Mark Scheme (Results)

Summer 2024

Pearson Edexcel International Advanced Level
In Geography (WGE03)
Paper 01: Contested Planet

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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 changes in the track and intensity of Hurricane Ian between 18 September and 2 October 2022.	Mark
1	**AO1 (4 marks)/AO2 (6 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. **Indicative content guidance** The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1: • Hurricanes (tropical cyclones) are seasonal storms requiring specific conditions to form e.g., ocean waters at 26.5C+ • The storms have source areas, tracks and eventually dissipate, often over land. • Tracks are linked to global atmospheric circulation and upper atmosphere winds. • Changes in ocean water temperature have an impact on intensity. AO2: • The timing of Ian is linked to the ITCZ being in the northern hemisphere in September, and the fact that solar energy has warmed the oceans over the summer. • On September the 18th Ian originates in the warm waters (26.5C+, deep, low upper atmosphere wind shear, strong convection) between Africa and S America, close to the equator. • Its track to the west is influenced by the trade winds and Coriolis effect, which slowly pushes the developing cyclone towards the Caribbean. • By 24th Sept Ian has intensified from a tropical depression to a tropical storm, because the warm, shallow waters of the Caribbean have given it extra energy (latent heat of condensation, fuelled by evaporation over warm water) – it develops into a Cat3 storm before landfall in Cuba on 27th • Landfall over Cuba is very brief, so Ian maintains its energy. Ian's track swings NW then North as the sub-tropical westerlies begin to influence its path. • Once in the Gulf, Ian strengthens again to Cat4 (because of additional energy from the warm water; long distance of travel over warm waters) before hitting	**(10)**

	Florida: Ian weakens over Florida (energy source lost) but strengthens again once in the Atlantic but only to Cat1 (waters not as warm as Gulf / Caribbean) • Dissipation takes place over the USA landmass when Ian is well to the north, and the warm water energy source has been lost; upper atmosphere wind shear will contribute to the cyclone losing its structure. NB: both track and intensity need to be explained for Level 3. NB: the focus of answers should not be on possible impacts.	

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–4	• 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	• 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	• 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	Using Figure 2, explain the factors that influence the pattern of biomes in Africa.	Mark
2 (a)	**AO1 (4 marks) /AO2 (6 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. **Indicative content guidance** The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1: • Biomes are global scale ecosystems, with characteristic vegetation and structure. • Biome location is mainly influenced by climate (annual temperature and precipitation) and latitude. • There is strong relationship between biome type and global atmospheric circulation i.e., high- and low-pressure zones and cells. • Other factors, local ones, such as altitude, geology and drainage can alter the dominant climate pattern and biome type. AO2: • Tropical rainforest is found around the equator in Central and West Africa, under the influence of the ITCZ / Hadley Cells where rainfall is high year-round (even when the ITCZ seasonally moves N/S) and temperatures are permanently high; some coastal locations (east Africa, northern Madagascar) have TRF because of maritime rainfall. • A large area either side of the TRF zone is seasonal savanna grassland, because here rainfall is seasonal due to the ITCZ movement north in the summer (towards the Tropic of Cancer) but then moves south in the N Hemisphere winter, so rainfall moves away – this rainfall is too low to support true forest. • Deserts occur in areas beyond the reach of the ITCZ, so rainfall is very low; semi-permanent high pressures associated with Hadley Cell subsidence (Ferrel / Hadley boundary); the Namib (SW Africa) is partly related to the cold Benguela current further increasing aridity along the coast. • In the extreme north (Morocco, Algeria) and south (RSA) the Ferrel cell low has some influence, so rainfall is higher and Mediterranean scrub replaces deserts.	**(10)**

	• Altitude is a local factor, meaning higher rainfall and lower temperatures allow montane forest to grow (Ethiopian Highlands, Atlas Mts). • In other locations poor drainage causes ponding of water from rivers allowing swamps to form even in areas of low rainfall (Okavango, Sudan). Accept other explanations; human factors are not relevant.	

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Level 2	5-7	• 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	• 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	Assess the view that local biodiversity management is always more successful than global strategies.	Mark
2 (b)	**AO1 (5 marks)/AO2 (10 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. **Indicative content guidance** The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1 • Biodiversity / ecosystem management involves attempts to conserve areas and species, or in some cases restore ecosystems. • Local strategies include total protection, national parks, sustainable reserves. • At a global scale strategy include biosphere reserves, BAPS and CITES; indirectly global climate agreements. • There are advantages and disadvantages of each approach; some extreme forms of conservation such as restoration and zoos may be used. AO2 • It might be argued that local approaches are inherently stronger, because of local control and accountability; local people may be more invested in local schemes and understand them; alterative incomes (ecotourism, sustainable farming) may help locals 'buy in' to the idea of conservation. • On the other hand, local schemes are small and often poorly funded (NGOs) and my not be able to prevent wider deforestation or the march of biofuels or conversion to farmland; local corruption and illegal hunting / deforestation may undermine local efforts. • Local ecotourism schemes (Costa Rica) might be considered as successful by providing funding via tourism to protect biodiversity; although they are small in many cases and tourism and protection may conflict. • Large predators need large areas, which local schemes may not provide i.e., fragmentation. • There is no genuinely global management of biodiversity, but some global frameworks may provide some benefits; CITES is a widespread effort but only protects some species (about	**(15)**

	38,000) and does not focus on ecosystem areas; the Biodiversity Hotspot approach identifies high-value and threatened areas – but conservation of these areas depends on national funding and motivation which may be lacking is some places (attitudes, priorities, poverty) • UNESCO World Heritage sites provide a framework for high-value sites (but rely on local action/ funding, which may not be enough: Australia's GBR). • BAPs suffer from similar issues i.e., countries need to write, fund and police BAPs and this is highly variable from country to country; REDD+ could be mentioned as a UN-backed approach aiming to reduce deforestation via carbon-offsets (which has had limited success). • Global campaigns by NGOs/ pressure groups (WWF, Greenpeace) might be seen as successful in raising awareness (and in some cases funds) of key issues, or funding local projects via a global fund-raising approach. • Some might argue that global climate / COP agreements are needed / essential to protect biodiversity, because of the climate change threat i.e., without global action on climate the progress that local management can achieve will be undone; accept this argument if linked to biodiversity specifically; the scale of the threat (local v global) may influence the 'best' approach. NB the focus needs to be on biodiversity management, rather than more general 'green' or environmental / pollution issues.	

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Level 1	1–4	• 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	• 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	• 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	• 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	To what extent are the problems of biodiversity loss and global warming linked?	Mark
3	**AO1 (5 marks)/AO2 (10 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. **Indicative content guidance** The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:	**(15)**

	AO1: • Global Warming is the increase in global average temperatures caused by human activity (anthropogenic) and greenhouse gas emissions. • Temperatures have risen by +1.2°C, mostly in the last 40 years. • Biodiversity loss is the degradation of species, loss of ecosystems and species extinction linked to human activity (Sixth Mass Extinction idea) • Both issues are global in scale, although with variable local impacts, and are viewed by many as two critical issues facing the planet. • The climate system and ecosystems are inextricably linked, as are other earth systems such as the water cycle. AO2: • Biodiversity loss might be seen as a cause of global warming; widespread deforestation (palm oil, mining, farming) directly releases CO_2 which contributes to the enhanced greenhouse effect and global warming. • On the other hand, the majority of greenhouse gas emissions are actually generated by other human activities notably fossil fuel burning – however, even the drive to exploit fossil fuels causes widespread biodiversity loss in places such as the Niger Delta (oil / gas) and Canada's boreal forest (tar sands). • Even attempts to move away from fossil fuels and develop biofuels leads to deforestation – Indonesian palm oil, deforestation for sugar cane plantations in Brazil – which emits more CO_2 into the atmosphere an contributes to global warming. • Arguably, as global warming accelerates there is greater pressure placed on remaining biodiversity i.e., people forced to deforest new areas as existing lands suffer drought and desertification – so a feedback loop develops. • As warming continues, and extreme weather patterns develop, and climate zones begin to shift, then there is further loss of biodiversity as biomes are ecosystems are placed under increased stress – forest die back in the Amazon, loss of Arctic tundra, widespread fires in boreal forests; biodiversity could increase in some places due to migration / climate belt shifts (but not overall). • Further issues exacerbated by global warming include alien species, disease and pest outbreaks – all of which further degrade biodiversity (but also exist without GW).	

	• Some might argue that an at least partial solution to global warming would be widespread afforestation to sequester additional CO_2. • Some might argue industrialisation / urbanisation are the main drivers of global warming, and biodiversity loss is merely a symptom; or place more of the 'blame' on population growth / trends i.e., too many people / too many resources exploited i.e., biodiversity loss is caused by rising demand for land, water, and resources not by global warming. • Stronger answers are likely to recognise biodiversity loss as both a cause and a consequence of GW, and that feedback loops accelerate both problems. NB weaker answers are likely to be one-way i.e., GW causes biodiversity loss (list of ways), rather than exploring the links or other factors.	

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Level 2	5-8	• 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)

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Question number	To what extent does increasing the use of renewable energy, such as wind and solar power, put energy security at risk for some countries?	Mark
4	**AO1 (5 marks)/AO2 (15 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate **only** AO1 without any AO2 should be awarded marks as follows: • 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 **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: • Renewable energy includes wind, solar, HEP, tidal – plus other sources considered 'recyclable' such as biofuels and nuclear. • Most world energy (80%) is fossil fuel derived (oil, gas, coal, unconventional fossil fuels) even today. • A combination of high energy costs, insecurity and emissions targets have caused a shift towards renewables, especially in the last decade.	**(20)**

	• Renewable energy is usually domestic source, whereas fossil fuels are often imported. • Energy security implies reliable, affordable energy with a secure supply. AO2: • It could be argued that because renewables are usually domestic supply that they increase security by reducing risky reliance on imports – which is good for fossil fuel poor countries; renewables can never 'run out' unlike fossil fuels. • When fossil fuel supplies are interrupted e.g., the Russia-Ukraine conflict in 2022, renewables can help replace supplies – but renewables are rarely a direct replacement for fossil fuels because electricity, gas and oil are used to power different things. • While renewables often produce electricity for the grid, as yet they don't provide much of an alternative for transport fuel – which as yet relies very heavily on oil; EVs and other developments mean this is changing but slowly, and at high cost i.e., risks to lower income consumers. • A major risk with some renewables is their physical constraints and intermittent nature: HEP is fairly reliable in terms of base load power, but wind and solar are both highly seasonal / variable (in many countries) and may need a 'back up' such as CCGT power stations when renewable supply is low; specific countries may lack a range of suitable physical conditions (water, flat land, wind, sun) limiting their options. • Renewable technology is quite mature, but still high-cost; it often competes well with fossil fuels in terms of generation costs but does require significant investment to set up – and some countries may not be able to afford this (may change in the future as costs decrease further). • Some might argue that renewable reliance is not high-risk, but there is some risk due to the nature of renewables – perhaps the key is a good energy mix so that risk is spread evenly. • Renewable affordability might be seen as good, but reliability is the issue (at least with wind and solar, HEP and tidal might be considered more reliable / predictable but is not available everywhere); climate change could increase risks from some renewables like HEP if future water supplies reduce in some places. • The switch to renewables could reduce income to major fossil fuel exporters (but is unlikely to affect their energy security); it could be argued falling fossil fuel demand could lower prices for countries still relying on it.	

	• It might be argued the transition to renewables (time, costs, access to technology, switching to EVs) is where the risk lies, rather than the end result. NB: be flexible in interpreting 'renewable'; nuclear and biofuels are acceptable as of a wider consideration of 'renewables'.	

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–5	• 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	• 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	• 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	• 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) • 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)

Question Number	To what extent is the increasing number of major engineering schemes, such as dams and reservoirs, putting water security at risk for some people?	Mark
5	**AO1 (5 marks)/AO2 (15 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. Responses that demonstrate **only** AO1 without any AO2 should be awarded marks as follows: • 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 **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: • Water security implies affordable, reliable, and safe drinking water as well as water availability for farming / industry. • Water supplies can be secured from surface and groundwater. • Infrastructure is needed in the form of wells and pipes, but also large engineering schemes such as dams, reservoirs, and transfers. • Large engineering schemes can be high cost and have negative impacts on people (soc / eco / env) as well as benefits in terms of increased supply.	**(20)**

	• Other sources include desalination, which is usually high cost. AO2 • Water supply, and security of supply, often do depend on the construction of large-scale engineering infrastructure such as dams and reservoirs (and linked supply systems) to supply enough water to industry, agriculture, and domestic users – however this has risks: high costs, not affordable to all, and not possible in places with very low rainfall and no rivers. • Large engineering schemes can secure supplies, but sometimes at the risk of unforeseen issues e.g., the economic and ecological costs to the Aral Sea (diverting / using the rivers that fed it). Major dams might secure water supplies for cities / industry but do little for communities in rural areas they are built in. • Very large dams and reservoirs can lead to transboundary conflict such as on the Mekong River (China) and Nile (Ethiopia) and create winners and losers in terms of water supply – in other words security for some but risks for others. • Desalination is another option, but this is high-cost both in terms of capital investment and unit water cost, so may not secure supplies for low-income people – it is reliable but has question over energy and ecological sustainability. Costs are falling but as, yet it is not used in very low-income countries, and needs access to the sea. • Very large schemes may have problems long term such as the silting of Lake Nasser and long-term declines in water storage caused by global warming or excessive use (Lake Mead) – they may not be the long-term solution to water insecurity they were designed to be. • Some might argue smaller scale, localised schemes might be better suited to genuine water security and lowest risk perhaps combined with water conservation to make a scarce resource go further, and last longer; on the other very large schemes might be the best option for megacities and other high-density populations. • Stronger evaluations are likely to focus on 'some people' i.e., the idea that large engineering schemes do increase water supply but do they do so equitably / for everyone (or are there winners and losers); this question can be explored through examples / case studies; a 'mixed' strategy (Singapore's 4-taps) might be seen as sensibly spreading risk.	

	• Other factors – climate change, over-abstraction, pollution – might be argued as more significant in terms of water insecurity especially long-term.	

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–5	• 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	• 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	• 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	• 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) • 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)

Question Number	Explain how useful the data shown in Figure 3 is for measuring geopolitical power.	Mark
6(a)	**AO1 (2 marks)/AO2 (3 marks)** 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. • Overall, the data covers 3 'pillars of power' (1) so in combination might be seen as useful / an index (1) / but lacks some measures e.g. military (1). • Population size can be linked to the size on an economy, to some extent, and to ability to support systems such as a large military (1), but the large China -v- USA population difference shown doesn't really reflect how close the two countries are in terms of geopolitical power (1). • TNCs might be a strong indicator of global economic influence and perhaps cultural / technological influence (1) and the USA and China appear more equal perhaps better reflecting reality (many of the Chinese TNCs are state-owned (1). • Movies perhaps reflects cultural influence globally (1) but less so geopolitical influence (1). NB the question is not asking for an explanation of the data, but how useful it is.	**(5)**

Question Number	Using named examples, assess the extent to which soft power has replaced hard power as the main way of increasing superpower influence.	Mark
6(b)	**AO1 (5 marks)/AO2 (10 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.	

	Indicative content guidance The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1: • Soft power is the power of persuasion and influence, often linked to attractive values and ideology. • Soft power is projected through culture, media, arts and fashion as well as diplomacy, economic and trade relationships. • Hard power (force, coercion) can be projected by military threat, or perceived threat, as well as military actions: economic sanctions are often considered as hard power. • Smart power (hard and soft together) and 'sharp' power (external actor acting internally e.g., election / social media manipulation) are related ideas and may be increasingly important. AO2: • One view is that in the past hard power was wielded frequently during the colonial era so that superpowers could conquer and defend territory / extend their sphere of influence; disputes were settled using hard power (wars) but that today soft power is more often used. • However, there are many examples of hard power being used in the late 20th and early 21st centuries by Russia (Georgia in 2008, Crimea in 2014, Ukraine in 2022) and the USA (Iraq wars, Afghanistan) and others (UK/ France in Libya in 2012) which might suggest hard power is still highly significant; western countries have applied sanctions to Russia since 2022, arguably an example of hard power; Chinese actions over Taiwan / S China Sea illustrate hard power in action (although short of actual conflict). • Despite a short-lived post-Cold War peace dividend of lower military spending, there has been no reduction in global military spending or investment in military technology – so the military threat that the USA and China have is very large. • Nevertheless, soft power is important, and arguably has become more important (in an era of globalisation) due to the huge increase in media / social media so that the 'global message' of superpowers is very important. • Some might argue that a largely deadlocked UN Security Council makes soft power diplomacy as difficult today as it	**(15)**

	was during the Cold War, so threat and economic power are just as important as in the past. • Smart and/ or Sharp power might be discussed as being very important; the US tends to combine hard and soft power, much less so China (although its actions in Africa, and with the Belt & Road Initiative, is as much about 'winning friends' as it is economic policy).		
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	0	No rewardable material.	
Level 1	1–4	• 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	• 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	• 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	• 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	Explain how useful the data shown in Figure 4 is for measuring development progress.	Mark
7(a)	**AO1 (2 marks)/AO2 (3 marks)** 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. • Time series data would be needed to actually measure 'progress' / against a world average (1) so this comparative data snapshot is less useful (1). • The three types of data could be seen as an 'index' (similar to HDI) (1), so taken together could be the basis for making a judgement on development level (1) but they are contradictory e.g., poverty v internet access (1). • Life expectancy is a good indicator of general health and disease burden which are linked to development (1) but the 15-year difference between India and Nigeria is large and might not reflect income difference very well (1) • Poverty is 7x higher in Nigeria suggesting a very large development difference (1) but internet access rather contradicts this making conclusions hard to draw (1). NB the question is not asking for an explanation of the data, but how useful it is.	**(5)**

Question Number	Using named examples, assess the extent to which theoretical frameworks, such as Dependency theory and Modernisation theory, help explain the development gap.	Mark
7(b)	**AO1 (5 marks)/AO2 (10 marks)** **Marking instructions** Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below. **Indicative content guidance** The indicative content below is not prescriptive, and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include: AO1:	**(15)**

	• The development gap is the gap in income, and social development, between rich and poor; it can be global or local / regional. • It has a global context: developing, emerging and developed countries as well as national / regional patterns. • Several theories have sought to explain the gap, most focus on the nature of the relationship (economic and political) between the rich and poor worlds. • Modernisation theory (Rostow and others) suggests a linear progression of development led by industrialisation / urbanisation, whereas dependency theory (Frank) argues the economic system 'traps' some countries in a state of underdevelopment. AO2: • The development gap has narrowed over the past 40 years with around 700 million people living on less than $1.90 per day in 2021, compared to 2 billion in 1990 – but poverty is deep-rooted in SSA and South Asia and has proved stubborn; in other regions (East Asia) poverty reduction has been rapid and impressive. • Many emerging countries, especially China, have managed to 'follow' Modernisation Theory by reaching a take-off point and industrialising / urbanising rapidly – so closing the gap; these emerging countries might be seen to support this theory, however many countries in SSA and South Asia have failed to 'take off' as expected; others have arguably gone into reverse. • Dependency Theory (Frank) could be used to explain the lack of development in some developing countries: Frank argued some countries are trapped in a state of underdevelopment because their relationship with rich countries is an exploitative, one-sided, neo-colonial one and this prevents development taking place. • Dependency theory has weaknesses: it is a two-speed world whereas emerging countries suggest at least three 'speeds' / many countries have broken free from theorised constraints (emerging Asia). • Equally, a developed core versus developing periphery (North v South) is a poor fit for the modern world, however a World Systems Theory (Wallerstein) pattern might be included as more closely fitting reality as it allows for emerging countries. • Some might argue that there are other reasons for lack of development such as war / conflict, poor governance, debt, land-locked status, or environmental disadvantages (isolation, lack of resources) – although some of these	

		might 'fit' the idea of dependency; even very 'disadvantaged' places have developed often with the help of more developed countries for political and economic reasons (UAE, Taiwan).	

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Level 4	13-15	• 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)