



Read the information in the insert and answer **all** questions.

1 Study Sources 1 to 3.

(a) From Source 1, identify the trend in the number of people in the world without access to electricity.

.....  
..... [1]

(b) From Source 2, identify **two** consequences of energy poverty.

.....  
.....  
.....  
..... [2]

(c) Which consequence of energy poverty do you think is the most significant? Explain why.

.....  
.....  
.....  
.....  
.....  
..... [3]







3 Study Source 4.

(a) Identify **one** opinion from Hua’s statement. Explain why it is an opinion.

.....  
.....  
.....  
..... [2]

(b) Jin argues that energy poverty is best solved at the local level.

(i) Identify **one** fact from Jin’s statement.

.....  
..... [1]

(ii) Explain how well this fact supports Jin’s argument.

.....  
.....  
.....  
..... [2]

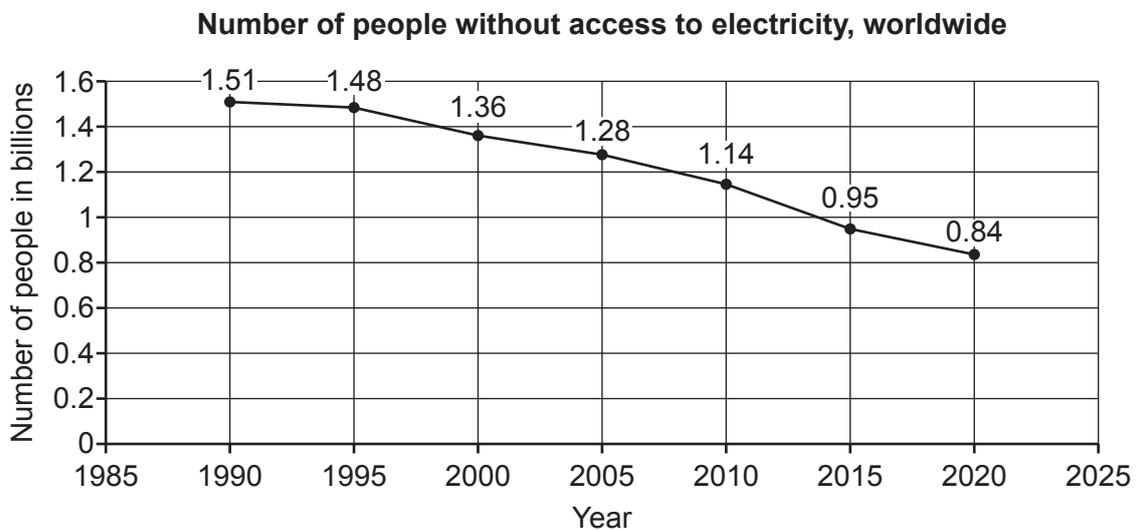






**Source 1**

In the past 30 years, there has been progress in supplying affordable, reliable and clean energy to the world's population of about eight billion people.

**Source 2**

There are two main energy problems. The first problem is the release of greenhouse gases that cause climate change when fossil fuels are used to produce energy. The second problem is energy poverty. This happens when people do not have electricity and clean cooking fuels. Almost a billion people do not have access to modern energy technology.

<b>Some consequences of energy poverty</b>	Cooking with fire causes indoor air pollution and disease.
	Living is harder without cold food storage, washing machines and light at night.
	Heating with firewood causes deforestation and environmental damage.
	Communication and entertainment with computers and television is impossible.
	Teaching and learning activities are limited without electricity.
	Economic development is much slower.

**Source 3: The world's energy problems must be solved by the rich industrialised countries**

Cheap, reliable and sustainable energy is needed by all nations to solve the world's energy problems. But who should pay for this?

The rich industrialised nations have created the problem. History shows us that industrialisation in the past depended upon dirty fossil fuels for power. Rich industrialised nations emit the most greenhouse gases. In 2020, a study by Oxfam showed that the richest 10 per cent of the global population were responsible for about 52 per cent of global emissions. If they caused the problem, it is right for them to solve the problem.

Richer, industrialised nations have renewable technology using the sun and wind to produce cheaper, sustainable energy. This technology should be shared with other nations.

Developing nations do not yet have enough money and expertise to end energy poverty. We must help them – we are all suffering from climate change and should work together to provide clean energy for all.

*Extract from an internet blog on energy written in the United States in 2021*

**Source 4****Hua**

Climate change is happening quickly. Energy poverty spoils lives. Access to modern electrical energy is needed to create more jobs and better schooling. The issue is so large that governments must act now.

Building an electrical supply grid across the country is very expensive and needs major planning. Only governments can coordinate this type of vast project.

More research into storing renewable solar and wind energy is needed; batteries are still very heavy and expensive. Using heat energy from the earth and hydrogen as a fuel for transport are other possible solutions that need more research. Only governments can afford to fund expensive energy research for our universities and businesses.

A recent newspaper report said that government investment in renewable energy is vital to reduce energy poverty everywhere.

Question	Answer	Marks
1(a)	<p><b>From Source 1, identify the trend in the number of people in the world without access to electricity.</b></p> <p><b>Main Annotations</b>   </p> <p>Candidates should identify the following trend from Source 1:</p> <ul style="list-style-type: none"> <li>Decreasing or going down or similar.</li> </ul> <p>1 mark should be awarded for identifying the above.</p> <p><i>Further guidance – the only acceptable answer is listed above. However, candidates may use their own words.</i></p>	1
1(b)	<p><b>From Source 2, identify <u>two</u> consequences of energy poverty.</b></p> <p><b>Main Annotations</b>   </p> <p>Candidates may identify the following consequences from source 2:</p> <ul style="list-style-type: none"> <li>Cooking with fire causes indoor air pollution and disease.</li> <li>Living is harder without cold food storage, washing machines and light at night.</li> <li>Heating with firewood causes deforestation and environmental damage.</li> <li>Communication and entertainment with computers and television is impossible.</li> <li>Teaching and learning activities are limited without electricity.</li> <li>Economic development is much slower.</li> </ul> <p>1 mark should be awarded for each correctly identified benefit.</p> <p><i>Further guidance – the only acceptable answers are listed above. However, candidates may use their own words.</i></p>	2

Question	Answer	Marks
1(c)	<p><b>Which consequence of energy poverty do you think is the most significant? Explain why.</b></p> <p><b>Main Annotations</b>    </p> <p>Indicative content</p> <p>Candidates may identify one of the following consequences:</p> <ul style="list-style-type: none"> <li>• Cooking with fire causes indoor air pollution and disease.</li> <li>• Living is harder without cold food storage, washing machines and light at night.</li> <li>• Heating with firewood causes deforestation and environmental damage.</li> <li>• Communication and entertainment with computers and television is impossible.</li> <li>• Teaching and learning activities are limited without electricity.</li> <li>• Economic development is much slower.</li> </ul> <p>Candidates may give the following reasons, any of which could be used, to justify their choice:</p> <ul style="list-style-type: none"> <li>• has greatest impact locally, nationally or globally</li> <li>• affects most people</li> <li>• ethically or morally most problematic</li> <li>• has multiple negative consequences</li> <li>• creates spiral of problems</li> <li>• other reasonable response.</li> </ul> <p><i>Further guidance – candidates are most likely to discuss consequences from Source 2 as listed above. However, the assessment is focused mainly upon their reasoning / justification and therefore additional benefits should be credited.</i></p> <p>The following levels of response should be used to award marks:</p> <p><b>Level 3 (3 marks) Good response</b> Clearly reasoned explanation explicitly linked to a benefit.</p> <p><b>Level 2 (2 marks) Reasonable response</b> Some explanation. The link between the explanation and a benefit may be implicit / unclear at times.</p> <p><b>Level 1 (1 mark) Limited response</b> A benefit is identified. There may be some limited explanation.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p>	3

Question	Answer	Marks
1(d)	<p><b>Explain why energy poverty is an important personal issue.</b></p> <p><b>Main Annotations</b>     </p> <p>Indicative content</p> <p>Candidates are likely to identify the following reasons:</p> <ul style="list-style-type: none"> <li>• it affects people individually e.g. health; access to education</li> <li>• affects the family and neighbourhood</li> <li>• spoils the local environment</li> <li>• makes life harder</li> <li>• prevents access to modern technology e.g. computers and social media</li> <li>• getting a job is more difficult as the local economy is affected negatively</li> <li>• other reasonable response.</li> </ul> <p>The following levels of response should be used to award marks.</p> <p><b>Level 3 (5–6 marks) Good response</b> Clearly reasoned, credible and structured explanation; usually two (or more) developed arguments clearly linked to the issue; or three (or more) undeveloped reasons. The personal dimension is explicit.</p> <p><b>Level 2 (3–4 marks) Reasonable response</b> Some reasoned explanation; usually one (or more) developed argument(s) with some link to the issue, but may be implicit at times; or two (or more) undeveloped reasons. The personal dimension is implicit at times.</p> <p><b>Level 1 (1–2 marks) Limited response</b> Limited reasoning and explanation; the response is likely to contain only simple, undeveloped and asserted points. Arguments are partial, generalised and lack clarity. The personal dimension is implicit or not apparent.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p>	6

Question	Answer	Marks
2(a)	<p><b>‘The world’s energy problems must be solved by the rich industrialised countries.’</b></p> <p><b>What are the strengths and weaknesses of the argument supporting this claim?</b></p> <p><b>Main Annotations</b>     </p> <p>Indicative content</p> <p>Candidates are likely to discuss the following evaluative points relating to Source 3:</p> <p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• relevant evidence and argument</li> <li>• examples used to support argument</li> <li>• evidence from experts cited – Oxfam</li> <li>• uses rhetorical questions</li> <li>• clear, well-structured use of language</li> <li>• uses some statistical evidence</li> <li>• clear values and ethical stance</li> <li>• any other reasonable response.</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• not much evidence</li> <li>• biased tone – some exaggeration</li> <li>• few counter arguments</li> <li>• author unknown</li> <li>• much opinion</li> <li>• expertise of author not known</li> <li>• only relevant to the US – difficult to generalise</li> <li>• any other reasonable response.</li> </ul> <p>The following levels of response should be used to award marks:</p> <p><b>Level 3 (5–6 marks) Good response</b> Clearly reasoned, credible and structured evaluation.</p> <p>Usually, two (or more) developed points clearly linked to the issue, with some other undeveloped points; or a wide range (four or more) of undeveloped points.</p> <p>Evaluation is clearly focused on the evidence and arguments, their strengths and/or weaknesses and the way they are used to support the claim. There is usually some clear reference to the evidence and arguments in the source e.g. quotation/summary.</p> <p><b>Level 2 (3–4 marks) Reasonable response</b> Reasonable evaluation mainly focused on the evidence and arguments, their strengths and/or weaknesses, and the way they are used to support the claim; there may be some lack of clarity and the answer may be difficult to follow at times.</p>	6

Question	Answer	Marks
2(a)	<p>The response may usually contain one (or more) developed point(s), with some other undeveloped points. Some (two or more) undeveloped points may be sufficient to reach this level.</p> <p><b>Level 1 (1–2 marks) Limited response</b> Limited evaluation which is often unsupported and asserted. The response is often unclear, tangential and generalised. It usually contains one or two undeveloped points only. Answers at this level may repeat source material with little understanding.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p>	

Question	Answer	Marks
2(b)	<p><b>‘Rich industrialised nations emit the most greenhouse gases.’</b></p> <p><b>How could you test this claim?</b></p> <p><b>You should consider the types of information, sources of evidence and methods you might use.</b></p> <p><b>Main Annotations</b>     </p> <p>Indicative content</p> <p>Candidates are likely to discuss the following ways to test the claim stated in Source 3:</p> <p><b>Possible types of information:</b></p> <ul style="list-style-type: none"> <li>• compare statistics/information on greenhouse gases</li> <li>• data from businesses, local authority or government</li> <li>• individual testimony or personal experience</li> <li>• material from the internet</li> <li>• other relevant response.</li> </ul> <p><b>Possible sources of information:</b></p> <ul style="list-style-type: none"> <li>• national and local governments and their departments</li> <li>• experts in climate change/environmental issues</li> <li>• research reports</li> <li>• media and the internet</li> <li>• UN/WHO/WWF etc.</li> <li>• other relevant response.</li> </ul> <p><b>Possible methods:</b></p> <ul style="list-style-type: none"> <li>• review of secondary sources/literature/research/documents</li> <li>• interview relevant environmental agencies and experts</li> <li>• internet search</li> <li>• questionnaires</li> <li>• surveys</li> <li>• other relevant response.</li> </ul> <p>The following levels of response should be used to award marks:</p> <p><b>Level 4 (7–8 marks) Very good response</b> Clearly reasoned, credible and structured explanation of a range of ways to test the claim. The response usually contains three (or more) developed points, and may contain some undeveloped points.</p> <p>The response is clearly and explicitly related to testing the claim.</p> <p><b>Level 3 (5–6 marks) Good response</b> Reasoned and mainly credible explanation of ways to test the claim. The response usually contains two (or more) developed points, and may contain some undeveloped points.</p> <p>The response is explicitly related to testing the claim.</p>	8

Question	Answer	Marks
2(b)	<p><b>Level 2 (3–4 marks) Reasonable response</b> Some reasoning and explanation of ways to test the claim. The response usually contains one (or more) developed point(s), and/or a few undeveloped points. There may be some lack of clarity and the answer may be difficult to follow at times.</p> <p>The response is related to testing the claim.</p> <p><b>Level 1 (1–2 marks) Limited response</b> Limited explanation of ways to test the claim. The response usually contains one or two simple, undeveloped and asserted points.</p> <p>There is little relevance in the response to testing the claim or the methods, sources and types of information are generally not appropriate for the claim being tested.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p> <p><i>If the response lists or describes methods, sources and types of data without linking to the issue/context, then it should not be placed above Level 2.</i></p>	

Question	Answer	Marks
3(a)	<p><b>Identify <u>one</u> opinion from Hua’s statement. Explain why it is an opinion.</b></p> <p><b>Main Annotations</b>  </p> <p>An opinion is an individual’s point of view or belief which is not necessarily shared by others or supported by evidence.</p> <p>Candidates may identify one of the following opinions from Hua’s statement:</p> <ul style="list-style-type: none"> <li>• Climate change is happening quickly.</li> <li>• Energy policy spoils lives.</li> <li>• Only governments can afford to fund expensive energy research.</li> <li>• Heat energy/hydrogen ... are other possible solutions that need more research.</li> <li>• The issue is so large that governments must act now.</li> <li>• Only governments can coordinate this type of vast project.</li> <li>• More research into storing renewable solar and wind energy is needed.</li> <li>• Government investment in renewable energy is vital to reduce ...</li> <li>• Other reasonable response</li> </ul> <p>1 mark should be awarded for identifying one of the above.</p> <p><i>Further guidance – the only acceptable answers are listed above. However, candidates may use their own words.</i></p>	<b>2</b>

Question	Answer	Marks
3(b)(i)	<p><b>Jin argues that energy poverty is best solved at the local level.</b></p> <p><b>Identify one example of a fact from Jin’s statement.</b></p> <p><b>Main Annotations</b>  </p> <p>A fact is a statement that is true, correct, accurate or can be proven/verified.</p> <p>Candidates may identify one of the following facts from Jin’s statement:</p> <ul style="list-style-type: none"> <li>• The World Bank suggests that energy poverty is best solved at the local level.</li> <li>• Solar panels can be used by several families to create a microgrid.</li> <li>• Microgrids have saved time for families on household tasks, helped farmers increase crop yield and provide light in classrooms.</li> <li>• A charity in India recently installed microgrids to power more than 150 villages serving 230 000 people.</li> <li>• Microgrids can deliver electricity to people in remote areas.</li> <li>• Other reasonable response.</li> </ul> <p>1 mark should be awarded for identifying one of the above.</p> <p><i>Further guidance – the only acceptable answers are listed above. However, candidates may use their own words.</i></p>	1

Question	Answer	Marks
3(b)(ii)	<p><b>Explain how well this fact supports Jin’s argument.</b></p> <p><b>Main Annotations</b> ✓ ✗ ⤴ ? BOD</p> <p>Examples of the points that could be made when explaining how well the fact supports the argument:</p> <ul style="list-style-type: none"> <li>• Very good support as the fact is based on evidence from research or experience that gives confidence to the reader about the claim.</li> <li>• Some support as the fact is relevant to the argument but the fact alone is not much evidence and so may not be relied upon or be sufficient to prove the case.</li> <li>• Limited support as the fact is not relevant and the research is not cited.</li> </ul> <p>Use the following levels of response to award a maximum of two marks:</p> <p><b>Level 2 (2 marks) Good response</b> An example of a fact is identified correctly. Clear, well-explained evaluation of the use of the fact in the argument. The analysis and evaluation highlights strengths and/or weaknesses and is supported with reference to the argument in the statement e.g. quotations or paraphrased summaries.</p> <p><b>Level 1 (1 marks) Reasonable response</b> An example of a fact is identified correctly. Some evaluation of the use of the fact in the argument. The response may occasionally lack clarity. The evaluation is mainly descriptive, asserted and unsupported with little explanation.</p> <p><b>Level 0 (0 marks)</b> An opinion is identified correctly but there is no relevant evaluation of how well the opinion supports the argument.</p> <p><i>Further guidance – Q3(b)(i) must be answered correctly to be awarded marks for this question. It is expected that responses will be very brief and not developed.</i></p>	2

Question	Answer	Marks
3(c)	<p><b>Which argument is more convincing, Hua’s or Jin’s?</b></p> <p><b>Your answer should consider both arguments, and you should support your point of view with their words.</b></p> <p><b>You should also consider:</b></p> <ul style="list-style-type: none"> <li>• the strength of their reasoning and evidence</li> <li>• their use of language</li> <li>• the different kinds of information used.</li> </ul> <p><b>Main Annotations J</b>     </p> <p>Indicative content</p> <p>Candidates are expected to evaluate the arguments presented in Source 4 and compare their effectiveness. They should make a supported judgement with some explanation about which person has the most convincing argument.</p> <p>Candidates may support their judgement by considering:</p> <p><b>Strength of reasoning:</b></p> <ul style="list-style-type: none"> <li>• logic</li> <li>• structure</li> <li>• balance</li> <li>• claims</li> </ul> <p><b>Use of language:</b></p> <ul style="list-style-type: none"> <li>• tone – emotive, exaggerated, precise</li> <li>• clarity</li> </ul> <p><b>Evidence:</b></p> <ul style="list-style-type: none"> <li>• range of information and depth</li> <li>• relevance</li> <li>• sufficiency – sample</li> <li>• source – media; internet</li> <li>• date – how recent</li> <li>• different types of information – fact, opinion, value, anecdote</li> <li>• testimony – from experience and expert</li> </ul> <p><b>Sources of bias</b></p> <ul style="list-style-type: none"> <li>• local interest</li> <li>• economic</li> <li>• personal values</li> <li>• experience</li> </ul> <p><b>Likely consequences of the ideas presented</b></p> <p><b>Acceptability of their values to others:</b></p> <ul style="list-style-type: none"> <li>• how likely other people are to agree with their perspective/view</li> </ul>	15

Question	Answer	Marks
3(c)	<p>The following levels of response should be used to award marks:</p> <p><b>Level 5 (13–15 marks) Very good response</b> Clear, credible and well-supported points/explanation about which argument is more convincing. Coherent, structured evaluation of both arguments with clear comparison.</p> <p>The response contains usually three (or more) developed evaluative points, and may include some undeveloped points. Material from the sources is used as evidence to support the evaluation; clear reference to the evidence and/or arguments in the source e.g. quotation/summary of ideas.</p> <p>A clear judgement is reached.</p> <p><b>Level 4 (10–12 marks) Good response</b> Clear, supported points/explanation about which argument is more convincing. Evaluation of both arguments, with comparison.</p> <p>The response usually contains two (or more) developed evaluative points and may include some undeveloped points. A wide range (four or more) of undeveloped but clearly appropriate points may be sufficient to enter this band at the lower level. Material from the sources is used as evidence to support the evaluation; some reference to the evidence and/or arguments in the source e.g. quotation/summary of ideas.</p> <p>A judgment is reached.</p> <p><b>Level 3 (7–9 marks) Reasonable response</b> Reasonable points/explanation about which argument is more convincing. Some evaluation of both arguments, with an attempt at comparison or very good evaluation of only one argument. Some judgements and evaluative points are partially supported or asserted.</p> <p>Usually one (or more) developed evaluative points, possibly with some undeveloped points; three (or more) undeveloped points may be sufficient to enter this band at the lower level. Some material from the sources may be used as evidence to support the evaluation. The response may occasionally lack some clarity and be difficult to follow.</p> <p>An attempt is made to give an overall judgement.</p> <p><b>Level 2 (4–6) Basic response</b> Basic points about which argument is more convincing. There may be only one argument considered in any detail, with little attempt at comparison. Judgements and evaluative points are partially supported and lack clarity/relevance at times.</p> <p>The response usually contains two (or more) undeveloped points.</p> <p>A basic judgement may be reached.</p>	

Question	Answer	Marks
3(c)	<p><b>Level 1 (1–3 marks) Limited response</b> Limited and unsupported points about which argument is more convincing. The response considers the arguments briefly and/or tangentially. There is little clarity. Answers at this level may repeat source material with little understanding or simply agree/disagree with the arguments presented.</p> <p>The response may not contain any clear evaluative points.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p> <p><i>Responses that give a very good evaluation of only one argument may achieve Level 3 but no higher.</i></p>	

Question	Answer	Marks
4	<p><b>Your government wants to reduce energy poverty.</b></p> <p><b>The following actions are being considered:</b></p> <ul style="list-style-type: none"> <li>• <b>Increasing access to electricity through national projects.</b></li> <li>• <b>Investing in microgrids producing renewable energy.</b></li> <li>• <b>Teaching local people about energy efficiency.</b></li> </ul> <p><b>Which one of these actions would you recommend to the government, and why?</b></p> <p><b>In your answer, you should:</b></p> <ul style="list-style-type: none"> <li>• <b>state your recommendation</b></li> <li>• <b>give reasons and evidence to support your choice</b></li> <li>• <b>use the material in the sources and/or any of your own ideas</b></li> <li>• <b>consider different arguments and perspectives.</b></li> </ul> <p><b>Main Annotations J</b>    </p> <p>Indicative content</p> <p>Candidates are expected to make a judgement about the recommended course of action, i.e. how to reduce energy poverty, using reasons and evidence to justify their choice.</p> <p>Candidates may use and develop the material found in Sources 1 to 4 but should go beyond simply repeating or recycling without adaptation. Other material may be introduced but is not necessary to gain full marks.</p> <p>Candidates may consider some of the following:</p> <ul style="list-style-type: none"> <li>• reference to scale of impact</li> <li>• reference to different consequences and implications for individuals/ groups/government</li> <li>• how long it might take to make a difference</li> <li>• barriers to change</li> <li>• the influence of individuals and groups on decision making</li> <li>• the role of vested interests and power differences</li> <li>• potential conflicts of interest</li> <li>• difficulties in planning and coordinating improvements</li> <li>• cost and access to resources to implement change</li> <li>• other reasonable response.</li> </ul> <p>The following levels of response should be used to award marks:</p> <p><b>Level 5 (20–24 marks) Very good response</b> Clear, well-supported reasoning about the issue. Different arguments and perspectives are clearly considered.</p>	24

Question	Answer	Marks
4	<p>The response usually contains a wide range of clearly reasoned points and/or evidence to support the views expressed, with four (or more) developed points, and some undeveloped points.</p> <p>The response is very well-structured and a clear judgement is reached.</p> <p><b>Level 4 (15–19 marks) Good response</b> Clear, supported reasoning about the issue. Different arguments and perspectives are considered.</p> <p>The response usually contains a range of reasoned points and/or evidence to support the views expressed, with three (or more) developed points, and some undeveloped points.</p> <p>The response is generally well-structured and a judgement is reached.</p> <p><b>Level 3 (10–14 marks) Reasonable response</b> Some supported reasoning about the issue. Different arguments and perspectives are included.</p> <p>The response usually contains some points and/or evidence to support the views expressed, with two (or more) developed points, and some undeveloped points.</p> <p>The response is structured but at times difficult to follow and an attempt is made to give an overall judgement.</p> <p><b>Level 2 (5–9 marks) Basic response</b> Basic reasoning about the issue. Different arguments are included; perspectives, if present, are unclear.</p> <p>The response relies on assertion rather than evidence but usually contains one (or more) developed point(s) or a range of undeveloped points.</p> <p>The response lacks structure and is difficult to follow though a basic judgement may be attempted.</p> <p><b>Level 1 (1–4 marks) Limited response</b> Limited and unsupported reasoning about the topic in general. Different arguments may be included.</p> <p><b>Level 0 (0 marks)</b> No relevant response or creditworthy material.</p>	