reasons why forest area has decreased in some regions but increased in others.	Mark
2	<p style="text-align: center;">AO1 (4 marks) /AO2 (6 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p>	

	<ul style="list-style-type: none"> • Forests are found at different latitudes and of different types (rainforest, taiga and temperate biomes) • Deforestation is widespread globally, but rates of deforestation (and afforestation) vary. • Forests are widely exploited for economic gain, but also protected and replanted for economic and environmental reasons. • There is some relationship between economic development level and attitudes to forests. • Credit commercial agriculture, logging, mining, road building, infrastructure development, urban growth and export-led development as reasons for forest loss where linked to a region shown in Figure 2 <p>AO2:</p> <ul style="list-style-type: none"> • Tropical rainforests in Asia have decreased the most (-22%) over the time period because deforestation is used to drive economic growth e.g. palm oil plantations in Indonesia; conversion of forests to farm and cattle ranches; the rate seems to be increasing on Fig 2. • Similar losses – smaller at -17% - are seen in Africa; the smaller total loss could be due to isolation / lack of opportunity for large scale deforestation (but this may happen in the future); reasons here might be less commercial than in Asia i.e. small-scale farming and mining. • In Europe forests have increased in areas by +25% perhaps related to climate change and other conservation targets; protected areas being improved (tourism / leisure) and the fact that forest products are imported from Africa and Asia; the rate of increase is slowing for Europe perhaps suggesting attitudes are less positive than they were. • Boreal forests may be being used more sustainably i.e. trees are cut down but then replanted in a cycle (to continually harvest wood for paper and pulp); credit the idea that natural / primary forests may be being replaced with far less diverse plantations. • In general, an attitude difference between forests as economic assets to be exploited versus forests as providing critical ecosystem services might be argued; some answer might link this to the environmental Kuznets Curve. • Broadly, a link to development level can be made i.e. developed countries conserving forests (perhaps linked to climate targets) and developing / emerging exploiting them. • Credit the idea that the data in Figure 2 is highly selective (not all regions, and only a handful of countries) so it may be misleading. 	(10)
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	<ul style="list-style-type: none"> Credit the idea that forest recovery or protection in developed regions may partly depend on importing timber, food or other forest-risk commodities from regions where deforestation is occurring. <p>NB: Responses that only explain forest decrease or only explain forest increase are unlikely to move beyond the middle of Level 2 unless there is very strong use of the resource.</p> <p>NB: Do not over-credit generic statements about “<i>more population means fewer trees</i>” unless linked to land-use change, resource demand, farming, settlement or economic development.</p>	
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-4	<ul style="list-style-type: none"> Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)
Level 2	5-7	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 3	8-10	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Applies knowledge and understanding to geographical information logically to find fully relevant connections/relationships between stimulus material and the question. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Question number	To what extent does rapid urbanisation explain the increasing economic and human costs of weather hazards?	Mark
3	<p style="text-align: center;">AO1 (5 marks)/AO2 (10 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> • Urbanisation is the increasing proportion of a population living in urban areas (55% globally) • In some places urbanisation is rapid, and often informal, raising issues of safety and resilience. • Weather hazards include cyclones, drought, storms and floods, wildfires (not tectonic hazards /tsunami) • Economic costs are increasing everywhere; human costs are more variable with evidence that response has reduced deaths / numbers affected in some places. <p>AO2:</p> <ul style="list-style-type: none"> • Rapid urbanisation might be seen as particularly significant in the developing / emerging world on crowded coasts and in megacities; these places are often at high risk of cyclones and floods; some might argue it is the nature of the urbanisation (high density / informal) that is the real problem rather than simply the 'numbers'. • The demographics of the at-risk population (very young) and their economic circumstances (low-income) might be considered as equally important in terms of vulnerability. • Weather hazards can have major impacts of people and economies in places where urbanisation is less important as a factor e.g. drought in the Sahel and Australia; here climate change might be argued as just as significant as it increases drought duration and intensity and links to the increase in wildfires. • The rising economic losses are partly explained by economic development and spiralling insurance costs in developed and developing countries as well as arguably by more intense / extreme weather hazards driven by climate change. 	(15)

	<ul style="list-style-type: none"> • Some might argue that better response has stabilised or even reduced human impacts – especially death tolls – so response is more significant than urbanisation trends. • Rapid urbanisation should be credited where it is linked to increased exposure and vulnerability, for example more people and assets concentrated in hazard-prone locations such as coasts, floodplains, unstable slopes or informal settlements. • Human costs may be reduced by better forecasting, evacuation, emergency planning, building codes, flood defences and post-disaster relief. Therefore, rapid urbanisation does not automatically lead to higher human costs if response and resilience improve. • Economic costs may rise even where human costs fall because there are more high-value assets, infrastructure, insured property and businesses in exposed areas. Developed countries may therefore record very high economic losses even with relatively low death tolls. • Responses may agree that rapid urbanisation is a major explanation because it concentrates people, infrastructure and economic assets in high-risk urban areas, especially informal settlements in developing and emerging countries. However, stronger responses should recognise that rising costs are also linked to climate change, economic development, insurance values, poverty, governance and the quality of preparedness and response. The best answers should assess whether rapid urbanisation is the main explanation or only one part of a wider risk equation. <p>NB: Credit tropical cyclones, floods, storm surges, droughts, wildfires, heatwaves and extreme rainfall. Do not credit earthquakes, volcanic eruptions or tsunamis unless used only to make a brief contrast with weather hazards.</p>	
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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)

		<ul style="list-style-type: none"> • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3	9-12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4	13-15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Question Number	Using Figure 3, suggest reasons for the energy mix of Denmark.	Mark
4 (a)	<p>AO1 (2 marks)/AO2 (3 marks)</p> <p>Award 1 mark (AO1) for each relevant point and further expansion marks for reasons/explanations linked to the data shown (AO2), up to a maximum of 5 marks.</p> <ul style="list-style-type: none"> • Over half of Denmark's energy is fossil fuel based (1) which could be because of domestic energy sources e.g. gas (1) • Significant wind and solar (31%) might imply a 'green' agenda / decarbonisation (1) linked to physical conditions i.e. mid-latitude so windy / limited sunshine due to latitude (1) Denmark's exposed coastal/North Sea location, strong and reliable winds, shallow offshore areas, or investment in offshore wind technology as reasons for the high wind (1) • Biomass is just over 10% which is high by international standards (1) suggesting an environmental desire to use 	(5)

	<p>waste / replace fossil fuels (biodiesel/bioethanol), explanations of agricultural, forestry or urban waste, biofuels and district heating as explanations for Denmark's relatively high biomass share (1).</p> <ul style="list-style-type: none"> Some energy sources are not present i.e. nuclear (1) which could be explained by negative public perceptions / lack of suitable sites. (1) <p>Accept other explanations if linked to the data. NB: Do not credit direct data lifts from the MS. Expect candidates to manipulate the data. For example, over half of Denmark's energy mix is fossil fuels, rather than 57%.</p>	
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Question Number	Using named examples, assess how far nuclear power is a sustainable solution to the problem of energy insecurity.	Mark
4 (b)	<p>AO1 (5 marks)/AO2 (10 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> Nuclear power is a partially recyclable energy source using uranium as a raw material. It is high cost, technically advanced, but can generate very large amounts of electricity. It has a controversial development and use history, and is not universally accepted. Compared to fossil fuels, especially oil, it is less flexible as it only generates electricity (not a transport energy source, generally). There are many other energy alternatives both renewable and non-renewable. Sustainability, in terms of energy security, might imply domestic / affordable / reliable energy with environmental impacts consistent with a green energy future. <p>AO2:</p> <ul style="list-style-type: none"> Nuclear power represents about 10% of global electricity generation; the installed capacity of 2500 TWh has barely changed since 2000; national dependency ranges from 0% to over 65% (France). No developing countries are among those 	(15)

	<p>using nuclear power suggesting it is not a solution – sustainable or otherwise – in these places (costs, technology access).</p> <ul style="list-style-type: none"> • Proponents argue nuclear is clean, low-carbon and reliable; it can provide constant baseload power at an affordable cost in many countries; downsides include no viable long-term storage / disposal solutions for radioactive waste and linkages to arms production; nuclear's; low-carbon credentials give it many supporters who argue it is not intermittent as solar and wind are. • HEP might be viewed as a more sustainable baseload provider, often at a similar scale – however there are issues in terms of land use, relocation and impact of rivers and ecosystems plus a lack of suitable sites in many countries. • Against nuclear are a range of environmental, safety, waste and security risks that have seen it banned / not considered in many countries (Italy, Germany, Japan) whereas it has been widely adopted in China, the USA and UK. Public perception of nuclear is often poor. • Nuclear capacity building has stalled in the last 20 years, suggesting the 'cons' in many cases outweigh the pros; as renewables have become more advanced and cheaper the pro-nuclear argument has weakened; this might suggest nuclear has 'had its day' and other sources are now seen as the sustainable solution i.e. domestically produced renewables and biofuels. • Overall, it might depend very much on national circumstances i.e. a lack of alternatives on France and Japan, a need for huge amounts of power very quickly (China) versus a lack of need for it as other sources are so widely available in some countries at around the same economic cost. • Comparisons with renewable energy, HEP, fossil fuels or wider energy mix are creditworthy only where they are used to assess the sustainability of nuclear power. Responses that mainly discuss other energy sources with limited reference to nuclear power will usually struggle to move beyond Level 2. <p>NB: Do not credit unsupported claims that nuclear power is renewable. Credit may be given where candidates understand that nuclear fuel can be partly recycled/reprocessed, or where they describe nuclear as low-carbon rather than renewable. Nuclear power should be treated as low-carbon and partially recyclable rather than renewable.</p> <p>NB: Responses with no named examples are unlikely to move beyond Level 2. Responses with named examples that are inaccurate but still support a valid geographical argument may receive limited credit.</p>	
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1–4	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2	5–8	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3	9–12	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)
Level 4	13–15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)

Question Number	Using Figure 4, suggest reasons for the water supply sources used in Oman.	Mark
5 (a)	AO1 (2 marks)/AO2 (3 marks)	

	<p>Award 1 mark (AO1) for each relevant point and further expansion marks for reasons/explanations linked to the data shown (AO2), up to a maximum of 5 marks.</p> <ul style="list-style-type: none"> • Groundwater sources dominate and are very high by global standards (1), which suggests limited surface water and a reliance on infiltration and aquifer storage (1). • Very low annual rainfall and river flow, arid climate, high evaporation rates and lack of reliable/perennial rivers (1) could explain the lack of surface water at 5% (1). • Both treated waste water and desalination (19%) (1), suggest Oman may have an overall water deficit so needs to use these technologies to plug the gap (1) / may have the ability to pay to develop these technologies (1). • There may be a lack of suitable sites for reservoirs / dams (1) and combined with aridity this source is very limited at 5% (1). • Desalination may be used because Oman has access to seawater through its coastline (1) as well as the wealth/energy capacity to operate expensive desalination plants (1) • Treated wastewater may be used because water is scarce (1) so recycling water for agriculture, landscaping or urban use helps reduce pressure on groundwater supplies (1). <p>Accept other explanations if linked to the data.</p>	(5)
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Question Number	Using named examples, assess how far major engineering schemes are a sustainable solution to the problem of water insecurity.	Mark
5 (b)	<p>AO1 (5 marks)/AO2 (10 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1:</p> <ul style="list-style-type: none"> • Major engineering schemes include dams and reservoirs, water transfers, and integrated water management systems (Singapore). • Schemes either store water for later use (due to seasonality of supply) or transfer water from areas of surplus to deficit. • Water insecurity occurs when supply does not match demand and / or some groups cannot access / afford enough water. 	(15)

	<ul style="list-style-type: none"> • Sustainable solutions should have minimal environmental impacts while increasing supply in an equitable, long-term way i.e. resilient. • There are other solutions including water conservation, small-scale local schemes, water-pricing and desalination. <p>AO2:</p> <ul style="list-style-type: none"> • Large dams and reservoirs provide potentially very large storage capacity allowing water supply, that is seasonal, to be evened-out over a year (or more) thus securing supply for industry, farming and domestic use. • Dams and reservoirs are high cost (debt issues), and can have negative impacts on ecosystems (flooded forests) and people (forced relocation) so have disadvantages especially in places such as India and Brazil where compensation / replacement land is not forthcoming. • The multi-use purpose of some dams (water, flood control, HEP) means they may be sustainable in both economic and water terms – solving a number of problems at once. • However, dams risk interfering with transboundary water systems (Nile, Mekong) leading to political conflict, and winners and losers. • Water transfers are another option, with similarly high costs and the potential to increase supply but also create conflict (South North in China, California). • Some might argue that dams and water transfers built decades ago are no longer sustainable due to climate change and falling precipitation – so their designed storage capacity is now not realised (Lake Mead). • Other options might be more sustainable such as water conservation, drip-irrigation and recycled water (NeWater in Singapore) as they make better use of existing supply rather than creating new supply at high cost; desalination could be discussed in terms of sustainability (energy use, brine disposal) but it should not be the whole focus of an answer. • In many places small-scale schemes / intermediate technology (tubewells, check dams) might be argued as more sustainable options (low cost, local control, minimal carbon footprint). • Small-scale/intermediate technology may be credited as an alternative, but should not form the whole answer. • The GERD may be used to show that major dams can increase water/energy security for the upstream country but may create downstream tensions, especially for countries such as Egypt that rely heavily on Nile water. 	
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		<ul style="list-style-type: none"> Higher-level responses should compare major engineering schemes with alternatives such as conservation, pricing, recycling, drip irrigation or small-scale local schemes, and reach a supported judgement. 	
Level	Mark	Descriptor	
	0	No rewardable material.	
Level 1	1–4	<ul style="list-style-type: none"> Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) Applies knowledge and understanding of geographical information/ideas, making limited and rarely logical connections/relationships, to produce an interpretation with limited relevance and/or support. (AO2) Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2) 	
Level 2	5–8	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2) 	
Level 3	9–12	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2) Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2) 	

Level 4	13-15	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)
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Question number	"It is inevitable that China will replace the USA as the world's most powerful superpower." To what extent do you agree with this view?	Mark
6	<p style="text-align: center;">AO1 (5 marks)/AO2 (15 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate only AO1 without any AO2 should be awarded marks as follows:</p> <ul style="list-style-type: none"> • Level 1 AO1 performance: 1 mark • Level 2 AO1 performance: 2 marks • Level 3 AO1 performance: 3 marks • Level 4 AO1 performance: 4–5 marks <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> • The USA is often perceived as a hegemonic superpower especially in military and economic terms, plus global cultural influence • The 'pillars of power' suggest the types of power superpowers / emerging powers have (or lack) • China might be argued as an emerging power or superpower, but one whose power is still increasing • There are various types of power (hard, soft, smart, sharp) • China has closed the gap on the USA, especially since 2000; other contenders (India, Russia, EU) could be mentioned in terms of their power. <p>AO2:</p>	(20)

	<ul style="list-style-type: none"> • Answers need to consider the ‘inevitable’ element of the question in terms of if and when, and might consider this as a whole of in terms of ‘pillars’. • Economically China’s GDP (~\$20 trillion) is somewhat short of the USA’s ~\$30 trillion but the gap has closed; Chinese p.c. GDP (~\$15,000) is much lower than that of the USA and there is large gap to close. • The US \$ remains a powerful reserve currency and US TNCs (Google, Tesla, Netflix, Facebook) remain both culturally influential and economically disruptive in a way that Chinese companies lack (most are SOEs); this might be seen as evidence that China has a long way to go to ‘best’ the USA’s economic position. • The USA has a range of allies and alliances (NATO, ANZUS, OECD, G7) and influence with IGOs (IMF, UN) that China tends to lack, although the expansion of the BRICS has given China a powerful ‘eastern’ bloc of largely authoritarian allies that could provide an alternative to the ‘western’ world order led by the USA since 1945. • The USA has a genuinely global military system with global reach that China lacks – although that is changing in terms of the Chinese navy and missile / drone technology; it could be argued that the huge costs of being ‘the world’s policeman’ are a drag on the USA i.e. a cost with limited benefits. • Some might see a bi-polar world as inevitable, rather than a unipolar world dominated by China; there is also an argument that the USA, China and EU (perhaps even India) might end up at similar levels of power; China’s weaknesses in term of demography / ageing population, internal tensions and risks from its economy transitioning from production to consumption might be considered as part of the debate: the case of Japan might be considered as an example of a potential superpower that failed to ‘make it’. • Good responses should address “inevitable”, considering whether China’s replacement of the USA is certain. Economic growth alone does not prove China will become the world’s most powerful superpower. • Credit use of the Belt and Road Initiative as evidence of China’s growing economic, diplomatic and infrastructural influence, especially across Asia, Africa and parts of Europe. • Credit examples of technological and digital influence, such as Huawei, semiconductors, AI, electric vehicles, BYD, TikTok or Chinese digital platforms, where they are linked to superpower influence. Evaluation may include innovation, control of supply chains, data/security concerns, Western restrictions, and whether Chinese technology has the same global cultural reach as US TNCs. 	
Level	Mark	Descriptor

	0	No rewardable material.
Level 1	1-5	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical ideas, making limited and rarely logical connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited coherence and support from evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2	6-10	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships. (AO2) • Applies knowledge and understanding of geographical ideas in order to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3	11-15	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and accurate. (AO1) • Applies knowledge and understanding of geographical information/ideas to find some logical and relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical ideas in order to produce a partial but coherent interpretation that is supported by some evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, largely supported by an argument that may be unbalanced or partially coherent. (AO2)
Level 4	16-20	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas to find fully logical and relevant connections/relationships. (AO2)

		<ul style="list-style-type: none"> • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is supported by evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a rational, substantiated conclusion, fully supported by a balanced argument that is drawn together coherently. (AO2)
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Question Number	"It is inevitable that the basic needs of people in some LDCs will never be met." To what extent do you agree with this view?	Mark
7	<p style="text-align: center;">AO1 (5 marks)/AO2 (15 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate only AO1 without any AO2 should be awarded marks as follows:</p> <ul style="list-style-type: none"> • Level 1 AO1 performance: 1 mark • Level 2 AO1 performance: 2 marks • Level 3 AO1 performance: 3 marks • Level 4 AO1 performance: 4–5 marks <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> • LDCs (Less Developed Countries) are those with low p.c. incomes under \$3000, low HDI (under 0.5) and often weak governance; • LDCs are concentrated in Africa and South Asia • Basic needs include water, healthcare, housing and a liveable income – these are often the focus of 'development' • Basic needs can be met through economic development, ODA / aid and also programmes such as the SDGs. <p>AO2</p> <ul style="list-style-type: none"> • Answers will need to address the key idea of 'inevitable' i.e. the development progress is so hindered in some places that it will never meet basic needs, or else argue that this is not the case. • Some might start with theory as the question links to Dependency Theory and underdevelopment; is it that case that some countries are trapped by exporting low-value commodities and their skilled people, so development is not 	(20)

	<p>possible, or is there a path to progress i.e. Modernisation Theory.</p> <ul style="list-style-type: none"> • Some might argue that FDI, globalisation and trade have proved that many former LDCs have progressed to emerging countries / NICs so that basic needs now are met (China, SK) and that Kenya, Ethiopia and Nigeria are now following a similar path to development. • Global programmes such as the MDGs and SDGs show the world's commitment to basic needs, but there are questions about their effectiveness i.e. positive in terms of primary education, absolute poverty – less convincing in terms of health and food security. • Aid (multi-, bi-lateral, from NGOs) has been used to improve lives but has issues in terms of debt, scale (NGO aid), fairness (tied aid) and how far it reaches the people most in need. • Some might focus on barriers such as conflict, poor governance, landlocked status, ethnic discrimination that makes meeting basic needs in some countries very difficult (Somalia, Yemen, Afghanistan, Myanmar, Venezuela) or have even set progress into reverse, to argue that some level of unmet basic needs is inevitable. • There is an argument that the basic needs of all are not met even in developed countries, so it is unrealistic to expect them to be met in all LDCs. • Credit discussion of weak governance, corruption, conflict, political instability and poor public services where linked to the failure to provide healthcare, education, housing, food security or clean water. Stronger responses should explain the mechanism, rather than simply stating that a government is corrupt or poor. Credit the idea that basic needs may be met for some groups but not others within the same country. Urban-rural inequality, informal settlements, ethnic discrimination, gender inequality and regional marginalisation may mean national progress does not guarantee universal access to basic needs. • Responses may agree with the statement by arguing that conflict, weak governance, debt, dependency, corruption, natural hazards, climate change, landlocked status and unequal access mean that in some LDCs basic needs may remain unmet for some groups. • The strongest responses should evaluate the word “inevitable” and recognise that outcomes vary by place, scale and group. 	
Level	Mark	Descriptor
	0	No rewardable material.

Level 1	1-5	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1) • Applies knowledge and understanding of geographical ideas, making limited and rarely logical connections/relationships. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited coherence and support from evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to produce an unsupported or generic conclusion, drawn from an argument that is unbalanced or lacks coherence. (AO2)
Level 2	6-10	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1) • Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships. (AO2) • Applies knowledge and understanding of geographical ideas in order to produce a partial interpretation that is supported by some evidence but has limited coherence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)
Level 3	11-15	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and accurate. (AO1) • Applies knowledge and understanding of geographical information/ideas to find some logical and relevant connections/relationships. (AO2) • Applies knowledge and understanding of geographical ideas in order to produce a partial but coherent interpretation that is supported by some evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a conclusion, largely supported by an argument that may be unbalanced or partially coherent. (AO2)
Level 4	16-20	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Applies knowledge and understanding of geographical information/ideas to find fully logical and relevant connections/relationships. (AO2)

		<ul style="list-style-type: none"> • Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is supported by evidence. (AO2) • Applies knowledge and understanding of geographical information/ideas to come to a rational, substantiated conclusion, fully supported by a balanced argument that is drawn together coherently. (AO2)
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