



# **Mark Scheme (Standardisation)**

January 2018

Pearson Edexcel International Advanced  
Level

Geography (WGE03)

Unit 3: 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.

## Spelling, Punctuation and Grammar Marking Guidance

- The spelling, punctuation and grammar assessment criteria are common to GCSE English Literature, GCSE History, GCSE Geography and GCSE Religious Studies.
- All candidates, whichever subject they are being assessed on, must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Spelling, punctuation and grammar marking criteria should be applied positively. Candidates must be rewarded for what they have demonstrated rather than penalised for errors.
- Examiners should mark according to the marking criteria. All marks on the marking criteria should be used appropriately.
- All the marks on the marking criteria are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the marking criteria.
- Examiners should be prepared to award zero marks if the candidate's response is not worthy of credit according to the marking criteria.
- When examiners are in doubt regarding the application of the marking criteria 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.
- Handwriting may make it difficult to see if spelling, punctuation and grammar are correct. Examiners must make every effort to assess spelling, punctuation and grammar fairly and if they genuinely cannot make an assessment, the team leader must be consulted.
- Specialist terms do not always require the use of complex terminology but the vocabulary used should be appropriate to the subject and the question.
- Work by candidates with an amanuensis, scribe or typed script should be assessed for spelling, punctuation and grammar.
- Examiners are advised to consider the marking criteria in the following way:
  - How well does the response communicate the meaning?
  - What range of specialist terms is used?
  - How accurate is the spelling, punctuation and grammar?

## Quality of Written Communication

Questions which involve the writing of continuous prose will expect candidates to:

- show clarity of expression
- construct and present coherent arguments
- demonstrate an effective use of grammar, punctuation and spelling.

Full marks will be awarded if the candidate has demonstrated the above abilities.

Questions where QWC is likely to be particularly important are indicated "QWC" in the mark scheme.

| Question number | Answer  |   |
|-----------------|---|---|
| 1 (a)           | <p style="text-align: center;">AO1 (4 marks)/ AO2 (6 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• Low pressure weather systems / depressions bring wet and windy weather, associated with fronts and tightly packed isobars.</li> <li>• Winds blow anticlockwise around depressions in the northern hemisphere.</li> <li>• High pressure brings calmer conditions, which are often sunny / few clouds with light winds and little rain.</li> <li>• Winds circulate clockwise around high pressure areas.</li> <li>• The jet stream can influence the position of weather systems especially depressions, and their characteristics are influenced by the seasons and types of air mass.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• As this is March, the end of the northern hemisphere winter, temperatures would be expected to be depressed due to short days and lack of strong solar insolation, i.e. only 18°C in north Africa and 6°C in Rennes.</li> <li>• The warm front/ occluded front approaching Rennes will bring rainfall (heavy rain as it is close to the front) due to rising warm (T<sub>m</sub>) air in the warm sector, but temperatures will be cool because Rennes is in P<sub>m</sub> air (but not for long).</li> <li>• The jet stream is moving Low 971 east; anticlockwise air circulation explains the SW air flow over Rennes.</li> <li>• In Sousse there is subsiding air due to the High 1022, which explains the scattered high cloud: subsiding air is warming as it descends so there is little cloud and no rain.</li> <li>• Cloud free skies contribute to direct sunlight so higher temperatures - the location is much further south than Rennes: T<sub>c</sub> air may be mentioned.</li> <li>• Light winds due to widely spaced isobars and ESE because of clockwise circulation and Sousse sitting in the NW quarter of the high.</li> <li>• Low cloud due to the angle of the warm front and Rennes is close to its base at ground level.</li> </ul> |   |
| Level           | Mark  | Descriptor  |
|                 | 0   | No rewardable material.   |
| Level 1         | 1–4   | <ul style="list-style-type: none"> <li>• Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> </ul> |

|         |      |  |
|---------|------|--|
|         |      | <ul style="list-style-type: none"> <li>• Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)</li> </ul>   |
| Level 2 | 5-7  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)</li> </ul> |
| Level 3 | 8-10 | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>• Applies knowledge and understanding to geographical information logically to find fully relevant connections/relationships between stimulus material and the question. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)</li> </ul>                           |

| Question number | Answer  |
|-----------------|---|
| 2 (a)           | <p style="text-align: center;">AO1 (4 marks)/ AO2 (6 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• There are three basic trends: steady, decline or increasing forest cover, which can be linked to different causes of deforestation / afforestation.</li> <li>• Many different countries have large areas of forest cover, which can be tropical, temperate or boreal / taiga.</li> <li>• Forests in general can be viewed as ecosystem 'goods' to be exploited but may also be conserved.</li> <li>• There are both declining and increasing countries on Figure 2; which could be grouped by level of development Italy / NZ as developed, Thailand as emerging and Nigeria / Cameroon as developing.</li> </ul> |

- The environmental Kuznets curve is a model of the relationship between development and attitudes to the environment / conservation.
- AO2:
- Nigeria and Cameroon have both experienced steep declines: from 17000 to 7000 Kha in Nigeria and from 24000 to 19000 Kha in the case of Cameroon: could be explained by widespread, uncontrolled deforestation (from a high initial level due to lack of population / exploitation)– possibly illegal logging and even urbanisation / population growth leading to farmland expansion.
  - Laws, legal frameworks, policing and monitoring might all be seen as weak in developing countries, as well as the need for low income people to exploit forests out of economic necessity.
  - Thailand has a more complex pattern with some expansion and decline experienced in different phases; a point could be made about data collection issues or forest expansion actually being plantations / secondary forests.
  - The Kuznets curve could be used as a structure to explain changing attitudes to forests and a shift towards conservation as incomes / leisure time / environmental education increase.
  - Developed countries appear to have minor increases in forests, which could be explained by pressure from the public and environmentalists to protect areas for use during leisure time, or even meeting carbon emissions targets.

| Level   | Mark | Descriptor   |
|---------|------|--|
|         | 0    | No rewardable material.  |
| Level 1 | 1–4  | <ul style="list-style-type: none"> <li>• Demonstrates isolated or generic elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> <li>• Applies knowledge and understanding to geographical information inconsistently. Connections/relationships between stimulus material and the question may be irrelevant. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)</li> </ul>  |
| Level 2 | 5-7  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding to geographical information to find some relevant connections/relationships between stimulus material and the question. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)</li> </ul> |
| Level 3 | 8-10 | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>• Applies knowledge and understanding to geographical information logically to find fully relevant</li> </ul>  |

|  |  |  |
|--|--|--|
|  |  | <p>connections/relationships between stimulus material and the question. (AO2)</p> <ul style="list-style-type: none"><li>• Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)</li></ul> |
|--|--|--|



| Question number | Answer  |
|-----------------|---|
| 2(b)            | <p style="text-align: center;">AO1 (5 marks)/ AO2 (10 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• Biodiversity can be defined as the number of species in particular areas as well as in terms of genetic diversity and the diversity of ecological niches in an area.</li> <li>• Biodiversity varies with latitude, with low latitude areas generally having lower levels.</li> <li>• Other physical factors are also important including area, age, altitude and isolation / islandisation, which are related to evolutionary processes.</li> <li>• Human factors may reduce biodiversity and largely consist of a range of threats that degrade / destroy ecosystems and at the same times species – ultimately leading to extinction.</li> <li>• Human actions can have a more positive impact through conservation and in some cases restoration.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• Latitude is a key factor as climate limiting factors influence NPP and seasonality, and places with high temperature and precipitation and low seasonality have the most growth and can support multi-layered vegetation with numerous niches.</li> <li>• Highland areas are often biodiverse as the altitudinal range ensures conditions change with height over short distances, supporting a wide range of species and niches in a small area.</li> <li>• Isolated areas, especially islands, allow for unique evolution of species and therefore higher than expected levels of biodiversity in many cases.</li> <li>• Physical factors are essentially ancient and set the global pattern especially latitude, which has then been modified by human actions – so on a long timescale physical factors might be considered more important, but it could be argued that today human factors, i.e. threats, are more significant.</li> <li>• A wide range of human threats degrade biodiversity including local exploitation such as deforestation and global threats such as climate change; alien invasive species out-competing indigenous species - the latter might be judged as very significant as it is a global context threat; the threats are recent in terms of the evolution of biodiversity.</li> <li>• Conservation and the setting up and managing of NPs and other areas may help preserve biodiversity or slow its decline – but they very rarely enhance it, e.g. by ecosystem restoration or species reintroduction; zoos and their breeding programmes might be seen as especially important for endangered species.</li> </ul> |

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|--|--|
|  | <ul style="list-style-type: none"><li>• Stronger answers may argue that either physical or human factors are most important, and come to a conclusion.</li></ul> |
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| Level   | Mark  | Descriptor   |
|---------|-------|--|
|         | 0     | No rewardable material.  |
| Level 1 | 1-4   | <ul style="list-style-type: none"> <li>• Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> <li>• 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)</li> <li>• 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)</li> </ul>  |
| Level 2 | 5-8   | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)</li> <li>• 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)</li> <li>• Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)</li> </ul> |
| Level 3 | 9-12  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)</li> </ul>  |
| Level 4 | 13-15 | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)</li> </ul>  |

| Question number | Answer  |
|-----------------|---|
| 3               | <p style="text-align: center;">AO1 (5 marks)/ AO2 (10 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• Global population is set to increase, to perhaps 9.5 billion by 2050, although the exact figure is open to debate; some suggest 11 billion by 2100.</li> <li>• Population trends are not even, with very rapid growth expected in Africa and parts of South Asia, but slower elsewhere and perhaps even decline in Europe / Japan.</li> <li>• Extreme weather hazards include drought, tropical cyclones, other storms and flooding.</li> <li>• The trends in disasters resulting from these hazards are rising in terms of economic losses and numbers affected but falling in terms of deaths.</li> <li>• Risks include risks to human life and also to property and businesses.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• Trends in urbanisation and the growth in cities / megacities could be argued to increase flood risk especially in places with rapid and often uncontrolled growth, due to an increase in impermeable surfaces and vulnerable homes, i.e. slums and other unplanned settlements.</li> <li>• Answers can also argue that rising extreme weather risks could be a result of global warming increasing the incidence of drought, flooding, variable rainfall and less convincingly tropical cyclones – this might be seen as more important than population as an explanation.</li> <li>• Answers should recognise that some regions are much more vulnerable than others, such as coastal cities in Asia’s cyclone belt or parts of the Sahel that are at risk from drought – because people are economically vulnerable; population growth may make this situation worse but on the other hand development in the future could increase education, access to technology and improve management so risk could fall despite rising populations.</li> <li>• In addition, risk could be argued to have fallen in many places due to better management, e.g. tropical cyclone warning, evacuation and shelters in Bangladesh have reduced death tolls (but not numbers affected / economic losses).</li> <li>• Population growth is not a significant factor in many parts of the developed world, but ageing / dependent population could be – although in many cases management, e.g. flood management, has also improved.</li> <li>• Stronger answers will make judgements, recognising the complexity of hazard risk and make a judgement about the</li> </ul> |

| significance of population change in relation to other risk factors. |       |  |
|--|-------|--|
| Level  | Mark  | Descriptor   |
|  | 0     | No rewardable material.  |
| Level 1  | 1-4   | <ul style="list-style-type: none"> <li>• Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> <li>• 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)</li> <li>• 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)</li> </ul>  |
| Level 2  | 5-8   | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)</li> <li>• 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)</li> <li>• Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)</li> </ul> |
| Level 3  | 9-12  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas logically, making some relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)</li> </ul>  |
| Level 4  | 13-15 | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas logically, making relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)</li> </ul>  |

| Question number | Answer   | Mark |
|-----------------|--|------|
| 4(a)            | <p style="text-align: center;">AO1 (2 marks)/ AO3 (3 marks)</p> <p>Award 1 mark (AO1) for each relevant point and further expansion marks for reasons/explanations linked to the data shown (AO3), up to a maximum of 5 marks.</p> <ul style="list-style-type: none"> <li>• Gas and oil decline, which could be linked to peak oil / gas and therefore lower supply (1) alongside higher prices making other energy sources like renewables / biofuels more competitive (1).</li> <li>• Coal is set to expand dramatically, which can be explained by industrialisation in Asia (1) and the fact that it is abundant and cheap / the technology for electricity generation is not complex (1).</li> <li>• Much of the growth is in renewables, which cause no / less carbon emissions (1) which fits in with many countries' policies of emissions reductions, e.g. COP21 (1).</li> <li>• Biofuel use is projected to triple in size by 2050 possibly due to increased use in the developing world (1) and replacement of fossil fuel oil with biodiesel / bioethanol (1).</li> <li>• Total demand increase can be linked to future growth in population especially in Africa and parts of Asia (1) as well as future increases in affluence pushing up energy demand, e.g. in China and India (1).</li> </ul> | (5)  |

| Question number | Answer   |
|-----------------|--|
| 4(b)            | <p style="text-align: center;">AO1 (5 marks)/ AO2 (10 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• Being energy secure / energy security means having access to reliable, affordable energy sources with minimal risk of disruption.</li> <li>• Players include a wide variety of groups that supply energy including oil and gas TNCs and electricity / power generation companies and national grids.</li> <li>• Government is often involved in terms of owning nationalised companies, setting energy mix targets and being involved in geopolitics, which can affect supplies.</li> </ul> |

- A wide range of other players such as consumers, environmental groups and businesses could affect energy policy in terms of their attitudes to energy sources as well as demand.

AO2:

- The supply of fossil fuels is largely in the hands of TNCs, or supermajors, that explore for and extract / process fossil fuels; these are publically traded and state owned – their production has a major influence on prices; their investment in technology ensures new supplies are found; they also have a role in developing renewable technology.
- Governments have a key role in setting energy policy and determining the energy mix of a country; they can increase security by relaxing policies, e.g. allowing widespread fracking in the USA or subsidising renewables; actions can also increase insecurity, e.g. Russia’s gas dispute with Ukraine in 2006 and 2009; failing to plan can lead to energy shortages, e.g. in India and South Africa.
- In some cases TNCs and/ or governments invest in the energy market of other countries, e.g. China’s state-led FDI investment in UK nuclear power (Hinkley C) and EDF’s continuing role in old and proposed nuclear in the UK – although this raises questions about who controls national energy supply.
- OPEC’s role could be considered; it has waned in terms of significance and ability to influence the oil price due to internal disagreement and rising supply in non-OPEC members like the USA.
- Environmental groups and the public influence energy policy especially in developed countries where the anti-nuclear lobby and pro-renewable lobbies have generally increased consumers’ positive perceptions of renewables at the expense of nuclear and coal – this could be seen as limiting energy security by excluding some energy sources that are unpopular, e.g. onshore wind and nuclear power.

| Level   | Mark | Descriptor  |
|---------|------|---|
|         | 0    | No rewardable material.   |
| Level 1 | 1–4  | <ul style="list-style-type: none"> <li>• Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> <li>• 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)</li> <li>• 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)</li> </ul> |
| Level 2 | 5-8  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships to produce a partial</li> </ul>   |

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

| Question number | Answer   | Mark |
|-----------------|--|------|
| 5(a)            | <p>AO1 (2 marks)/ AO3 (3 marks)</p> <p>Award 1 mark (AO1) for each relevant point and further expansion marks for reasons/explanations linked to the data shown (AO3), up to a maximum of 5 marks.</p> <ul style="list-style-type: none"> <li>• Total water demand is set to increase from 3500 to 5200 cubic km per year (1) which can be explained by projected increases in global population / per capita consumer demand (1).</li> <li>• Irrigation water use / animal farming is set to decline slightly (1) which could be explained by a shift towards more formal irrigation and less wasteful water use (1).</li> <li>• Domestic use increases as more people will live in cities (1) and have formal water connections, i.e. piped supply in their homes increasing overall use (1).</li> <li>• Proportionately the largest increase is in industrial use from 400 to 1300 (1) which can be explained by continued industrialisation especially in Asian emerging economies (1).</li> </ul> | (5)  |



| Question number | Answer   |                         |
|-----------------|--|-------------------------|
| 5(b)            | <p style="text-align: center;">AO1 (5 marks)/ AO2 (10 marks)</p> <p>Marking instructions<br/>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<br/>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"> <li>• Transboundary water sources consist of rivers, lakes and aquifers that straddle an international boundary (or an internal political boundary with potential for management differences).</li> <li>• Players include governments internationally, as well as water consumers and the private / state companies that extract and supply water; international bodies such as river commissions can also be involved.</li> <li>• Conflict includes a spectrum of levels of disagreement ranging from low level disputes over use to diplomatic conflict and in very rare cases armed conflict, e.g. the Six Day War.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• Rivers are the most common source of conflict, especially when they traverse several different countries that have competing demands on shared water; downstream countries are often in dispute with upstream countries that extract water and / or alter river flow using dams – conflict is perhaps more common in areas of existing water stress such as the Nile basin.</li> <li>• There are international rules, the Helsinki and Berlin Rules, that govern transboundary use, and these can and have helped resolve conflict; river commissions such as the Nile and Mekong have a mixed track record of balancing competing demands and minimising conflict.</li> <li>• Conflict is more likely when countries have pre-existing political tensions such as Bangladesh and India, or Israel – Palestine; it could be argued that water becomes another element of a wider political dispute.</li> <li>• Major changes to river management such as China’s dam building on the Mekong or Ethiopia’s HEP ambitions have the potential to cause major changes to river discharge, which concerns downstream users.</li> <li>• Many international rivers (Rhine, Danube) do have agreements that work well in practice providing evidence that conflict is by no means inevitable.</li> <li>• Stronger answers will address the question of ‘always’, i.e. the extent to which conflict is always inevitable or whether in fact conflict is actually the exception and in many cases transboundary water sources are effectively managed for multiple users.</li> </ul> |                         |
| Level           | Mark   | Descriptor              |
|                 | 0  | No rewardable material. |

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

| Question number | Answer   |
|-----------------|--|
| 6               | <p style="text-align: center;">AO1 (5 marks)/ AO2 (15 marks)</p> <p>Marking instructions<br/>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>Responses that demonstrate only AO1 without any AO2 should be awarded marks as follows:</p> <ul style="list-style-type: none"> <li>• Level 1 AO1 performance: 1 mark</li> <li>• Level 2 AO1 performance: 2 marks</li> <li>• Level 3 AO1 performance: 3 marks</li> <li>• Level 4 AO1 performance: 4–5 marks.</li> </ul> <p>Indicative content guidance<br/>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"> <li>• Superpowers are countries with global influence and ‘global reach’ that can come in several forms, including military, economic and political.</li> <li>• Military power consists of weaponry and bases, which may be based at home or located overseas; naval and air power including missile technology are important.</li> <li>• Military power can be exercised as the threat of action or ability to act, as well as direct action to meet objectives.</li> <li>• The idea of ‘pillars’ of power of which military is one among economic, political, cultural and demographic is important as is the concept of hard v soft (and even ‘smart’) power.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• Some might argue that military power is very important especially to the USA, which has a globally distributed military machine that can act anywhere – this gives it a type of power not matched by another country; China’s growing military might be seen as recognition of the importance attached to military power.</li> <li>• Some might argue military power is old-fashioned hard-power and is less relevant today than in the past, e.g. during the Cold War, and that forms of soft power ,such as cultural influence, are more important in terms of spreading a superpower’s message and ideology.</li> <li>• On the other hand, numerous recent conflicts, e.g. the USA in Iraq and Afghanistan and Russia in Georgia and Ukraine, show that force is still used as a form of power; China’s South China Sea island and military base construction could also be seen in these terms.</li> <li>• A key part of the USA’s hegemony is NATO, which is a military alliance that has no counterpart with either China or Russia.</li> <li>• Economic and demographic power could be seen as more important than military power, or at least a precursor to it because of the need to have a large population in order have a large military force and the huge costs of military power; technology and TNCs might be seen as critical to developing</li> </ul> |

new technology in the military field as countries with large armies are not always powerful, e.g. North Korea.

- Arguments could consider / rank the different 'pillars' to argue which is the most important, and military power should form the backbone of the evaluation but it is not the only facet that should be considered.
- Stronger answers make an obvious attempt to address the phrase 'most important' and make judgements about the importance of military power in relation to other factors / sources of power and influence.

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



| Question number | Answer   |
|-----------------|--|
| 7               | <p style="text-align: center;">AO1 (5 marks)/ AO2 (15 marks)</p> <p>Marking instructions</p> <p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Responses that demonstrate only AO1 without any AO2 should be awarded marks as follows:</p> <ul style="list-style-type: none"> <li>• Level 1 AO1 performance: 1 mark</li> <li>• Level 2 AO1 performance: 2 marks</li> <li>• Level 3 AO1 performance: 3 marks</li> <li>• Level 4 AO1 performance: 4–5 marks.</li> </ul> <p>Indicative content guidance</p> <p>The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1:</p> <ul style="list-style-type: none"> <li>• The development gap refers to the economic and social inequalities that exist on a global scale, but also within countries regionally and locally – as well as between different gender and ethnic groups.</li> <li>• Small-scale, bottom-up projects are often NGO run, and may use intermediate technology or strategies such as micro-finance to help a community.</li> <li>• There are other approaches including large top-down schemes, fair trade, FDI and free trade that could be used to reduce the gap.</li> <li>• The MDGs and SDGs might also be considered at a global scale.</li> </ul> <p>AO2:</p> <ul style="list-style-type: none"> <li>• Much will depend on scale, as it might be argued that small-scale, bottom-up schemes directly help communities and are small enough to meet community needs; however, some might argue that many schemes only meet basic needs and end abject poverty rather than promoting a long-term development trajectory.</li> <li>• The scale of local small-scale schemes is limited, so how many people out of the millions in need are actually helped? NGOs are often under-funded and while they help some they may not help many; there are examples of larger schemes such as barefoot doctor and Grameen Bank that might be considered bottom-up but are more widespread.</li> <li>• Fair-trade is more widespread and could be seen as partly bottom-up as it is community focused, although the organisation and brand are global.</li> <li>• Some might make the case for top-down approaches although most have a range of costs and benefits and tend to help urban areas more than rural, e.g. large HEP or railway / road development.</li> <li>• In terms of poverty reduction, FDI and free trade might be cited as a way to generate income and propel people out of poverty, i.e. the case of China –although this development</li> </ul> |

|         |       | <p>comes with social and environmental costs such as growing inequality.</p> <ul style="list-style-type: none"> <li>• A number of different strategies / projects should be considered, centred on bottom-up but considering other approaches in order to evaluate their relative merits.</li> <li>• Stronger answers make an obvious attempt to address the idea that bottom-up projects are always the 'best' – and may identify criteria to help make these judgements based on cost, outcomes etc.</li> </ul>   |
|---------|-------|---|
| Level   | Mark  | Descriptor  |
|         | 0     | No rewardable material.   |
| Level 1 | 1–5   | <ul style="list-style-type: none"> <li>• Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate or irrelevant. (AO1)</li> <li>• Applies knowledge and understanding of geographical ideas, making limited and rarely logical connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited coherence and support from evidence. (AO2)</li> <li>• 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)</li> </ul> |
| Level 2 | 6-10  | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is occasionally relevant and may include some inaccuracies. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas with limited but logical connections/relationships. (AO2)</li> <li>• 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)</li> <li>• Applies knowledge and understanding of geographical information/ideas to come to a conclusion, partially supported by an unbalanced argument with limited coherence. (AO2)</li> </ul> |
| Level 3 | 11-15 | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and accurate. (AO1)</li> <li>• Applies knowledge and understanding of geographical information/ideas to find some logical and relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical ideas in order to produce a partial but coherent interpretation that is supported by some evidence. (AO2)</li> <li>• 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)</li> </ul>                       |
| Level 4 | 16-20 | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> </ul>   |



|  |  |   |
|--|--|---|
|  |  | <ul style="list-style-type: none"><li>• Applies knowledge and understanding of geographical information/ideas to find fully logical and relevant connections/relationships. (AO2)</li><li>• Applies knowledge and understanding of geographical information/ideas to produce a full and coherent interpretation that is supported by evidence. (AO2)</li><li>• 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)</li></ul> |
|--|--|---|