

# Mark Scheme (Results)

## Summer 2026

PearsonEdexcelGCSEinGeography  
9GE0/01

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## General Marking Guidance

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

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response

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| Question number | Indicative content                                                                                                                                                                                                                                                                                                                                             | Mark       |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>1 (a)</b>    | <b>A03 (4 marks)</b>                                                                                                                                                                                                                                                                                                                                           |            |
| <b>(i)</b>      | <b>39.56 to two decimal places</b><br><b>There is no other acceptable answer</b>                                                                                                                                                                                                                                                                               | <b>(1)</b> |
| <b>(ii)</b>     | <b>30</b><br><b>There is no other acceptable answer</b>                                                                                                                                                                                                                                                                                                        | <b>(1)</b> |
| <b>(iii)</b>    | 1mark for <b>25.5-48.5</b><br><br>OR<br><br>1mark for correct use of a correct equation<br><br>1mark for <b>23</b><br><br>2marks if the candidate offers the <b>correct answer</b> without showing working<br><br>2marks if the candidate offers the <b>correct answer despite the working shown</b><br><b>Allow working and answers by Figure 1 on page 2</b> | <b>(2)</b> |

| Question number | Indicative content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1(b)</b>     | <b>Assess the relative importance of physical processes in influencing the impacts of earthquakes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                 | <p><b>A01 (3 marks)/A02(9marks)</b></p> <p><b>Marking instructions</b><br/>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.<br/>Responses that demonstrate <b>only</b> A01 without any A02 should be awarded marks as follows:</p> <ul style="list-style-type: none"> <li>• Level 1 A01 performance: 1 mark</li> <li>• Level 2 A01 performance: 2 marks</li> <li>• Level 3 A01 performance: 3 marks.</li> </ul> <p><b>Indicative content guidance</b><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><b>A01</b></p> |

| Question number | <b>Indicative content</b><br><b>Assess the relative importance of physical processes in influencing the impacts of earthquakes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <ul style="list-style-type: none"> <li>• The theory of plate tectonics and its key elements (the earth's internal structure, convection, subduction, ridge push, slab pull, sea floor spreading and palaeomagnetism).</li> <li>• The operation of these processes at different plate margins (destructive, constructive, collision and transform).</li> <li>• Tectonic hazard profiles such as magnitude, frequency and areal extent are important to an understanding of contrasting hazard impacts</li> <li>• Development and governance are important in understanding disaster impact.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Earthquakes that occur at destructive/convergent plate margins where two plates converge may have deep and shallow foci and may have a large magnitude. In particular thrust fault earthquakes such as Tohoku 2011 can cause high impacts.</li> <li>• In contrast earthquakes at constructive/divergent plate margins where two plates move away from each other and may have shallow foci and a lower magnitude and so create fewer impacts.</li> <li>• Earthquakes at conservative plate margins where plates move laterally to each other can be both shallow and medium level magnitude and so can cause high levels of impacts as shown by the Haiti earthquake 2010.</li> <li>• Other processes include liquefaction and landslides as well as the process of the generation of tsunamis.</li> <li>• There are other physical factors which are important in explaining the impacts of earthquakes such as the substrate as some can cause liquefaction and so increase the impacts of earthquake such as in the 1989 Loma Prieta earthquake.</li> <li>• The location of the earthquake is also an important factor as remote areas often have greater impacts as aid takes longer to arrive.</li> <li>• Similarly, topography also is an important factor as in areas with steep slopes earthquakes can create landslides, not only adding to primary impacts but also slowing down the aid for such areas.</li> <li>• There are also numerous human factors that may be assessed alongside the physical processes such as the level of development and governance.</li> </ul> <p><b>Responses that only focus on physical factors rather than processes are likely to reach mid-level 2</b></p> <p><b>Accept other assessments of the relative importance of physical processes in influencing the impacts of earthquakes.</b></p> |

| Level          | Mark        | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <b>0</b>    | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Level 1</b> | <b>1-4</b>  | <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 logical connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to produce an interpretation with limited relevance and/or support. (AO2)</li> <li>• Applies knowledge and understanding of geographical information/ideas to make unsupported or generic judgements about the significance of few factors, leading to an argument that is unbalanced or lacks coherence. (AO2)</li> </ul>                  |
| <b>Level 2</b> | <b>5-8</b>  | <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> <li>• Applies knowledge and understanding of geographical information/ideas to make judgements about the significance of some factors, to produce an argument that may be unbalanced or partially coherent. (AO2)</li> </ul> |
| <b>Level 3</b> | <b>9-12</b> | <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> <li>• Applies knowledge and understanding of geographical information/ideas to make supported judgements about the significance of factors throughout the response, leading to a balanced and coherent argument. (AO2)</li> </ul>                                      |

| Question number | Indicative content<br><b>Explain how the landscape of relict glaciated areas, such as the Lake District National Park, contributes to their economic value.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2(a)            | <p style="text-align: center;"><b>AO1 – (3 marks)/AO2–(3marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Relict glaciated landscapes are important economically.</li> <li>• This includes tourism.</li> <li>• Relict glaciated landscapes also have economic value through farming, mining, hydroelectric power and forestry.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Candidates may describe the features of the landscape of a relict glaciated area and then link these features to the economic activities that are shown on the resource.</li> <li>• The steep slopes shown in the resource and the outstanding natural beauty will attract tourists. The resource shows that tourism could be of key importance as there 18 million visitors.</li> <li>• These will create direct employment in hotels, restaurants and tourist related activities such as climbing walls and boating.</li> <li>• It will also create further employment and income through the multiplier effect with suppliers and retail outlets benefitting from tourism.</li> <li>• The resource also shows other activities such as farming (71% land used for livestock farming) and forestry (13%) which may also contribute to the economic value of relict glaciated landscapes. The flat valley floors provide grazing for livestock. This generates economic value through the sale of livestock or dairy products both to national chains as well as local restaurants.</li> <li>• Candidates may go beyond the resource as the question includes the word contributes.</li> </ul> <p><b>Accept other explanations of how the landscape of relict glaciated areas, such as the Lake District National Park, contributes to their economic value.</b></p> |

| Level          | Mark       | Descriptor                                                                                                                                                                                      |
|----------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                         |
|                | <b>1–2</b> | <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> |

| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                                                                            |
|----------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |            | <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> </ul>                                                                                                                       |
| <b>Level 2</b> | <b>3–4</b> | <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> </ul> |
| <b>Level 3</b> | <b>5–6</b> | <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> </ul>                 |

| Question number | Indicative content<br>Explain how fluvio-glacial processes contribute to the glacial landscape shown.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>2(b)</b>     | <p style="text-align: center;"><b>AO1 (3 marks)/AO2 (3 marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>The formation of fluvio-glacial landforms; ice contact features include kames, eskers and kame terraces.</li> <li>The formation of proglacial features such as sandurs, pro-glacial lakes, meltwater channels, and kettleholes.</li> <li>The processes of water movement within the glacial system such as supraglacial, englacial and sub-glacial flows.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>The resource shows a variety of glacial features some of which are of fluvial-glacial in origin and some are not.</li> <li>Eskers are linear features that often show a close correspondence with the recent direction of ice movement. Eskers are often formed within ice-walled tunnels by meltwater reworking sediment (often coarse-grained, water-laid sand and gravel) that was found at the base of the glacier.</li> <li>Kames are irregularly shaped hills consisting of sand, gravel and till. They are associated with a retreating glacier when material resting on the glacier is reworked by meltwater. Kames form in zones of melting ice such as crevasses, moulins and larger cavities. As the ice melts, the kame begins to emerge as a low hill such as those found in Gleann Einich.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Kettle holes are formed by blocks of ice that are separated from the main glacier. The isolated blocks of ice then become partially or wholly buried in glacial meltwater outwash material. When the ice blocks eventually melt they leave behind holes or depressions that fill with water to become kettle holes.</li> <li>• Pro-glacial lakes are ephemeral lakes created where glacier ice blocks a valley or embayment and ponds the glacial meltwater. The lakes may drain through the ice barrier or via a spillway through cols. Drainage of these lakes may form sculpted bedrock surfaces and leave behind poorly-sorted boulder gravels.</li> <li>• Outwash plains (Sandurs) are formed when meltwater carries sediment away from the glacier and deposits it on a broad plain. The material in the outwash plain is of fine size-sorted by the water runoff of the melting glacier with the finest materials, like silt being the most distantly re-deposited, whereas larger boulders are the closest to the original terminus of the glacier.</li> </ul> <p><b>Accept other explanations of how fluvio-glacial processes contribute to the glacial landscape shown.</b></p> |
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| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                  |
|                | <b>1–2</b> | <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> </ul> |
| <b>Level 2</b> | <b>3–4</b> | <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> </ul>                                |
| <b>Level 3</b> | <b>5–6</b> | <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> </ul>                                                |

| Question number<br>2(c) | Indicative content<br><b>Explain why human activity can degrade the landscape and ecology of active glaciated landscapes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <p style="text-align: center;"><b>AO1 –(8marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Glaciated landscapes are often degraded by anthropogenic processes such as deforestation on exposed slopes which have been found to cause increased damage to landscapes such as in the Canadian Rockies.</li> <li>• Furthermore urbanisation, mineral exploitation and reservoir construction also degrade active glaciated landscapes with pollution and toxic waste with threats from hastily built urban areas.</li> <li>• Increases in tourism in active glaciated landscapes also have the potential to degrade these fragile environments. Svalbard receives nearly 25,000 cruise ship passengers per year and recorded nearly 150,000 overnight stays in 2023. This not only threatens the fragile fauna and flora of Svalbard but also may introduce new species and potentially harmful microorganisms to the ecosystem through ballast water.</li> <li>• Similarly, the growth of tourism in Antarctica with over 100,000 visitors has led to other impacts on the ecology such as the impact on breeding birds and spreading diseases such as bird flu.</li> <li>• Other so called frontier destinations such as Greenland are also threatened by tourism. Greenland now receives over 100,000 visitors a year which are focused in only a few accessible areas. This has led to damage to the fragile landscape and ecology of Greenland.</li> <li>• Accept impact of anthropogenic global warming but it must be focused on the landscape and ecology of active glaciated landscapes.</li> </ul> <p><b>Accept other explanations why human activity can degrade the landscape and ecology of active glaciated landscapes.</b></p> |

| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                          |
|----------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                             |
|                | <b>1–2</b> | <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>• Understanding addresses a narrow range of geographical ideas, which lack detail. (AO1)</li> </ul>              |
| <b>Level 2</b> | <b>3–5</b> | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Understanding addresses a range of geographical ideas, which are not fully detailed and/or developed. (AO1)</li> </ul> |

| Level   | Mark | Descriptor                                                                                                                                                                                                                                                          |
|---------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Level 3 | 6–8  | <ul style="list-style-type: none"> <li>Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>Understanding addresses a broad range of geographical ideas, which are detailed and fully developed. (AO1)</li> </ul> |

| Question number | Indicative content<br><b>Evaluate the view that the basal temperature of the ice is the most important influence on the rate of glacial movement.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2(d)            | <p style="text-align: center;"><b>AO1 (5 marks)/AO2 (15 marks)</b></p> <p><b>Marking instructions</b><br/>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 <b>only</b> 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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>Polar and temperate glaciers have different rates of movement.</li> <li>There are different processes that are important in the movement of glaciers (basal slip, regelation creep, internal deformation).</li> <li>A number of factors control the rate of movement (altitude, basal temperature, slope, lithology)</li> <li>Glacial mass balance also controls the rate due to the relationship between accumulation and ablation in the maintenance of equilibrium.</li> <li>The reasons for the variations in the rates of accumulation and ablation.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>ice temperature is crucial in determining whether a glacier is classified as a polar (cold based) or temperate glacier (warm based) but accept those that discuss poly thermal glaciers.</li> <li>Polar and temperate glaciers have different rates of movement.</li> <li>These are the result of different processes such as basal slip, regelation creep and internal deformation.</li> <li>Temperate (warm based) glaciers due to a combination of air and ground temperatures often have meltwater at the base of the glacier leading to basal sliding and sometimes surging increasing the rate of glacier movement.</li> <li>Temperate glaciers (warm based) also often move through regelation creep as obstacles to the ice flow (especially small ones under a metre) create added pressure on the ice as it begins to move over them. This increases ice temperature and once pressure melting point is reached melting occurs which allows the ice to move over the obstacle. This also increases the rate of glacier movement in temperate (warm based) glaciers.</li> </ul> |

| Question number | Indicative content<br><b>Evaluate the view that the basal temperature of the ice is the most important influence on the rate of glacial movement.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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|                 | <ul style="list-style-type: none"> <li>• Polarglaciers (cold based) are colder and do not reach pressure melting point at their base. Glacier movement is therefore reliant on internal deformation when individual ice crystals change shape in response to pressure (overlying ice) and position of crystals in relation to each other. The rate of glacier movement is therefore lower in Polar (cold based) glaciers.</li> <li>• However, the altitude of a glacier can be critical in determining the equilibrium point of a glacier where there is often the maximum rate of glacier flow.</li> <li>• The equilibrium point is where net accumulation becomes net ablation. By understanding the altitude of the equilibrium point, the rate of movement of the glacier can be understood.</li> <li>• Altitude can also impact on precipitation type and amount and so the rate of accumulation and so increase the mass balance of a glacier and so the rate of glacial movement.</li> <li>• Altitude and ice temperature are not the only factors affecting the rate of glacier movement. Changes in gradient can be important in understanding the rate of glacial movement. This is as a result of compressional and extensional flow - where it steepens, the rate of glacier movement increases and extensional flow occurs, where gradient reduces, the rate of glacier movement falls, and ice catches up with ice in front causing compressional flow.</li> <li>• In addition outlet glaciers that terminate in the sea, depending upon the assemblage, can also determine glacier flow.</li> <li>• Sub glacial Bed deformation is also a primary mechanism of movement: Glaciers move faster because they do not just slide over hard rock; they ride on top of soft, wet mud. When trapped meltwater fills this mud, it pushes the dirt grains apart and turns the ground into a slippery, moving conveyor belt. Because the ice and the mud push on each other, any increase in water from climate melting makes the mud even softer, causing the glacier to rapidly slide into the ocean.</li> </ul> <p><b>Accept other evaluations of the view that the basal temperature of the ice is the most important influence on the rate of glacial movement.</b></p> |

| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | <b>0</b>   | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                | <b>1–5</b> | <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          | Mark         | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 2</b> | <b>6–10</b>  | <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> |
| <b>Level 3</b> | <b>11–15</b> | <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>                       |
| <b>Level 4</b> | <b>16–20</b> | <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 | Indicative Content<br>Explain how land value contributes to the different Shoreline Management Policy decisions shown.                                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>3(a)</b>     | <p style="text-align: center;"><b>AO1 (3 marks/AO2 (3 marks))</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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> |

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|  | <p><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Shoreline Management Policy decisions (No Active Intervention, Strategic Realignment, Hold The Line, Advance The Line) are based on complex judgements</li> <li>• These include engineering feasibility, environmental sensitivity, land value, political and social reasons);</li> <li>• Cost Benefit Analysis (CBA) and Environmental Impact Assessment (EIA) are used as part of the decision-making process.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• The resource shows a variety of SMP decisions from No Active Intervention through to Hold The Line.</li> <li>• It is likely that the Hold The Line policy was adopted for the dense urban area using CBA whose primary concern was land value.</li> <li>• Furthermore, the No Active Intervention policy was also probably adopted due to the low value of agricultural land.</li> <li>• Yet there are other factors that have may have contributed to the SMP shown</li> <li>• Environmental sensitivity could have been a factor in the Strategic Realignment policy for the inter-tidal wetland whilst social reason (tourism) may have been a factor in the adoption of No Active Intervention for the sand dunes and hard defences may have been dangerous for younger children.</li> <li>• The cliffs may have very low rates of coastal recession and or are constantly slumping and so engineering feasibility may have been a factor here.</li> </ul> <p><b>Accept other explanations of how land value contributes to the different Shoreline Management Policy decisions shown.</b></p> |
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| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                  |
|                | <b>1–2</b> | <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> </ul> |
| <b>Level 2</b> | <b>3–4</b> | <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> </ul>                                |
| <b>Level 3</b> | <b>5–6</b> | <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> </ul>                                                |

| Question number | Indicative content<br>Explain how sediment transport and deposition contributes to the coastal landscape shown.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 3(b)            | <p style="text-align: center;"><b>AO1 (3 marks)/AO2(3marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Transportation and deposition processes produce distinctive coastal landforms</li> <li>• Beaches recurved and double spits, offshore bars, barrier beaches and bars, tombolos and cusped forelands can be stabilised by plant succession.</li> <li>• Sediment transportation is influenced by the angle of wave attack, the process of longshore drift, tides and currents.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• The resource shows a coastal landscape which has landforms of erosion and deposition.</li> <li>• Beaches are landforms where there is an accumulation of sediment which is reworked by the action of waves and tides. Constructive waves and gravity settling are key processes in the creation of beaches.</li> <li>• Spits are long, narrow ridges of sand and/or shingle that are attached to the land at one end known as the proximal end. The distal end is in the sea and often extends partly across an estuary. This end can be hooked and is likely to change its position over time. These are created through sediment transport caused by the process of longshore drift. They form due to the presence of a surplus of sediment combined with the process of longshore drift, the dominance of constructive waves and an appropriate coastal configuration – presence of an estuary or a change in direction of the coast.</li> <li>• Bars (baymouth bars) are formed where sediment transport caused by longshore drift elongates a spit from one side of the river channel to the other. This also creates a lagoon behind the bar such as at Lady's Island Lake, Ireland. Other bars are formed when rising sea levels associated with the end of the last ice age have pushed or over washed sediment landwards and so trapped a freshwater lagoon such as at Slapton sands.</li> <li>• Tombolos are features when a beach or bar connects two landmasses. They are formed when an offshore island refracts approaching waves so that there is then a convergence of two directions of sediment transport on the opposite side of the island creating a beach/bar that connects the island to the mainland such as St Ninian's Isle Tombolo.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>Accept that the resource shows headlands and bays – accept the explanation of wave refraction in influencing the development of these landforms.</li> </ul> <p><b>Accept other explanations of how sediment transport and deposition contributes to the coastal landscape shown.</b></p> |
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| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                                                                                                           |
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| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                                                                                                              |
|                | <b>1–2</b> | <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> </ul> |
| <b>Level 2</b> | <b>3–4</b> | <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> </ul>                                |
| <b>Level 3</b> | <b>5–6</b> | <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> </ul>                                                |

| Question number | Indicative content<br>Explain why coastal recession can cause significant social and economic losses.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>3(c)</b>     | <p style="text-align: center;"><b>AO1 (8 marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>Coastal recession is the result of marine erosion as well as subaerial processes.</li> <li>Some may view coastal recession as coastal flooding. This is acceptable.</li> <li>Social consequences of coastal recession range from the serious (loss of housing) to the more minor (loss of transport routes) leading to inconvenience.</li> <li>Severity of the losses will depend upon the rate of recession as well as the population density. Coastal recession on the Isle of Wight has led to the temporary closure of roads after the Bonchurch 2023 landslide as well as the permanent loss of transport infrastructure such as the closure of the Undercliff road. This has caused the re-</li> </ul> |

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|  | <p>routing of bus routes as well as the increased journey times of people moving west/east on the island/</p> <ul style="list-style-type: none"> <li>• Economic losses will also vary according to the land value that has been lost.</li> <li>• The 2023 Bonchurch landslide which caused housing loss has costs of repair and in extreme cases demolition. There have also been increased cost of insurance with allied stress and strain of uninsurable properties allied to difficulties in re-mortgaging.</li> <li>• The loss of Smugglers Haven café also reduced tourism and so reduced employment due to negative multipliers.</li> <li>• In other areas such as Cowden and Aldbrough on the Holderness coast there are also costs of repair and dislocation. Sediment starvation downdrift caused by hard defences at Mappleton have led to villages such as Cowden and Aldbrough suffering increased coastal retreat leading to the loss of settlements and agricultural land. Indeed the population of Aldbrough has fallen from 1336 in 2001 to 1269 as people have left the coastal area.</li> </ul> <p><b>Accept other explanations of why coastal recession can cause significant social and economic losses.</b></p> |
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| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                          |
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| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                             |
|                | <b>1–2</b> | <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>• Understanding addresses a narrow range of geographical ideas, which lack detail. (AO1)</li> </ul>              |
| <b>Level 2</b> | <b>3–5</b> | <ul style="list-style-type: none"> <li>• Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>• Understanding addresses a range of geographical ideas, which are not fully detailed and/or developed. (AO1)</li> </ul> |
| <b>Level 3</b> | <b>6–8</b> | <ul style="list-style-type: none"> <li>• Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>• Understanding addresses a broad range of geographical ideas, which are detailed and fully developed. (AO1)</li> </ul>                             |

| Question number | Indicative content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                 | <b>Evaluate the view that geology is the most important influence on the development of erosional coastal landscapes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>3(d)</b>     | <p><b>Marking instructions</b></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. Responses that demonstrate <b>only</b> 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><b>Indicative content guidance</b></p> |

| Question number | Indicative content<br><b>Evaluate the view that geology is the most important influence on the development of erosional coastal landscapes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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|                 | <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><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Marine erosion creates distinctive coastal landforms and contributes to coastal landscapes.</li> <li>• Geological structure is responsible for the formation of concordant and discordant coasts.</li> <li>• Geological structure influences coastal morphology: Dalmatian and Haff type concordant coasts and headlands and bays on discordant coasts. Geological structure (bedding planes, jointing, dip, faulting, folding) is an important influence on coastal morphology and erosion rates, and also on the formation of cliff profiles and the occurrence of micro-features, e.g. caves</li> <li>• Differential erosion of alternating strata in cliffs (permeable/impermeable, resistant/less resistant) produces complex cliff profiles.</li> </ul> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• A landscape is considered to be a range of features/landforms in a place.</li> <li>• Geological factors can refer to both lithology as well as geological structure.</li> <li>• Lithology can be thought of as the rock type (metamorphic, igneous, sedimentary and unconsolidated) and may play a crucial role in the development of landforms particularly with regards to cliff form and profile.</li> <li>• Geological structure can be thought of in terms of macro rock structure (concordant/discordant) as well as micro (bedding planes, jointing, dip, faulting, and folding) and also may play a significant role in the development of erosional landforms.</li> <li>• Yet these erosional landscapes are also developed by the marine process of erosion. Expect explanations of how hydraulic action, corrosion, abrasion and attrition also have a key influence in the development of erosional landforms.</li> <li>• Reward those candidates who explicitly link the processes of marine erosion to geological factors when examining the development of erosional factors.</li> <li>• Wave type (destructive/constructive) as well as wave refraction are also likely to be discussed particularly in the creation of bays and headlands.</li> <li>• Yet subaerial processes of weathering and mass movement will also be important factors in the development of erosional landforms.</li> <li>• Reward those candidates who explicitly link subaerial processes of weathering and mass movement to geological factors when examining the development of erosional factors.</li> <li>• Accept sea level change will also have a part to play in the development of erosional landforms.</li> <li>• Accept the role of management in contributing to the development of erosional coastal landscapes. It is conceivable that terminal groyne syndrome will lead to sediment starvation and so increase rotational</li> </ul> |

| Question number | Indicative content<br><b>Evaluate the view that geology is the most important influence on the development of erosional coastal landscapes.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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|                 | <p>slumping downdrift leading to the formation of a terraces and rotational scars.</p> <ul style="list-style-type: none"> <li>• Expect explanations of bays and headlands as well as coves.</li> <li>• Expect explanations of wave cut platforms and cliff profiles.</li> <li>• Expect explanations of the cave/arch/stack/stump formation.</li> <li>• Reward those candidates who distinguish between landscapes and individual landforms</li> </ul> <p><b>Accept other evaluations of the view that geology is the most important influence on the development of erosional coastal landscapes.</b></p> |

| Level          | Mark        | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Level 1</b> | <b>0</b>    | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                | <b>1–5</b>  | <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> |
| <b>Level 2</b> | <b>6–10</b> | <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          | Mark         | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Level 3</b> | <b>11–15</b> | <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> <p>Demonstrates accurate and relevant geographical</p> |
| <b>Level 4</b> | <b>16–20</b> | <ul style="list-style-type: none"> <li>• 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 | Indicative content<br>Explain <b>one</b> reason for the projected change in water use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Mark       |
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| <b>4(a)</b>     | <p align="center"><b>AO1 – 2 marks/AO2 – 1 mark</b></p> <p>Award <b>1 AO2 mark</b> for analysing the resource to identify one possible reason and a further <b>2 AO1 marks</b> expansion up to a maximum of 3 marks to explain the predicted changes in water use. For example:</p> <p>The predicted change in water use in manufacturing from 250 to 1250 cubic km (1) is as a result of the increase of developing countries (1) who are using water in processes such as the dyeing of textiles (1).</p> <p>The predicted change in domestic water use from 460 to 750 cubic km (1) is as a result of the predicted increase in the world's population (1) as there will be greater demands for domestic water supplies such as in washing machines (1).</p> <p>Accept that the AO2 mark does not need to quote data from the resource – give 1 mark if the candidate has analysed the resource and stated that water use has increased.</p> <p><b>Accept other explanations for the projected change in water use.</b></p> | <b>(3)</b> |

| Question number<br>4(b) | Indicative content<br>Explain why river flooding has impacts on soils and ecosystems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|                         | <p style="text-align: center;"><b>AO1 (6marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>Flooding will inevitably saturate soils on the floodplain. This can lead to environmental damage as soil is washed away into the river. As soil takes thousands of years to form the loss of soil inevitably impacts upon the ecosystem that has developed upon it often leading to the destruction of the ecosystem and the loss of biodiversity.<br/>In addition, the continual waterlogging of soil reduces soil biota which are crucial for the health of the soil and so ultimately the health of the ecosystem. As a result productivity of the ecosystem is reduced after a flood leading to a reduction in the complexity of the food web and so a reduction in biodiversity.</li> <li>Flood events also have a number of negative impacts on freshwater ecosystems. Floods increase surface run-off, exacerbating erosion and introducing more soil, organic matter and pollutants into water courses, whilst erosion within the river channel is also increased. Plant biomass and the abundance of both vertebrates – such as fish – and invertebrates can be dramatically reduced by extreme floods. For example, populations of the freshwater pearl mussel – an endangered species found in the north of the UK – can be significantly affected by extreme floods, which remove mussels from riverbeds and increase riverine pollution<br/>In addition, flooding may force ecosystems over a threshold beyond which a different, simpler community of species forms. This is as a result of flooding removing ecological niches and so reducing biodiversity in flood hit ecosystems.</li> <li>Candidates may explain the positive aspects of flooding on soils and ecosystems explaining how alluvium improves soil quality and so helps develop ecosystems.</li> </ul> <p><b>Accept other explanations of why river flooding has impacts on soils and ecosystems.</b></p> |

| Level          | Mark       | Descriptor                                                                                                                                                                         |
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| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                            |
|                | <b>1–2</b> | <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> </ul> |

| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                      |
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|                |            | <ul style="list-style-type: none"> <li>Understanding addresses a narrow range of geographical ideas, which lack detail. (AO1)</li> </ul>                                                                                                                                                        |
| <b>Level 2</b> | <b>3–4</b> | <ul style="list-style-type: none"> <li>Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>Understanding addresses a range of geographical ideas, which are not fully detailed and/or developed. (AO1)</li> </ul> |
| <b>Level 3</b> | <b>5–6</b> | <ul style="list-style-type: none"> <li>Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>Understanding addresses a broad range of geographical ideas, which are detailed and fully developed. (AO1)</li> </ul>                             |

| Question number | Indicative content<br>Explain why human actions disrupt the flows of the drainage basincycle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>4(c)</b>     | <p style="text-align: center;"><b>AO1 (8 marks)</b></p> <p><b>Marking instructions</b><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><b>Indicative content guidance</b></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><b>AO1</b></p> <ul style="list-style-type: none"> <li>Human activity can disrupt the flows of the drainage basin cycle both intentionally and unintentionally.</li> <li>The emphasis of the question is on <b>why</b> human actions disrupt the <b>flows</b> of the drainage basin cycle but credit those responses which focus on <b>how</b>.</li> <li>The need for arable land leading to deforestation. Deforestation unintentionally disrupts the flows of the drainage basin cycle by accelerating surface runoff because there is no longer any interception so all the rain hits the ground exceeding the infiltration rate and so accelerates the rate of surface runoff. There is also less evapotranspiration and less stem flow/leaf drip and throughfall.</li> <li>Increases in population leads to urbanisation on greenfield sites to provide housing or infrastructure which unintentionally disrupts the flows of the drainage basin cycle as there is an increase in the number of impermeable surfaces. When there is heavy rain, the rain cannot infiltrate into the impermeable roofs and pavements. This causes more surface runoff. There is also less vegetation and so less interception and so more surface runoff is created. There is also less evapotranspiration from vegetation and less evaporation from soil.</li> <li>Reducing the risk of flooding through channelisation intentionally disrupts the flows of the drainage basin cycle as river flow is increased and so reduces the size of the flood peak discharge.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>Supplying water through the development of reservoirs can also intentionally disrupt the flows of the drainage basin cycle as river discharge is regulated and losses from evaporation increased.</li> </ul> <p><b>Accept other explanations why human actions disrupt the flows of the drainage basin cycle.</b></p> |
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| Level          | Mark       | Descriptor                                                                                                                                                                                                                                                                                      |
|----------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Level 1</b> | 0          | No rewardable material.                                                                                                                                                                                                                                                                         |
|                | <b>1–2</b> | <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>Understanding addresses a narrow range of geographical ideas, which lack detail. (AO1)</li> </ul>              |
| <b>Level 2</b> | <b>3–5</b> | <ul style="list-style-type: none"> <li>Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1)</li> <li>Understanding addresses a range of geographical ideas, which are not fully detailed and/or developed. (AO1)</li> </ul> |
| <b>Level 3</b> | <b>6–8</b> | <ul style="list-style-type: none"> <li>Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1)</li> <li>Understanding addresses a broad range of geographical ideas, which are detailed and fully developed. (AO1)</li> </ul>                             |

| Question number | Indicative content<br><b>Assess the reasons why the future concentration of atmospheric carbon dioxide is uncertain.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>4(d)</b>     | <p style="text-align: center;"><b>AO1 (3 marks)/AO2 (9 marks)</b></p> <p><b>Marking instructions</b><br/>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 <b>only</b> 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> </ul> <p><b>Indicative content guidance</b><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><b>AO1</b></p> <ul style="list-style-type: none"> <li>The process of fossil fuel combustion has altered the balance of carbon pathways and stores</li> <li>Future emissions and atmospheric concentration levels are uncertain owing to natural factors (the role of carbon sinks), human factors (economic growth, population, energy sources)</li> <li>Positive feedback mechanisms (carbon release from peatlands and permafrost and tipping points, including forest die back and alterations to the thermohaline circulation).</li> </ul> |

| Question number | Indicative content<br>Assess the reasons why the future concentration of atmospheric carbon dioxide is uncertain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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|                 | <p><b>A02</b></p> <ul style="list-style-type: none"> <li>• The resource shows that there are three possible scenarios low, medium and high.</li> <li>• Candidates do not need to have both physical and human reasons, nor assess all the three scenarios.</li> <li>• The key reason why there are uncertainties is that we do not know how much natural carbon sinks such as the ocean and the land will be able to absorb this extra CO<sub>2</sub>. The more that these sinks can absorb, the lower the future concentrations. Furthermore oceans absorb CO<sub>2</sub> through diffusion and through the uptake of CO<sub>2</sub> by biota in the oceans. There are considerable uncertainties over how these processes will react to increased concentrations of CO<sub>2</sub> in the atmosphere.</li> <li>• Permafrost covers some 25% of the exposed land cover in the Northern Hemisphere and contains 1672Gtc of carbon which is not usually considered in carbon cycle models. Yet there are a variety of reasons for uncertainties over future releases of this carbon</li> <li>• There is an uncertainty over how much the permafrost has warmed with estimates varying between 0.5C and 2C as a result of differences in study regions giving different estimates. As a result estimates of addition to the carbon cycle vary. There are also uncertainties over future changes with estimates varying from 2.8C to 7.8C mainly as a result of the uncertainties of the rate of industrialisation in HMHD. The greater and quicker that they industrialise the greater the level of CO<sub>2</sub> and so the greater the changes to the carbon cycle in permafrost areas.</li> <li>• In contrast the burning, draining, and degrading of peatlands emits more than one tenth of the global emissions released from burning fossil fuels. There are uncertainties over the future rate of such activities particularly in Southeast Asia which account for 67% of all emissions from peatlands and so future concentrations of CO<sub>2</sub>.</li> <li>• There are also uncertainties over the rate of restoration of peatlands which will reduce carbon emissions from these sources. Degraded peatlands can be restored the equivalent of one tenth of the global emissions from fossil fuels could be Crucially it is uncertain the extent to which the drainage of peatlands will be reduced and so future concentrations of CO<sub>2</sub>.</li> <li>• There are also human factors.</li> <li>• We don't know how fast NIC's will industrialise. The greater and quicker that they industrialise the greater the level of CO<sub>2</sub>.</li> <li>• If there is to be a continued rise in population this means that there will be a continued increase in emissions and so the greater the future concentrations of CO<sub>2</sub>.</li> <li>• We don't know the extent to which global treaties such as the Paris agreement will reduce emissions. If the developed countries of the world adopt clean technology such as renewables, this will limit the increase of CO<sub>2</sub> and so reduce emissions. It will also depend upon whether we implement as countries such as the USA may pull out of the agreement and whether India and China maintain their present use of fossil fuels and particularly their mix – China uses a lot of coal the most pollutive of the fossil fuels.</li> <li>• Yet there is also the issue of forest dieback particularly in Amazonia. This is because it is thought as temperatures rise, there will be greater evaporative losses from the soil and so trees in Amazonia</li> </ul> |

| Question number | Indicative content<br><b>Assess the reasons why the future concentration of atmospheric carbon dioxide is uncertain.</b>                                                                                                                                                                                                                                                         |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <p>will die. This further increases evaporative losses from the soils leading to further forest dieback. As a result there are predictions that up to 50% of Amazonia may be lost by 2100 increasing future concentrations of CO<sub>2</sub>.</p> <p><b>Accept other assessments of the reasons why the future concentration of atmospheric carbon dioxide is uncertain.</b></p> |

| Level          | Mark        | Descriptor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Level 1</b> | 0           | No rewardable material.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                | <b>1–4</b>  | <ul style="list-style-type: none"> <li>• Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate. (AO1)</li> <li>• Applies knowledge and understanding to geographical information/ideas, making limited logical connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce an interpretation that is not relevant and/or supported by evidence. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce an unbalanced argument that lacks coherence and makes judgements that are generic and/or unsupported by evidence. (AO2)</li> </ul>                                     |
| <b>Level 2</b> | <b>5–8</b>  | <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/ideas logically, making some relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce a partial but coherent interpretation that is mostly relevant and supported by evidence. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce an unbalanced, partially-supported argument that is drawn together with some coherence in order to make judgements. (AO2)</li> </ul> |
| <b>Level 3</b> | <b>9–12</b> | <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/ideas logically, making relevant connections/relationships. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce a full and coherent interpretation that is relevant and supported by evidence. (AO2)</li> <li>• Applies knowledge and understanding to geographical information/ideas to produce a balanced, fully-supported argument that is drawn together coherently in order to make rational judgements. (AO2)</li> </ul>                                                  |

| Question number<br>4(e) | Indicative content<br>Evaluate the view that for most countries achieving energy security is difficult.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Mark |
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|                         | <p><b>Indicative content</b><br/><b>AO1 (5 marks)/AO2 (15 marks)</b></p> <p><b>Marking instructions</b><br/>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.<br/>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><b>AO1</b></p> <ul style="list-style-type: none"> <li>• Consumption (per capita and in terms of units of GDP) and energy mix (domestic and foreign, primary and secondary energy, renewable versus non-renewable).</li> <li>• Access to and consumption of energy resources depends on physical availability, cost, technology, public perception, level of economic development and environmental priorities.</li> <li>• Energy pathways (pipelines, transmission lines, shipping routes, road and rail) are a key aspect of security but can be prone to disruption especially as conventional fossil fuel sources deplete</li> <li>• The development of unconventional fossil fuel energy resources (tar sands, oil shale, shale gas, deep water oil) has social costs and benefits, implications for the carbon cycle, and consequences for the resilience of fragile environments.</li> <li>• Renewable and recyclable energy (nuclear power, wind power and solar power) could help decouple fossil fuel from economic growth; these energy sources have costs and benefits economically, socially, and environmentally and in terms of their contribution they can make to energy security.</li> </ul> <p><b>AO2</b></p> |      |

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|  | <ul style="list-style-type: none"> <li>• Energy security can be defined as a consideration of both the resource availability (domestic and foreign) as well as the security of this supply within a country coupled with the energy demand both in the present and in the future. It is essentially balancing the supply of energy in a country with the demand in a country now and in the future.</li> <li>• It is likely that in the near future countries with substantial reserves of fossil fuels such as Saudi Arabia and Canada will continue to be energy secure but both countries realise the difficulties on relying on fossil fuels. As a result they are both developing renewables and attempts to decarbonise their economies. Therefore these countries may not find achieving energy security difficult</li> <li>• Yet some countries have their energy security based on renewable resources such as Norway and Iceland and so are also likely to be able to achieve energy security.</li> <li>• However, countries with rapidly increasing demands are likely to find achieving energy security difficult, particularly those that rely on fossil fuels such as China, Brazil and India. Although these countries have substantial resources of fossil fuel energy resources, as they continue to pursue economic development whilst relying on fossil fuels, they will inevitably need to increase their renewable resources as their supply of finite resources dwindle.</li> <li>• Furthermore many countries are seeking to improve energy security by developing domestic renewable resources. In some countries such as the UK recent changes in the emphasis of becoming net zero have increased their development of renewable resources such as wind power. Yet such resources can be unreliable and fossil fuels will continue to be needed in times when wind power cannot meet all of the demands for energy, leading to difficult choices for the UK if it is to be energy secure.</li> <li>• Other HIC countries such as Germany and France without substantial reserves of fossil fuels will also find it increasingly difficult to be energy secure as they are reliant on foreign suppliers to fill the gap between domestically produced energy and domestic demand. The threats to energy security shown by the issues of relying on Russia energy and latterly on energy from the US highlight that those countries are increasingly finding achieving energy security difficult.</li> <li>• Yet many LIC cannot afford the infrastructure needed to develop renewables nor be able to pay to import fossil fuels and are so reliant on biomass. As their populations grow and their energy demands increase these countries will become increasingly energy insecure.</li> </ul> <p><b>Accept other evaluations of the view that for most countries achieving energy security is difficult.</b></p> | (20) |
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| 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 information/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 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 | 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 information/ideas 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 information/ideas 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>                 |