



Exam Practice: Answers
Theme 1

Page 10

1 Outline the human and physical features of a distinctive landscape that you have studied. [4]

<i>This box contains the rationale: it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response</i>	<i>This box contains the candidate's expected responses for point-based marking. For some sub-questions, such as those with a closed question, this box will indicate the only response that is acceptable. For more open-ended sub-questions, this box will illustrate a number of likely responses that are creditworthy. It may be that this list will be extended at the examiners' conference after actual scripts have been read. For banded mark schemes this box contains indicative content</i>
---	--

Rationale	Expected answers
To gain full marks, both physical and human features must be given 1 mark awarded for each feature given	The answers given will depend on the landscape being described. Expect answers to include description of geology, vegetation, land use and people and culture

The distinctive landscape that I have studied is Snowdonia. The landforms of this area are the result of glaciers and as such there are many U-shaped valleys, arêtes and corries. The vegetation is characterised by large areas of deciduous forests and planted coniferous trees. Tourism is one of the main industries in the area today, although slate mining was a previous dominant industry. The Welsh language is widely spoken in this area. [4]

2 What are honeypot sites and how can they help to protect distinctive landscapes? [4]

Rationale	Expected answers
Award 1 mark for the correct definition and 3 marks for how they help protect distinctive landscapes	A place of special interest that attracts tourists [1] Tourists cluster in one place, allowing other areas to be conserved [1] Less trampling in other locations [1] Increase in income to local area providing funding for conservation [1]

Honeypot sites are areas within a landscape that attract a lot of people to visit. This may be for either human factors (for example, historic buildings) or physical factors (for example, waterfalls). If tourists are attracted to one area this means that the damage they will cause to the landscape will be focused in one area. Therefore, although that area may become eroded for example, it means that other areas are able to be conserved and protected. It's like a sacrifice of one area so that other parts of that distinctive landscape will survive.

Tourism will bring money to the local area which may be used to protect and repair parts of the landscape. [4]



3 For a distinctive landscape that you have studied, discuss whether the impacts of human activity are largely positive or negative. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed understanding of the impacts of human activity on the landscape. Consideration given to both positive and negative impacts with a discussion and exemplification being evident</p> <p>Band 3 (5–6 marks): Detailed understanding of the human impacts within the distinctive landscape. The answer is unbalanced and exemplification limited</p> <p>Band 2 (3–4 marks): Understanding of impact of human activity on landscapes and reference to them being positive or negative</p> <p>Band 1 (1–2 marks): Basic understanding of some impacts of human activity on landscapes</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The answers will depend on the landscape being used</p> <p>There must be an element of discussion to gain Band 4 along with a balance of positive and negative impacts</p>

There are many impacts of human activity on the Snowdonia landscape. With the area being popular with tourists, this brings a large amount of income to the local economy which will benefit local people with jobs. However, tourists will also bring negative impacts such as footpath erosion and litter. The slate industry previously brought a high income to this area but since the majority of the slate mines have now closed they have left scars on the landscape with large areas of waste material piled up near the mines. However, sometimes these quarries have been used effectively, for example Dinorwig HEP station in Llanberis, north Wales was placed inside a disused slate mine. In this way, the HEP station does not cause a visual pollution in Snowdonia National Park because all of the ‘equipment and workings’ of the power station are inside the mountain. I, therefore, think that although human activity has altered the natural landscape in many ways, some of which are negative, on balance the effect is positive as people realise that they depend on the landscape for their income so limiting any destruction will be beneficial to them. [8]

Page 11

For a distinctive landscape that you have studied:

1 Identify how that landscape has become damaged due to visitors. [2]

Rationale	Expected answers
<p>Award 1 mark for each type of damage given to a maximum of 2 marks</p>	<p>The answer given will depend on the distinctive landscape being described. The types of answers given may include: footpath erosion [1], erosion of landscape [1], air pollution may kill some types of vegetation [1], litter [1]</p>

The distinctive landscape that I have studied is the Brecon Beacons National Park. Many visitors come to this landscape to walk the mountains and therefore there is often footpath erosion or a wearing away of the vegetation due to the frequent trampling by hikers. Visitors will often have a picnic while in the mountains and therefore sometimes they can leave litter which is a visual pollution on the landscape or can be harmful to wildlife. [2]



2 Explain why this damage has occurred due to increased visitor numbers. [4]

Rationale	Expected answers
Award marks for either one or two developed reasons. Do not award mark for 'increased visitor numbers'	<p>This answer will depend upon the answer to Q1. However, the types of answers that may be seen are:</p> <ul style="list-style-type: none"> Increased visitor numbers ... lead to a greater use of footpaths [1], which leads to more frequent trampling of vegetation [1], which leads to the vegetation dying [1], which leaves the footpath more vulnerable to erosion [1] Increased visitor numbers ... lead to a high amount of traffic [1], more air pollution [1], which may kill more sensitive species [1] and reduces biodiversity [1]

The more tourists that visit a place, the more likely it is that damage will take place. For example, in the Brecon Beacons, the more hikers that climb the mountains then the more the footpath will become eroded due to trampling and therefore the vegetation will be worn away more quickly and will find it more difficult to regrow. This will leave the footpath vulnerable to further erosion as there is less vegetation to protect it. [4]

3 Describe ways in which the landscape has been repaired. [4]

Rationale	Expected answers
Award 2 marks each for two creditworthy responses which are adequately described	<p>The answer given will depend on the distinctive landscape being described. The types of answers given may include:</p> <p>Repair of footpaths [1] leads to a more hard-wearing surface [1]</p> <p>Clearly marked car parks [1], which reduce parking on grass verges [1]</p>

The footpaths in the Brecon Beacons have been repaired by flying in large rocks by helicopter to build up the footpaths. This then makes them more resistant to further erosion. Also, some areas of the National Park have been fenced off to prevent visitors walking on them and therefore the vegetation is given time to regrow and re-establish. [4]

Page 14

Explain two different ways that waterfalls can form in Wales. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Detailed explanation of two ways in which waterfalls have been formed in Wales</p> <p>Band 2 (3–4 marks): Explanation of two ways in which waterfalls are formed but imbalanced. Or a good explanation of one method but the other method is absent</p> <p>Band 1 (1–2 marks): Basic reference to how waterfalls are formed</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates are expected to make reference to erosional processes within a drainage basin creating waterfalls due to hard and soft rock</p> <p>Candidates are also expected to refer to hanging valleys created due to glaciation where waterfalls are now present</p> <p>Band 3 answers would expect to see reference to the processes involved</p>



Waterfalls usually form due to geology. When a river crosses onto soft rock it is able to erode this more quickly than the hard rock that it had previously been flowing across. As a result, a step forms. This drop gets bigger and bigger as the soft rock is eroded by hydraulic action and abrasion. The soft rock under the waterfall gets further eroded and eventually the hard rock that the water is flowing over becomes an overhang and collapses. The waterfall then retreats upstream.

Waterfalls have also formed in Wales due to glaciation. Much of the Welsh landscape has been changed by glaciation. Large glaciers often have smaller ones flowing into them. The smaller tributary glaciers do not have the power to erode as deeply as the main glacier, and therefore the valley is often at a higher level than the main valley. As such, once the ice has melted, a river flowing down the tributary valley will 'fall' into the main valley due to the difference in height. [6]

Page 15

1 Give two factors that influence which method of transportation a river's bed load is moved by. [2]

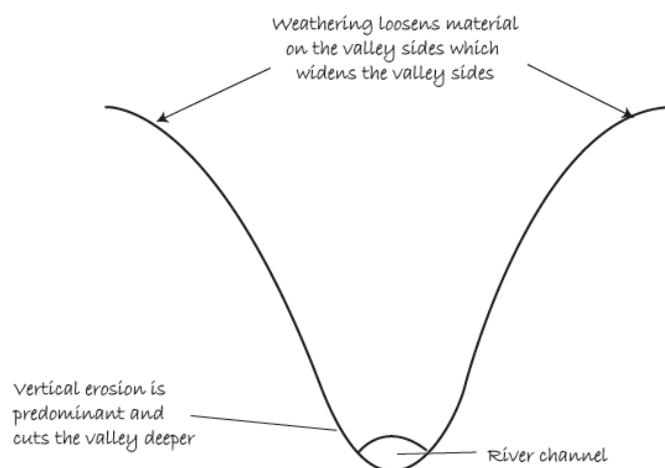
Rationale	Expected answers
Award 1 mark for each creditworthy response, up to the value of 2 marks	Speed of flow/velocity [1] Size of the material being moved [1]

Two factors that influence what type of transportation a river moves its material by are how fast the river is flowing and the size of the material being moved. [2]

2 Describe the formation of a V-shaped valley. Use a diagram to help your answer. [4]

Rationale	Expected answers
<p>Band 2 (3–4 marks): A detailed description of the formation of a V-shaped valley which includes reference to the processes involved. An appropriately annotated diagram will be present</p> <p>Band 1 (1–2 marks): Basic description of the formation of a V-shaped valley. Little reference to processes. A diagram will be basic or absent</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The description should include reference to vertical erosion in the upper course cutting deeper into the landscape. Weathering processes occurring on the valley sides which open out the slopes creating a V shape</p> <p>A diagram must be included to gain Band 2</p>

A V-shaped valley is found in the upper course of a river. As the small stream flows down the steep landscape, the erosional processes are usually in the form of vertical erosion rather than horizontal erosion. This, therefore, leads to a deepening of the river channel on the landscape. The processes of hydraulic action, abrasion and solution cause this vertical erosion. The river has vertical sides at this point. Weathering processes such as freeze–thaw action erode the valley sides and so the valley becomes V-shaped. [4]





3 'Erosional processes are the most important factor in the formation of river landforms.' To what extent do you agree with this statement? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of erosional processes and how they contribute to river landform formation. Good consideration of other factors and extent</p> <p>Band 3 (5–6 marks): Detailed knowledge of erosional processes and how they contribute to river landform formation. Some consideration of other factors or extent</p> <p>Band 2 (3–4 marks): Knowledge of erosional processes and how they contribute to river landform formation. Lack of consideration of other factors involved or extent</p> <p>Band 1 (1–2 marks): Basic knowledge of erosional processes involved in river landform formation</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates would be expected to describe the influence that processes such as abrasion, hydraulic action and solution have on the formation of river landforms such as waterfalls, V-shaped valleys, meanders and so on</p> <p>At the higher bands, candidates should balance this discussion with a consideration of how erosional processes influence landforms compared to other factors such as geology, human influence, climate and so on. A consideration of 'extent' must be present to reach Band 4</p>

Erosional processes play an important role in the formation of many river landforms such as waterfalls, V-shaped valleys and meanders. Processes such as hydraulic action, abrasion and solution erode the river channel into distinctive features. However, there are other factors that are also important in the formation of some river landforms. For example, meanders are formed not only by erosion but also by deposition (erosion on the outside bank and deposition on the inside bank). Therefore, both processes are vital to the formation of meanders. Waterfalls would also not form unless the geology is favourable – they need hard and soft rock to be next to each other so that different rates of erosion can occur. Overall, I think that erosional processes have a large part to play in the formation of river landforms, but there are often other factors that are needed as well such as geology, weathering or deposition. [8]

Page 20

For a located coastal environment in the UK, explain the processes that have created the landforms specific to that environment. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Detailed explanation of processes that create coastal landforms. Clear links are made between the process and how this results in the landform seen</p> <p>Band 2 (3–4 marks): Explanation of processes and how they relate to coastal landforms. Some links are evident between the process and landform</p> <p>Band 1 (1–2 marks): Basic explanation of processes at the coastline with a basic link to landforms</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates are expected to explain how coastal processes such as hydraulic action, abrasion, longshore drift and deposition contribute to the formation of landforms such as sea arches, caves, sand dunes, spits and so on</p> <p>Credit can also be given to other processes found at the coastline such as weathering. However, full marks can be awarded without the mention of these</p>

I have studied the Vale of Glamorgan coastline in south Wales, specifically Llantwit Major beach. This beach is characterised by cliffs and a wave-cut platform. A wave-cut platform is formed when a cliff is eroded. The power of the waves crashing into the cliff (hydraulic action), together with the pebbles being thrown at the base of the cliff (abrasion), create a wave-cut notch at the base of the cliff. As this process continues, the cliff above becomes unstable and collapses, moving the cliff line further inland.



The material from the cliff will then be moved by the sea and when this happens abrasion will smooth the surface of the wave-cut platform left behind, creating a wave-cut platform. [6]

Page 23

1 Compare the influence of two different types of geological structures on the shape of coastlines. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of two types of geology and how they impact on the coastline. Comparison is clear</p> <p>Band 3 (5–6 marks): Detailed knowledge of two types of geology and how they impact on the coastline. Comparison is weak or implied</p> <p>Band 2 (3–4 marks): Knowledge of two types of geology and how they impact on the coastline. Comparison may be implicit rather than explicit</p> <p>Band 1 (1–2 marks): Basic knowledge of how geology affects coastlines. No comparison evident.</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates may refer to different types of rock material, rock structure, concordant and discordant coastlines</p> <p>For Band 4, there should be a clear link between how the geology influences the landforms that occur with a clear comparison</p>

The two different geological conditions that I am going to look at are a discordant coastline and a concordant coastline. A discordant coastline is when layers of different types of rock are at right angles to the sea. This, therefore, means that the different types of rock are exposed to erosion by the sea. If the rock types erode at different rates, for example shale and limestone, then a series of bays and headlands will be created which reflect the different erosion rates. Whereas on a concordant coastline, the different types of rock are laid down parallel to the sea and therefore it will only be the outer rock type that gets eroded by the sea. As this will erode at the same rate then it is more likely that headlands and bays will not occur. [7]

2 Explain why climate influences the rate of erosion in river landscapes. [4]

Rationale	Expected answers
<p>Award up to 3 marks for each valid point. To gain full marks both temperature and rainfall should be referred to</p>	<p>Increased rainfall [1] will increase the amount of water in the channel [1], which will therefore increase erosion [1]</p> <p>Increased temperature [1] increases the evaporation rate so less water in the channel [1], which will therefore decrease erosion [1]</p> <p>Accept the converse of either of the above</p>

The heavier the bursts of rainfall in a drainage basin then the more quickly the water will get into the river, causing a larger discharge. In conditions such as these, more erosion will occur as there is more water and energy in the river. On the other hand, if the temperature is high then more evaporation will take place from within both the drainage basin and the river which will reduce the amount of water in the channel, and therefore reduce the rate of erosion. [4]



3 'Human intervention at the coastline will always have unintended consequences.' To what extent do you agree with this statement? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of the unintended consequences of human intervention at the coastline. Good consideration of extent</p> <p>Band 3 (5–6 marks): Detailed knowledge of impacts of people on the coastline which are unintended. Does not address the issue of extent</p> <p>Band 2 (3–4 marks): Knowledge of the impacts of people at the coastline, both intended and unintended</p> <p>Band 1 (1–2 marks): Basic knowledge of the impacts of people at the coastline, both intended and unintended</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates are expected to discuss the following issues in their responses:</p> <ul style="list-style-type: none"> coastal erosion due to management techniques at other locations dune erosion due to trampling <p>To reach Band 4, the candidate should consider the issue of extent as asked by the question</p>

People have a great impact on the coastline. Sometimes this is intended, such as a sea wall, but this can also be unintended where protection along one area of the coastline causes erosion in other areas. For example, if groynes are put along a beach to stop longshore drift then this will have the effect of keeping the sand on that beach and preventing the removal of sand off that beach. However, further along the coastline where this sand would previously have been moved to, this area would now have reduced sand and therefore be more vulnerable to erosion of the cliffs, for example. This may also happen when a sea wall is built as this will prevent erosion from happening and therefore again reduce the amount of sediment that is available further down the coastline. I would, therefore, agree with this statement as whenever people interfere in any natural process there are always knock-on effects in other areas. [8]

Page 25

1 Name two stores and two flows in a drainage basin. [4]

Rationale	Expected answers
<p>Award 1 mark for up to two correctly identified stores and two further marks for two correctly identified flows</p>	<p>Stores: lake/pond/surface storage [1], vegetation [1], groundwater store [1], soil store [1], sea/ocean [1]</p> <p>Flow: evaporation [1], transpiration [1], channel flow [1], throughflow [1], groundwater flow [1]</p>

Two stores in the drainage basin are soil store and surface storage, whereas two types of flow are overland flow and evaporation. [4]



2 Explain the impact on the rest of the drainage basin system of cutting down a large area of trees. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Detailed knowledge of how deforestation impacts on the movement of water in a drainage basin</p> <p>Band 2 (3–4 marks): Knowledge of how deforestation impacts on water movement in a drainage basin</p> <p>Band 1 (1–2 marks): Basic knowledge of impacts – vague link between lack of trees and more water in river channel</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will be expected to explain how interception, infiltration, percolation and uptake of water are reduced when trees are removed from a drainage basin</p> <p>At Band 3, there should be some explanation of processes together with how these impact on the river</p>

Any changes that take place within a drainage basin will have an impact on the movement of water through the basin to the river channel. Trees have a big impact on water movement. When it rains, large trees will intercept the rainfall and therefore this leads to leaf surface storage and stem flow. This has the effect of slowing down the movement of water to the channel, and therefore reduces the peak discharge. Trees will also suck up water from the soil and therefore again reduce the amount of water in the system. If trees were chopped down then all of these features would be removed. The rainfall would have more erosive power on the soil, more overland flow and therefore a shorter lag time and a higher peak discharge in the river. [6]

Page 26

1 List three factors which may affect flooding in the UK. [3]

Rationale	Expected answers
<p>Award 1 mark for each creditworthy factor given up to a maximum of 3 marks</p>	<p>Land use [1], vegetation cover [1], drainage basin size [1], urbanisation [1], climate [1], geology [1]</p>

Three factors that affect flooding in the UK are precipitation type, type of vegetation and human use of the drainage basin. [3]

2 Describe how porous rocks will influence the shape of a hydrograph. [4]

Rationale	Expected answers
<p>Award 1 mark for each valid statement given</p>	<p>Porous rocks will allow for more percolation [1] Less water will be in the river channel [1] Hydrograph will have a longer lag time [1] A low peak discharge [1]</p>

Porous rocks have more ‘holes’ within the rock and therefore are able to hold water. When it rains in a drainage basin with porous rocks, water is absorbed into the rocks and so less water gets into the river. This makes the lag time longer as it takes longer for the water to move through the ground to get into the channel, and also the peak discharge lower and there is a more varied period of time that it takes for the water to reach the channel. [4]



3 'Urbanisation is the most important factor in causing flooding in the UK today.' To what extent do you think this is true? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of how urbanisation causes flooding. Consideration is also given to other causes and good consideration of extent</p> <p>Band 3 (5–6 marks): Detailed knowledge of how urbanisation causes flooding. Some consideration is also given to other causes. Does not address the issue of extent</p> <p>Band 2 (3–4 marks): Some knowledge of how urbanisation causes flooding. Full explanation will not be given</p> <p>Band 1 (1–2 marks): Basic knowledge of how urbanisation causes flooding. Lacks named processes</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will be expected to talk about the process of infiltration and how this is reduced when urbanisation takes place due to the increase in impermeable surfaces. A link to how a lack of infiltration is likely to cause a flood is also needed</p> <p>Higher band candidates will also discuss how important other factors such as deforestation, drainage basin size and so on are, and at Band 4 consideration of extent will be given</p>

Urbanisation is the growth of towns and cities. This involves covering unbuilt land with tarmac or concrete – impermeable surfaces. These surfaces will not allow infiltration and therefore this results in more surface water storage and overland flow. This, in turn, means that the lag time will be shorter, the peak flow higher and the risk of flooding increased. As more urbanisation occurs then the greater the importance of this factor in flooding. With the demand for housing increasing, it is likely that the rate of urbanisation will also increase. Other factors that are important are things such as vegetation type in the drainage basin. If a drainage basin is covered with broad-leaved deciduous trees then it is less likely that a flood will occur as more interception and infiltration will take place compared to a drainage basin covered in grass, for example. Also, the amount of rainfall is important as the greater volume of water then the more chance there is that a flood will occur. Therefore, I agree with this statement partially as urbanisation certainly increases the chances of a flood. However, I think the most important factor is the amount of rainfall: the higher the quantity of rainfall, the more chance there is of a flood. [8]

Page 27

Evaluate the effectiveness of soft engineering as a strategy for managing UK floodplains in the future. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of both costs and benefits of soft engineering as a way of managing floodplains with future context. Evaluation is evident</p> <p>Band 3 (5–6 marks): Detailed knowledge of both costs and benefits of soft engineering as a way of managing floodplains but does not have future context</p> <p>Band 2 (3–4 marks): Some knowledge of both costs and benefits of soft engineering as a way of managing floodplains</p> <p>Band 1 (1–2 marks): Basic knowledge of the costs or benefits of soft engineering as a way of managing floodplains</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates should discuss methods such as land-use zoning, afforestation and so on. Full marks can be given if just one strategy is given</p> <p>To gain Band 4, the future context should be referred to and evaluation should be explicit</p>



Soft engineering is the method of flood control that works with the environment rather than puts things in place to stop flooding. An example of soft engineering is afforestation. This is where trees are planted to absorb water from the drainage basin and also intercept rainfall. This slows down the movement of water through the drainage basin. Another form of soft engineering is land-use zoning. This is where more important buildings are built further away from the floodplain so that only crops or playing fields get flooded if a flood does happen. The benefits of soft engineering solutions are that they are usually low cost and they work with the environment rather than against it. As such, they can either help reduce the amount of water getting into the river channel at any moment in time or ensure that the impact of flooding is reduced. However, the disadvantages are that there is no physical barrier to stop any flooding and therefore it cannot be guaranteed that a flood will not happen. In the future, with the impact of global warming predicted to increase the quantity of rainfall, it might be better to use soft and hard engineering strategies to reduce the impact of floods happening. [8]

Theme 2

Page 31

1 Give the definition of the term ‘counter-urbanisation’. [2]

Rationale	Expected answers
Award 1 mark for each correct statement	The movement of people out of towns and cities [1] to rural areas [1]

When people move out of the city to the countryside. [2]

2 Suggest and describe two examples of economic impacts of counter-urbanisation. [4]

Rationale	Expected answers
Award 1 mark for the impact and 1 mark for its description	Increase in house prices [1] because there is a greater demand for housing in rural areas [1] Reduction in the use of village shops [1] because people shop at larger supermarkets in the cities [1] Increase in the cost of transportation [1] because people have a longer distance to commute [1] New business opportunities in rural areas [1] because newcomers want new services such as crèches and so on [1]

One economic impact of counter-urbanisation is an increase in house prices. As more people move to rural areas with a good income from jobs in urban areas, there is more demand for housing. If the demand for housing is more than the number of houses available, then the prices of houses increase as people compete for the limited choices available. A second impact could be a change in the types of businesses and services found in the village. Village shops may close due to commuters shopping in larger supermarkets in urban areas. But there may be an increase in demand for other services such as a crèche due to the increase in young families that move to the area. [4]



3 For an example that you have studied, describe the pattern of commuting. [4]

Rationale	Expected answers
<p>Band 2 (3–4 marks): Description of the pattern of commuting both into and out of an urban area</p> <p>Band 1 (1–2 marks): Basic description of the pattern of commuting either into or out of an urban area</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The answer will depend on the example of commuting being described. For Band 2, consideration of commuting in and out of an urban area must be given</p>

Cardiff, being the capital of Wales, attracts industry and investment. As such, many jobs are created which attract people not only from within Cardiff but also from the surrounding communities in south Wales. Every day, around 78,000 people commute into Cardiff. This is done by roads such as the M4 motorway which links Cardiff to cities such as Swansea and Newport and beyond. The A470 connects Cardiff to the south Wales valleys which enables people in these communities to commute to Cardiff relatively easily. There are train lines which also link Cardiff to east and west Wales, together with the valleys line that links to the north.

In addition to the people commuting into Cardiff, a smaller number of 34,000 commute out of Cardiff each day. This tends to be to neighbouring counties such as the Vale of Glamorgan and Caerphilly, but also across the River Severn to Bristol. [4]

4 Explain the issues created by commuting in your named example. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Detailed understanding of the issues created by commuting in a named example. There must be at least two issues given</p> <p>Band 2 (3–4 marks): Understanding of the issues created by commuting in a named example. Maximum if only one issue given</p> <p>Band 1 (1–2 marks): Basic understanding of the issues created by commuting. Maximum if no named example</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The answer will depend on the example of commuting being described. Band 3 answers should have at least two issues</p>

Due to the large number of commuters that travel into and out of Cardiff on a daily basis, a number of issues are caused. The main one of these is congestion. The main routes into Cardiff are severely congested at peak times. For example, the A470 is frequently gridlocked from south of Pontypridd to the city centre of Cardiff. This will also have knock-on effects on local roads that could provide an alternative route for commuters trying to beat the traffic. A second issue is one of air pollution. With a high number of cars being stationary in traffic in a city environment, carbon dioxide and nitrous oxide are emitted, which increases the amount of air pollution found in the city and the surrounding area. [6]



1 What do you understand by the phrase ‘rural poverty and deprivation’? [2]

Rationale	Expected answers
Award 1 mark for each valid statement given	People living in a rural area have a lack of money [1] and a lack of key features that are regarded as necessary for a reasonable standard of living [1]

Rural poverty and deprivation means that some households in rural areas have a limited income due to the lack of available jobs and, therefore, a lack of money to be able to have a reasonable standard of living. [2]

2 Explain why some rural communities suffer from rural deprivation. [4]

Rationale	Expected answers
Award 1 mark for each valid point given	Lack of jobs in the village [1], high house prices [1], lack of services [1], expensive costs for commuting [1], expensive cost of food in rural shops [1], poor quality of broadband [1]

The more remote a rural area is, the more chance there is of it suffering from rural deprivation. This is because remote rural areas are often not close enough to an urban area for people to commute, or this may be too expensive, and there are not enough jobs in the village. Therefore, people move away to find work, which leads to less people using rural services which may cause them to close. The cost of buying goods is also usually higher due to less being sold overall and therefore the shop needing to pay more to buy them from their supplier. [4]

3 Discuss the challenges that are faced in creating sustainable rural communities. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge of the challenges faced in creating sustainable rural communities. At least two challenges must be given and an element of discussion must be present</p> <p>Band 3 (5–6 marks): Detailed knowledge of the challenges faced in creating sustainable rural communities. At least two challenges must be given but lacks discussion</p> <p>Band 2 (3–4 marks): Knowledge of the challenges faced in creating sustainable rural communities</p> <p>Band 1 (1–2 marks): Basic knowledge of the challenges faced in creating rural communities</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will be expected to discuss challenges such as poor public transport, lack of affordable housing, lack of village services, small schools which are faced with closure and so on</p> <p>For Bands 3 and 4, there must be at least two challenges discussed, and to get Band 4 the element of discussion must be present</p>

A sustainable rural community is one that is able to meet the needs of all of its residents and provide them with a good quality of life. The main challenges in achieving this in rural areas, particularly remote rural areas, are the lack of local jobs and the lack of infrastructure. Many people in cities have the opportunity to work from home due to the excellent broadband service, however this is not always available in rural communities, particularly remote ones. Due to the lower population, some rural areas have not been a focus for broadband companies to ensure a good service as there are fewer potential customers there. This lack of reliable broadband will limit the potential jobs that people can do and therefore restrict the income in these areas. If people find it difficult to gain work in rural areas then



they are not able to provide for the needs of their family, maintain their homes and so on, and a cycle of deprivation may develop. The poor infrastructure may also limit the chances of new employment opportunities coming to the area. For example, if the roads in and out of the area are poor then it is unlikely that any industry will locate there as it will be too costly in time and money for them. [7]

Page 37

1 List three types of migration that the UK is experiencing. [3]

Rationale	Expected answers
Award 1 mark for each valid point made	Emigration [1], urban–rural migration [1], rural–urban migration [1], domestic migration [1], immigration [1]

Rural–urban migration, emigration and immigration. [3]

2 Explain two housing issues that the UK is currently experiencing. [4]

Rationale	Expected answers
Award 1 mark for each valid point made up to 2 marks. Award one further mark for explanation of each	Lack of available housing [1], population is increasing and increase in single households [1] Lack of affordable housing [1], house prices are increasing much faster than people’s wages [1]

One housing issue that the UK is currently facing is a shortage of homes. The demand for houses is bigger than the available houses due to more people getting divorced and living longer. A second problem is that of the cost of housing. House prices keep rising and are above many people’s affordability. Wages are not rising as fast as house prices and as such people cannot afford to take out mortgages. [4]

3 Evaluate the various options available to alleviate the current housing crisis in the UK. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of solutions to the housing crisis. Benefits and drawbacks of each solution are discussed</p> <p>Band 3 (5–6 marks): Detailed knowledge and understanding of solutions to the housing crisis. Give benefits or drawbacks of each</p> <p>Band 2 (3–4 marks): Knowledge and understanding of solutions to the housing crisis. May begin to suggest which options are better than others</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of some solutions to the housing crisis. No evaluation</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	Suggestions may include building more housing, more affordable housing, building more council housing, help-to-buy schemes, limit on rent charged and so on

One option to deal with the housing crisis is simply to build more houses. If there were more houses built then there would be enough to meet demand and this would keep the price of houses down. However, this is easier said than done and houses take time to be built. Also, the agreement of where to build these houses takes time which all means that they are not being built quickly enough. Another option is to limit the rent being charged on rental properties. If someone cannot afford to buy a



property then they will need to pay rent on the house they live in. Some of these homes are rented from the local council where rental prices are limited. However, the majority are from private landlords where there is no cap on what they can charge. Private landlords renting out their houses are in the business of making a profit and therefore they want to get as much money as they can from their tenants. If a cap were to be introduced then this would restrict the amount of rent that they could charge and so the tenants would save money. However, this may put some of the landlords out of business which in turn may reduce the number of houses available to rent, making the situation worse. [8]

Page 39

1 Describe any two Egan’s wheel parts. [4]

Rationale	Expected answers
Award 1 mark for up to two parts of the Egan’s wheel and a further mark for a description for each	Active, inclusive and safe [1]: provides the community with a sense of identity and creates strong bonds [1] Well run and led [1]: everyone will feel their view has been and will be heard [1] Environmentally sensitive [1]: care is taken for the environment and wildlife [1] Well designed [1]: includes natural features, well-built homes and sustainable energy solutions [1] Well connected [1]: good roads so that commuting is easy [1] Thriving [1]: the local economy provides plenty and a variety of jobs [1] Well served [1]: sufficient transport services and amenities [1] Fair for everyone [1]: now and in the future [1]

One part of the Egan’s wheel is being well connected. This means that there are good transport links into and out of the city and therefore people can get to work or school easily. Another part of the wheel is being environmentally sensitive. This means that when building the city they are considerate to ecosystems and wildlife. [4]

2 ‘Achieving a sustainable community is equally as difficult on a greenfield site as on a brownfield site.’ Discuss why this statement may be true. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of creating a sustainable community. Comparison of greenfield and brownfield site issues and assesses why the statement is true</p> <p>Band 3 (5–6 marks): Detailed knowledge and understanding of creating a sustainable community. Comparison of greenfield and brownfield site issues</p> <p>Band 2 (3–4 marks): Knowledge and understanding of creating a sustainable community. Reference to either brownfield or greenfield</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of creating a sustainable</p>	Candidates are expected to know what greenfield and brownfield sites are and the issues of building on each, for example planning permission, removal of existing land use, contamination of land and so on For Band 4 there must be an element of discussion as to why it is equally difficult to build on both



community. No reference to the type of site No band (0 marks): Award 0 marks if wholly irrelevant	
---	--

A greenfield site is when land that has not previously been built on is used for development, whereas a brownfield site is one that has previously been built on and is now being redeveloped. The difficulty of achieving a sustainable community built on a greenfield site is that it is destroying an existing ecosystem and therefore creates a loss of wildlife. However, the advantage of this site is that it can be designed and built with sustainability in mind from the start and, therefore, can ensure that green technologies are used and that housing suitable for everyone is included. Whereas building on a brownfield site is more sustainable in that it does not destroy an ecosystem. However, because of existing buildings and infrastructure it is more difficult to include green technologies for heating and so on as these will need to be retrofitted. Therefore, this statement is true up to a point but there are difficulties with both types of sites used. [7]

Page 41

'The characteristics of a sustainable urban community as shown by Egan's wheel are not all achievable in one urban area.' Give reasons for and against this statement. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of why Egan's wheel is not achievable in urban areas. Arguments for and against are balanced</p> <p>Band 3 (5–6 marks): Detailed knowledge and understanding of why Egan's wheel is not achievable in urban areas. Arguments for and against but not necessarily balanced</p> <p>Band 2 (3–4 marks): Knowledge and understanding of why Egan's wheel is not necessarily achievable. Either arguments for or against each point</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of why Egan's wheel is not necessarily achievable</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will give arguments such as all communities want different things, physical features may restrict the 'ideal', eco-housing costs more and sectors of the community cannot afford it and so on</p> <p>Arguments for and against should be given</p>

The main reason why this statement may be true is because different aspects of Egan's wheel conflict with each other and therefore it is very difficult to achieve all parts. For example, being environmentally sensitive may conflict with providing good transport links for residents. If more road and railways are built then it is very difficult to maintain habitats and protect wildlife. One reason against this statement is that some of the factors are achievable in the same urban area. For example, 'fair for everyone' will complement 'well run and led'. This aims to ensure that everyone feels their views have been heard and this complements 'fair for everyone'. Therefore, I think that it is possible for some parts of Egan's wheel to be achieved in one urban area, but achieving all of them would be difficult. [7]



1 Look at Figure 8, showing the locations of global cities. Describe their distribution. [4]

Rationale	Expected answers
Award 1 mark for each valid statement	Clustered in areas across the world [1] The largest cluster is in Europe [1], the continent with the fewest is Africa [1] Majority on coastlines [1] Majority in the northern hemisphere [1]

Global cities are found in clusters across the world with the exception of the continents Antarctica and Africa. The largest cluster is in Europe with thirteen global cities and the fewest are found in Africa with just one global city. The majority are north of the equator. [4]

2 Explain why cities in NICs are growing at the fastest rate. [4]

Rationale	Expected answers
Award 1 mark for each correct response with an additional mark for explanation of why this would lead to fast growth	Examples of responses are: Growth in industry [1]: people move to cities as needed to work in factories [1] Rural to urban migration [1]: people move in the hope of gaining a higher paid job [1] Outsourcing [1]: HICs outsource call centres and factories to NICs to increase profits [1]

Cities in NICs are growing at the fastest rate because they are industrialising. As such there is a large amount of rural–urban migration as people are needed to work in the factories. However, people also move to these cities because they think they are going to get work which is not always available, and hence the cities grow in size and quickly due to the rapid growth of slum communities. As slums are not planned or permanent housing, they are quick to ‘build’ and therefore the expansion of the city is rapid. [4]

3 Describe the characteristics that cities need to have to become classified as a global city. [4]

Rationale	Expected answers
Credit 1 mark for each valid statement for up to four statements	Attracts economic migrants from all over the world [1] Decision-making in one city can affect people all over the world [1] Has a financial centre which may include the headquarters of banks and financial markets [1] Is well connected to the rest of the world through transport hubs [1] Major media centres such as TV stations and newspapers [1]

To become a global city a city must be well connected and contain a number of transport hubs. This is so that people and goods move through this hub and city to reach their final destination and therefore it is an important link. Another factor is that it needs to have a financial centre where banks and businesses have their headquarters and where the stock market is located. This means that they are centres of trade, which adds to their significance. [4]



Page 45

1 What is meant by the term 'global city'? [2]

Rationale	Expected answers
Award 1 mark for the correct definition and a second mark for development	Cities that play an important role in the global economic system of finance and trade [1] and a named example [1]

A global city is a city that is important in terms of finance and trade on the global platform, for example London. [2]

2 Why are challenges in informal settlements difficult to overcome? [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Detailed knowledge of challenges in informal settlements and explanation of why they are difficult to overcome</p> <p>Band 2 (3–4 marks): Knowledge of challenges in informal settlements and limited explanation of why they are difficult to overcome</p> <p>Band 1 (1–2 marks): Basic knowledge of challenges in informal settlements</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will probably suggest solutions to problems in informal settlements and then explain why these solutions are difficult to implement. However, if they choose to purely focus on challenges with only passing mention to solutions then this is also acceptable</p> <p>At Band 3, candidates will state the challenges and explain why they are a problem in informal settlements</p>

The challenges that informal settlements present are usually down to poverty, which is the core reason why they are difficult to overcome. One challenge is the quality of housing that people inhabit in these settlements. For example, the favelas in Rio de Janeiro are largely built from scraps of wood, corrugated iron and other waste material because the residents cannot afford to buy a purpose-built house and the government cannot afford to house them. Therefore, it is difficult to overcome this issue of poor-quality housing because of poverty. Another issue found in informal housing is the poor health of the residents. Disease spreads quickly and people often die from diseases that may be cured in the Western world. This is difficult to overcome because people live in close proximity to each other due to the high-density housing and also do not have clean running water or waste disposal, so disease spreads quickly. [6]

Page 47

1 Describe what a transport hub is. [2]

Rationale	Expected answers
Award 1 mark for a correct definition and a further mark for exemplification of this	A central point where a number of transport networks meet [1] and a named example [1]

A transport hub is a place where several transport points meet so that travellers can easily connect to their on-going method of transport. A good example of this is Schiphol Airport in Amsterdam. [2]



2 Explain why tourism enables global cities to be connected. [4]

Rationale	Expected answers
Award 1 mark for each valid statement and a further mark for development of this statement	The number of long-haul flights has increased together with the number of destinations [1], therefore global cities may provide central hubs for transportation [1] The number of short-haul flights has increased [1], which will increase the exchange of culture [1] Tourism is a valuable source of revenue for many countries [1], which will increase its global economic importance [1]

Tourism enables global cities to be connected because first there need to be routes to allow the tourists to reach these countries. Therefore, investment in airports and infrastructure needs to take place for the tourism to be able to happen. This will encourage the number and frequency of both long- and short-haul flights so that more tourists are able to visit. Increasing the number of tourists will also increase awareness of the country and its culture and products, and therefore this will create more connections. [4]

3 For two global cities that you have studied, describe the connections that they have to the rest of the world and decide which type of connection is most important to that city. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Both cities' connections described with evidence. A decision is made as to the most important connection type together with reasoning for this choice</p> <p>Band 3 (5–6 marks): Both cities' connections described with some evidence but there may be an imbalance. A decision is made as to the most important connection type but the reasoning for this choice may be sparse</p> <p>Band 2 (3–4 marks): At least one connection for each city is given but with little evidence. A choice is made as to the most important connection for at least one city but no evidence given</p> <p>Band 1 (1–2 marks): Some relevant information is given but with little evidence and not well structured</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	The candidate's answers will depend on the cities that they have chosen. More than one connection for each city should be described with evidence, and for Band 4, together with a choice of the most important connection for each city

The two global cities that I have studied are Cardiff and Mumbai. Cardiff is in south-east Wales and is connected by land, air and sea. Cardiff International Airport handles both passengers and freight and therefore connects Cardiff to the rest of the world for tourism, business and trade. It is linked to the rest of the UK primarily via the M4 motorway, which is a major motorway linking London to the west of the UK. The M4 enables people to get from Cardiff to London in around two hours. It also has a port which, while currently is reducing in size, in the early 1900s it was the busiest port in the world, exporting Welsh coal globally. Whereas the port used to be the most important connection for Cardiff I now think that it is the M4 motorway.

Mumbai also has a variety of connections and it too has an airport, port, road and rail links. It has a railway that links Mumbai to all parts of India, which is important in moving goods and people around the country. These railways are among the busiest railway systems in the world and are often overcrowded. Mumbai's port (Nhava Sheva) is an important link for trade and exports and imports across the Arabian Sea. Mumbai's airport is also important for bringing the thousands of tourists that visit yearly, together with the heads of MNCs that visit their outsourcing units in the country. However, I think that the railway system is probably the most important connection in the city as this transports thousands of people and goods on a daily basis. [8]



Theme 3

Page 53

Describe how tectonic processes at a destructive plate margin have resulted in the formation of any large-scale feature, such as an ocean trench or a volcano. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark, which focus on processes Accept fold mountains as a valid landform Do not credit the name of the large-scale feature	Ocean trench: oceanic plate and continental plate converge [1], driven by convection currents in the mantle [1], denser oceanic plate forced under the continental plate [1], process known as subduction [1], a long deep depression in the ocean floor is formed [1] Volcano: oceanic plate and continental plate converge [1], driven by convection currents in the mantle [1], denser oceanic plate forced under the continental plate [1], process known as subduction [1], as the oceanic plate sinks, it melts [1], the molten magma finds its way to the surface [1], through cracks/faults in the rock [1]

The high temperatures in the Earth's core create convection currents in the mantle causing the tectonic plates to move. At a destructive plate margin, an oceanic plate and a continental plate move towards each other and the oceanic plate is forced underneath. This is called subduction. A long deep groove is formed in the ocean floor; an example is the Mariana Trench. [4]

Page 57

Study the photograph which shows the impact of the tsunami on the coast of Japan. Use evidence in the photograph only to describe two ways in which the tsunami affected the lives of people who live in the coastal areas of Japan. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark Each of these statements can be elaborated for up to two additional marks each. Hence, candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3) Credit only evidence from the photograph	Houses destroyed [1], people are homeless [1], people lack clean drinking water [1], disease spreads [1] Roads destroyed [1], people unable to get to hospital [1], people unable to get to work [1] Shops/business destroyed [1], people unable to buy food/drink [1], elderly and children are particularly vulnerable [1] Debris covers land [1], needs to be cleared before life can get back to normal [1], costly process [1]

The photograph shows the total destruction of all the buildings. This means that people's homes have been destroyed and they will have nowhere to live. They will be exposed to the weather which may get very cold at night and people may suffer since they would have lost a lot of their clothes. All the roads are also covered with rubbish which means that children will not be able to get to school and people will not be able to get to the shops to buy food. [4]



Explain why people who live in lower income countries are likely to be more vulnerable to the impact of tectonic hazards. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Demonstrates detailed understanding of the lives of people who live in lower income countries and why this makes them more vulnerable. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Demonstrates understanding of the lives of people who live in lower income countries and why this makes them more vulnerable. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Simple statements show basic understanding. The answer may lack clarity. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of the lives of people who live in LICs. Responses should link this understanding to give reasons why these people are likely to be more vulnerable</p> <p>Responses in Band 3 should give examples to support understanding.</p> <p>Examples include:</p> <p>People in lower income countries are likely to live and work in buildings that are less likely to withstand tectonic events. Emergency services such as health and rescue teams are likely to have fewer resources and not be trained as well as in richer countries. In Indonesia for example, when Mount Merapi erupted buildings were covered in ash and thousands of people were made homeless. They spent several weeks living in emergency shelters. There were not enough toilets or clean drinking water and disease killed many</p>

Tectonic hazards such as earthquakes or volcanic eruptions have a greater impact on people who live in lower income countries. Poorer people can't afford houses that are built to protect against these hazards. People in lower income countries are more likely to be illiterate, so that means they cannot spread information and warnings easily. Governments in lower income countries won't have enough money to build buildings that can withstand extreme events or educate people to be aware of the dangers, and emergency services won't be as developed to be able to rescue and treat people. Hence, when Mount Merapi in Java, an LIC, erupted in 2010 it caused 353 deaths, largely from pyroclastic flows, and 570 people were injured. Thousands of people spent weeks living in 700 emergency shelters and there were not enough toilets or clean drinking water for everyone. [6]



Theme 4

Page 63

Study the photograph.

Use evidence in the photograph only to describe two ways in which the cyclone affected the lives of people who live in the coastal communities affected by Cyclone Phailin. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark Each of these statements can be elaborated for up to 2 additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3) Credit only evidence from the photograph	Houses destroyed [1], people are homeless [1], people lack clean drinking water [1], disease spreads [1], it will be costly to rebuild houses [1], people may lack insurance [1] People have lost their possessions [1], photograph suggests people are poor [1], will take the family a long time to recover [1]

The photograph shows the destruction of all the buildings. People's homes have been destroyed and they will have nowhere to live. Diseases may spread if they are unable to wash and they may not be able to get to the doctor to get medicine. The people in the photograph look poor and perhaps they do not have insurance and so it will take a long time for them to recover. [4]

Page 70

Describe how hard engineering strategies may be used to reduce the risk of coastal erosion and flooding in one location you have studied. [4]

Rationale	Expected answers
Band 2 (3–4 marks): Elaborated description of one or more strategy in the context of a named area Band 1 (1–2 marks): Basic statements which outline one or more strategy No band (0 marks) Award 0 marks if wholly irrelevant Do not credit description of beach nourishment or managed retreat	Responses should demonstrate knowledge of strategies. Responses may describe: <ul style="list-style-type: none"> • sea walls • rip rap • gabions • revetments • groynes Credit description of engineering strategies that use a structural element to encourage deposition of beach sediment such as groynes and barrier reefs

Hard engineering means using structures to control coastal processes. These include sea walls, groynes and rip rap. They are expensive and have a high impact on the environment. Sea walls are usually made of concrete and are often recurved to reflect the waves back on themselves. This protects the coast from erosion and flooding by the waves. Groynes are usually made of wood and they trap sand, which stops sand being moved by longshore drift. This makes the beach wider so that it absorbs the energy of the waves. In Borth, Ceredigion, work began in 2010 to build four rock groynes to build the beach and protect the village inland from flooding. The scheme was completed in 2015 at a cost of £18 million and has so far been successful. [4]



'Small island developing states are more vulnerable to coastal hazards than any other location.' Do you agree with this statement? Explain your answer. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): A balanced analysis and sophisticated judgement. A range of detailed and elaborated points are made both for and against the statement. Conclusion is justified using a sophisticated chain of reasoning. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured</p> <p>Band 3 (5–6 marks): Elaborated analysis and reasoned judgement. A range of elaborated points are made on one or both sides of the argument. A reasoned and valid conclusion is made based on the evidence. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Valid but limited analysis and simple judgement. Valid points are made on one or both sides of the argument. Conclusion is made with limited justification. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Basic analysis and judgement. Valid but basic points are made with limited elaboration. Basic conclusion with no justification. Meaning may lack clarity in parts. Statements are linked by a basic structure</p> <p>No band (0 marks) Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of the reasons for small island developing states (SIDS) being particularly vulnerable to coastal hazards</p> <p>SIDS are low-lying coastal countries first recognised as a distinct group in 1992. They share challenges which include small but growing populations, limited resources, remoteness and fragile environments</p> <p>The Maldives is an example of a SIDS, with a population of 350,000. Eighty per cent of the land area is less than 1 m above sea level. It is a poor country, ranked 165th out of 192 nation states. Rising sea levels mean the islands may disappear in the next century</p> <p>The Nile Delta is part of the country of Egypt on the continent of Africa, and home to over 40 million people. The 50-km wide strip of land along the coast is less than 2 m above sea level. It is protected from flooding by a sand belt that ranges from 1 to 10 km wide. Rising sea levels will destroy parts of this sand belt. Eight million people may become environmental refugees</p>

Small island developing states (SIDS) are very low-lying countries such as the Maldives in the Indian Ocean. They are at the highest risk from the rise in sea levels that may result from climate change. For example, a rise in sea levels of 1 metre would flood about 75 per cent of the land surface of the Maldives.

However, they are not the only regions which are at risk from coastal hazards. Some coastlines such as the Thames Gateway are vulnerable to storm surges because of the funnelling effect of their estuaries. Some coastlines are threatened by tsunamis. In December 2004, the Indian Ocean tsunami affected thirteen countries and killed over 230,000 people. The clay rocks of the Holderness coastline give it some of the highest erosion rates in the world.

In the Nile Delta, Egypt, over 40 million people are squashed into a 50-km strip of land which is less than 2 m above sea level. Many are poor and live in informal housing. Rising sea levels will destroy the sand belt protecting these people. Eight million people will become environmental refugees and low-lying parts of Alexandria destroyed.

Hence, although SIDS are at risk and could disappear altogether in the next 100 years, and their culture and way of life could be lost, there are many more people in other parts of the world whose lives are also at risk. Therefore, I would not say that SIDS are more vulnerable than other locations. [8]



Theme 5

Page 75

Describe the change in the extent of Arctic sea ice between 1979 and 2014. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark Allow up to 2 marks for quantification, for example overall decrease 16.5–14.4 km ² [1], average 0.08 km ² per year [1]	Decrease [1], fluctuates [1], large decrease 2002–2006 [1], quantified [2]

The area covered by sea ice in the Arctic was 16.5 million km² in 1979. This area has decreased since that date so that by 2016 it covered about 14.4 million km². This is a decrease of 2.1 million km² in 37 years. This decrease has not been gradual but has seen annual fluctuations, increasing and decreasing. The biggest decrease happened between 2002 and 2006, when there was no increase. [4]

Page 78

1 Calculate the rise in the global average temperature between 1880 and 2000. [2]

Rationale	Expected answers
Credit 1 mark for correct answer and 1 mark for correct calculation	14.4 – 13.5 [1], 0.9 °C [1]

$14.4 - 13.5 = 0.9 \text{ °C}$. [2]

2 Describe how one piece of evidence, other than rising temperatures, suggests that climate is changing. [4]

Rationale	Expected answers
Credit 1 mark for a valid reason which can be elaborated for a further 3 marks	Examples: Ice cores [1], from the Antarctic [1], show that the amount of carbon dioxide (CO ₂) in the atmosphere has increased [1], since the Industrial Revolution [1] Shifting seasons [1], earlier arrival of spring [1], causes changes in migration patterns of birds [1], for example storks wintering in southern Europe instead of Africa [1] Glaciers and ice sheets melting [1], the Pasterze Glacier in Austria [1], retreated 8 km in past 160 years [1], in 2008 a 400 km ² piece of ice broke off the Antarctic ice sheet [1]

In general, glaciers around the world are retreating and ice sheets are melting as the climate slowly warms up. The evidence for this can be seen in some of the large Antarctic ice sheets either retreating or breaking off from the continent altogether. In 2008, a 400 km² piece of ice broke off the Antarctic ice sheet. Valley glaciers are also being measured to see how quickly they are retreating. The Mer de Glace in the French Alps is the largest glacier in France, 7 km long. It has been getting shorter and thinner since 1850. It is retreating by about 30 metres a year and is 500 metres shorter than it was in 1994. [4]



3 'People's actions are the major cause of recent climate change.' To what extent do you agree with this statement? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): A balanced analysis and sophisticated judgement. A range of detailed and elaborated points are made both for and against the statement. Conclusion is justified using a sophisticated chain of reasoning. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured</p> <p>Band 3 (5–6 marks): Elaborated analysis and reasoned judgement. A range of elaborated points are made on one or both sides of the argument. A reasoned and valid conclusion is made based on the evidence. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Valid but limited analysis and simple judgement. Valid points are made on one or both sides of the argument. Conclusion is made with limited justification. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Basic analysis and judgement. Valid but basic points are made with limited elaboration. Basic conclusion with no justification. Meaning may lack clarity in parts. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of how people's actions could be a major cause of recent climate change</p> <p>There is increasing evidence that people's actions are adding to the amounts of greenhouse gases in the atmosphere through: burning fossil fuels, deforestation, dumping waste in landfill and commercial cattle farming</p> <p>Measurements by the Met Office have shown that global temperatures have increased by 0.6 °C in the past 100 years since the Industrial Revolution. The Pasterze Glacier in Austria has retreated by about 8 km in the past 160 years</p> <p>Not everyone agrees that people are causing climate change. They point to many natural causes of climate change such as volcanic eruptions and variations in the amount of energy given off by the Sun</p> <p>Mount Pinatubo erupted in 1991, ejecting 10 km³ of ash into the atmosphere together with 15 million tonnes of SO₂. Following this, world temperatures decreased by 0.5 °C</p>

The world's climate varies naturally, for example as a result of changes in the Earth's orbit. There is now strong evidence that recent climate change is mainly the result of human activities. The Intergovernmental Panel on Climate Change (IPCC) says that human activity is the main cause of the changes seen in climate during recent decades.

Over long periods of time, ice ages show that climate changes naturally, perhaps triggered by changes in the Earth's orbit. The last ice age ended about 11,000 years ago. Over a shorter period of time, there have been changes such as the Medieval Warm Period followed by a cooler period known as the Little Ice Age. Mount Pinatubo erupted in 1991 and in the following year world temperatures decreased by 0.5 °C because of all the ash in the atmosphere. Hence climate does change naturally. In the last century, however, our climate has started to change rapidly. In the past 100 years, the Earth has warmed by 0.6 °C. People's actions are adding to the amounts of greenhouse gases in the atmosphere through the burning of fossil fuels, deforestation, dumping waste in landfill and intensive farming.

Evidence of global warming includes glacial retreat, for example the Pasterze Glacier in Austria has retreated by about 8 km in the past 160 years. Satellite observations show that Arctic sea ice is now declining at a rate of eleven per cent per decade. Shifting seasons are leading to changes in the migration patterns of birds and insects.

Hence, although a small number believe that climate change is due to natural causes, the majority of people think that humans are causing this change. The evidence suggests that climate change happens naturally but recent change is so dramatic that it is almost certainly has been caused by people. [8]



Explain why tropical low-pressure systems are described as the most destructive of weather hazards. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Demonstrates detailed understanding of tropical low-pressure systems and the destruction they can bring. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Demonstrates understanding of tropical low-pressure systems and the destruction they can bring. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Simple statements show basic understanding. The answer may lack clarity. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of why tropical low-pressure systems are described as the most destructive of weather hazards</p> <p>Responses in Band 3 should give examples to support understanding</p> <p>Examples include:</p> <p>Tropical storms have wind speeds that can reach over 120 km/hour. They give heavy rain which can cause severe flooding. High winds and low pressure generate large waves and storm surges which can cause flooding in coastal areas</p> <p>Tropical cyclone Pam hit the island chain of Vanuatu in the South Pacific in March 2015. Eleven people died, 90,000 were made homeless, 80 per cent of subsistence crops were destroyed, and a storm surge flooded coastal areas and contaminated freshwater wells with seawater</p>

Tropical low-pressure systems are among the most powerful and destructive weather systems on Earth. Tropical storms are known as hurricanes, typhoons or cyclones in different parts of the world. They have wind speeds that can reach over 120 km/hour. When tropical storms strike land they can cause huge amounts of damage. Most of the damage is caused by flooding and storm surges. A storm surge is when the ocean level rises at the coastline due to the power of the storm. Tropical storms also cause damage, with high-speed winds that can blow down trees and damage homes.

Tropical cyclone Pam hit the island chain of Vanuatu in the South Pacific in March 2015. Pam was a category 5 cyclone where wind speeds reached over 250 km/hour. Eleven people died, 90,000 people were made homeless, winds destroyed hospitals and schools, 80 per cent of subsistence crops were flattened, coastal areas were flooded by a storm surge and freshwater wells were contaminated by seawater. [6]

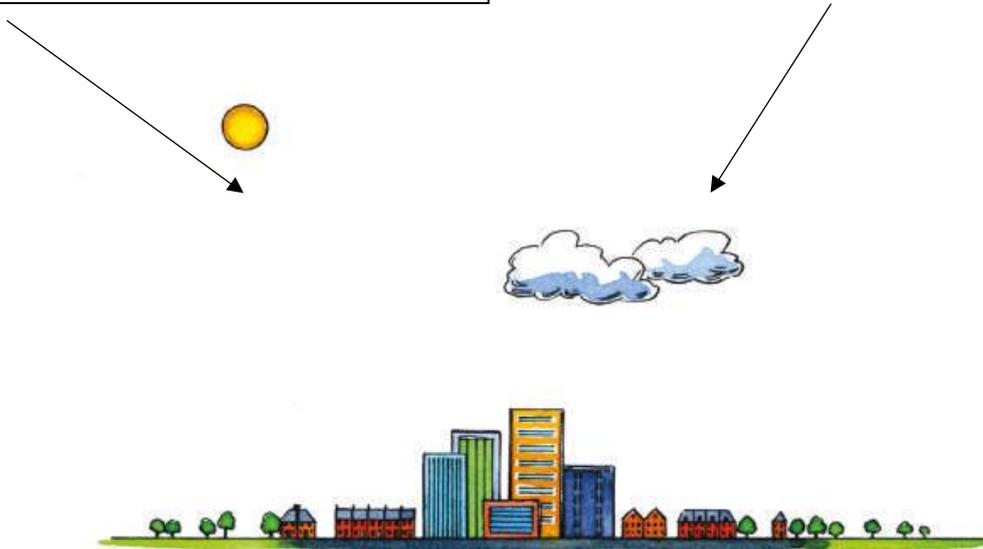


Annotate the diagram to explain how temperatures and rainfall totals differ in urban areas compared to rural areas. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark. At least one statement must relate to temperature and one statement to rainfall	Higher temperatures [1], particularly at night [1], buildings absorb heat from the sun [1], heat is given off by burning fossil fuels [1] Increased convectional rainfall [1], particularly thunderstorms [1], higher temperatures lead to increased convection [1], more dry days due to less moisture in the air [1]

Temperatures are higher. Urban heat islands develop under calm conditions. Building materials absorb heat. Tarmac road surfaces absorb large amounts of heat due to their dark colour. Heat is absorbed during the day and then released slowly at night. Heat is also given off by homes, factories and cars

Urban areas get a larger number of dry days, since there is less moisture in the air. They have more rainfall when they do have rain. This happens because convection currents, generated by higher temperatures, cause convectional rainfall and also increase the likelihood of thunderstorms



[4]



Page 86

1 Use the map above to describe the distribution of the tropical rainforest biome. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark	Tropical regions [1], almost a continuous belt along the equator [1], tropical grasslands to the north and south [1], largest area in South/Central America [1], named region, for example Indonesia [1], quantification, for example area in South America over 4000 km × 4000 km

The map shows that the tropical rainforests are located in the tropics, a band around the equator from 23.5°N (the Tropic of Cancer) to 23.5°S (the Tropic of Capricorn). There are large areas of rainforest in South America in countries such as Brazil, as well as central Africa in countries such as the Congo, and South-East Asia in countries such as Indonesia. [4]

2 Give two features of the climate of the tropical rainforest ecosystem. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark. Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Rainfall totals are high [1], often exceeding 2000 mm a year [1], no dry season [1] Temperatures are high [1], averaging around 25 °C [1], no summer and winter [1]

Warm and wet describes the tropical rainforest climate. Rainfall is continuous throughout the year and totals can often exceed 2000 mm per year. Temperatures are also high throughout the year, with daytime temperatures often exceeding 25 °C. [4]

Page 92

1 Describe the distribution of the savannah ecosystem. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark	Located north and south of tropical rainforest biomes [1], found between 5 and 15° north and south of the equator [1], within tropics [1], broad band around the globe [1], largest expanse in Africa [1], named country, for example Kenya [1], quantification, for example continuous belt across Africa over 6000 km wide in some places [1]

Savannah grasslands are found within the tropics between rainforest and desert biomes. They are located in a broad band around the globe about 5–15° north and south of the equator. They are found countries such as Brazil, Tanzania, India and northern Australia. [4]



2 Give two features of the savannah ecosystem that make it distinctive. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark. Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Examples include: The climate has a marked wet and dry season [1], wet season occurs in 'summer' with heavy convectional rain [1], temperatures are high throughout the year [1], ranging between 23 and 28 °C [1] Plants are xerophytic/pyrophytic [1], vegetation consists of scattered trees [1], drought-resistant bushes [1] and grasses that can grow up to 4 m in height [1] Contains a huge variety of insects, birds and animals [1], this makes the savannah a popular tourist destination [1], contains large herds of grazing animals that live on the abundance of grass [1]

Savannah lands have two distinct seasons: a wet season and a dry season. There is very little rain in the dry season. As you move further away from the equator and its heavy rainfall, the grassland becomes drier and drier. Temperatures are high throughout the year.

Plants have adapted to live in the dry season and some, such as the baobab tree, store water in their trunks. Others, such as the acacia tree, have long roots to tap water deep underground. [4]

3 Explain why climate is important in the development of the savannah. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Demonstrates detailed understanding of the importance of climate in the development of the savannah. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Demonstrates understanding of the importance of climate in the development of the savannah. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Simple statements show basic understanding. The answer may lack clarity. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of why climate is important to the development of the savannah ecosystem</p> <p>Responses in Band 3 should give examples to support understanding</p> <p>Savannah regions have two distinct seasons: a wet season and a dry season. In the wet season plants grow, particularly grasses, up to 4 m in height. Plants and animals adapt to the long dry periods. Many plants are xerophytic, for example, the acacia tree with its small, waxy leaves and thorns. Plants may also store water, for example the baobab tree, or have long roots that reach down to the water table. Animals may migrate great distances in search of food and water. Many herbivorous species feed off the grasslands, for example zebra. In turn, carnivores such as the lion have evolved to hunt and feed on the herbivores</p>

The savannah biome has distinct wet and dry seasons. Few trees are able to survive the dry season but grasses thrive. Because of the availability of grass, there are many grazing animals that take advantage of this abundant food supply. The savannah biome is rich with herbivores such as elephants, zebras, gazelles and buffalo. The many herbivores in the savannah bring many carnivores. Herbivores have developed traits which help them escape predators such as being fast, large or tall. Animals travel great distances in search of food and water.



Plants and animals have to adapt to the long dry periods. Many plants are xerophytic, for example the acacia tree with its small, waxy leaves and thorns. Some plants may also store water, for example the baobab tree, or have long roots that reach down to the water table like the acacia tree. [6]

Page 95

Describe how the patterns of rainfall have changed in the Sahel region between 1950 and 2010. [4]

Rationale	Expected answers
Credit four valid statements, each for 1 mark	Average rainfall decreased [1], between 1950 and 1967 every year had a greater than average rainfall [1], between 1965 and 2010 only ten years have had a greater than average [1], between 1979 and 1987 a continuous period of below average rainfall [1], 1983/84 had the least rainfall [1], quantified, for example 4 cm/month below average in 1983/84 [1]

Rainfall in the Sahel varies considerably from year to year. Since 1970 the totals have generally declined. Between 1950 and 1970, rainfall totals were generally higher than the long-term average. Since 1970 the totals have generally been lower than the long-term average, with some exceptions such as in 1994 and 1999. In the period 1980 until 1987, rainfall totals were particularly low, almost 4 cm/month lower in 1984. [4]

Page 97

Give two ways in which the rainforest can be used sustainably. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark Each statement can be further elaborated for up to two additional marks. Hence, candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Agro-forestry [1], growing trees and crops at the same time [1] Selective logging [1], only cutting down trees that are a certain species or age [1], the international Forest Stewardship Council (FSC) ensures this [1] Forest reserves [1], areas of forest are protected [1], for example Alto Maués National Park in Brazil [1], wildlife corridors link up fragmented areas of land [1] Encouraging ecotourism [1], a highly profitable form of tourism that relies on the protection of the forest [1] Debt-for-nature swaps [1], poor countries can 'swap' debt with a rich country if they protect an area of rainforest [1]

Forest reserves can be set up where the plants and animals that live in the rainforest are protected. An example of such a reserve is the Alto Maués National Park in Brazil which covers over 600,000 hectares of the Amazon rainforest.

In recent years, as people have looked for more exotic holidays, there has been a growth in ecotourism. Ecotourists like to visit the rainforest and meet its wildlife and people. They bring money to the places they visit. If the forest is cleared, they won't want to come. The Yachana ecolodge in the Amazon rainforest is one example of an ecotourism development. [4]



Theme 6

Page 100

1 Describe the relationship between infant mortality and GNI per capita. [3]

Rationale	Expected answers
Credit three valid statements, each for 1 mark	Negative correlation [1], infant mortality increases when GNI per capita decreases [1], relationship is exponential [1], for example Norway has a GNI per capita of U\$94,000 and an infant mortality of two deaths per 1000 live births [1]

As the GNI per capita increases, so the infant mortality decreases. For example, the Central African Republic has a GNI per capita of US\$1000 and an infant mortality of 95, whereas Norway has a GNI of U\$94,000 and an infant mortality of two. The relationship shows an exponential decrease in infant mortality as GNI increases. [3]

2 Suggest two reasons to explain this relationship. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Countries with a low GNI per capita have less money to spend on health [1], have poorer healthcare [1], fewer doctors and hospitals [1], lack modern medicines [1] Countries with a low GNI per capita often rely on subsistence agriculture [1], food supplies are not reliable [1], poor nutrition (malnutrition) of infants [1], increases vulnerability to disease [1] Countries with a low GNI per capita often have weak governments [1], unable to provide clean water to people's houses [1], or adequate sanitation [1], this leads to the spread of disease [1]

Countries with a higher GNI have more money to spend on things such as healthcare. This means that mothers can be better looked after when they are pregnant and when they give birth. Babies can also have better healthcare and, for example, be given vaccinations against diseases such as polio. Countries with a lower GNI probably have a poorer food supply. They may have a subsistence economy where farmers grow food for their families. Food supplies may not be reliable and children may not have a diet which gives them all of the protein and vitamins they need. [4]

Page 105

1 Suggest one alternative way of representing the information shown in the graph above. Justify your choice. [2]

Rationale	Expected answers
Credit one valid alternative for 1 mark and its justification for one additional mark	Bar graph [1], easy to understand [1] Divided bar graph [1], easy to compare [1] Scattergraph [1], effectively shows changes [1]

The information in the graph could be represented with a bar graph and a bar could be drawn for each five-year period. A bar graph would be easy to understand and would show the information clearly. [2]



2 Compare the change in the GDP per person for Malawi with that of India. [2]

Rationale	Expected answers
Credit two valid statements, each for 1 mark. Only accept comparative statements	India has a large increase in GDP while the GDP in Malawi has changed little between 1985 and 2015 [1], GDP in Malawi has decreased after 2010 while the GDP in India shows constant increase [1], GDP in India began to show rapid increase after 2000, GDP in Malawi also began to increase more rapidly until 2010 then decreased [1], quantification [1]

The GDP per person has increased much more in India than it has in Malawi. In 1985, Malawi had a GDP per person of about US\$150 whereas India had a GDP per person of about US\$300. In 2015, Malawi had a GDP per person of about US\$200 whereas India had seen a large increase to about US\$1600. After 2010, the GDP per person in Malawi decreased whereas the GDP per person in India continued to increase. [2]

3 Suggest ways in which this graph could be misleading. [4]

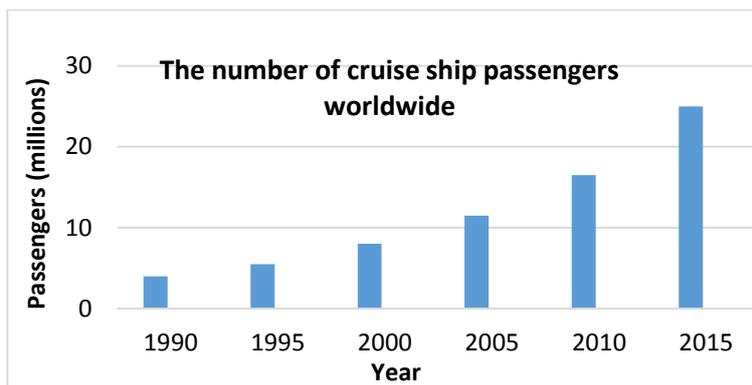
Rationale	Expected answers
Credit four valid statements, each for 1 mark	GDP per person is a measure of the total output of a country divided by the number of people who live in the country [1], figure for the number of people may be inaccurate without an accurate census [1], does not take into account subsistence or informal economies which are very important in less developed countries [1], can hide inequalities within a country since it is an average figure and it does not show the distribution of wealth [1], can be manipulated by governments who want to appear poor to collect more aid [1]

India is a very large country. The GDP per person is an average figure so in some parts of India the GDP per person may be a lot higher than the average figure, and in some parts it may be a lot lower than the average figure. Malawi is a poor country and may not have the resources to gather accurate data on its population. It may also give out inaccurate data to try to get more aid from richer countries. In both countries there are subsistence farmers and the output of such farms is not taken into account when working out GDP. [4]



1 Draw a suitable graph to show the information in the table below. Justify your choice of graph. [4]

Rationale	Expected answers
Credit 3 marks for accurate graph. Credit 1 mark for justification	Examples: Bar graph is easy to draw and understand [1] Line graph clearly shows changing information [1] Ideograph is interesting and if a cruise ship icon is used then will have immediate impact [1]



A bar graph is easy to draw and understand. [4]

2 Describe the trend shown by your graph. [2]

Rationale	Expected answers
Credit two valid statements, each for 1 mark Example could include a numerical comparison such as increased by 1.5 million between 1990 and 1995 and 8.5 million between 2010 and 2015	Increase [1], increases at an increasing rate [1], example [1]

The number of cruise ship passengers has increased. In 1990, 4 million people travelled on cruise ships, 25 years later in 2015 this had increased by 21 million people to 25 million. [2]

3 Give two reasons to explain this trend. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark. Each statement can be further elaborated for up to one additional mark	Greater affluence [1], people have more money to spend on leisure activities [1] Increased leisure time [1], people often take several holidays in a year [1] New cruise ships [1], with many new facilities [1] New destinations [1], which gives people more choice [1] Greater awareness via television and social media [1], increases the demand [1] Ageing population/early retirement [1], cruising is particularly suited to older travellers [1]

The population of the richer countries is ageing and cruising is more attractive to older people. It takes the luxury of a hotel room along with the passenger. It is a safe way of taking a holiday with all the facilities a guest would need all in one place and all easily accessible.



Many new cruise ships have been built in recent years which have a great range of facilities on board, from shopping to sports facilities to top-class entertainment. These cruise ships appeal to all types of people and marketing campaigns have increased demand. [4]

Page 110

Discuss how receiving international aid could improve the lives of people who live in the least developed countries. [8]

The accuracy of your writing will be assessed in your answer to this question. [3]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Thorough understanding of how aid could improve the lives of people who live in the least developed countries. Specific and detailed examples used. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured</p> <p>Band 3 (5–6 marks): Thorough understanding of how aid could improve the lives of people who live in the least developed countries. Refers to examples. Meaning is clear. The response has purpose, is organised and well structured</p> <p>Band 2 (3–4 marks): Understanding of how aid could improve the lives of people. Response contains some examples. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Simple statements showing a basic understanding of the issue. Meaning may lack clarity in parts. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Responses should demonstrate understanding of how receiving international aid could improve the lives of people who live in the least developed countries</p> <p>Aid is a transfer of resources from a richer country to a poorer country. It includes money, equipment, training and loans. Large-scale projects ‘kick start’ the development process. Small-scale projects work with local people and use local skills</p> <p>COVAMS is a ten-year project, funded by the Japanese government, in Malawi. It aims to prevent soil erosion by education on the causes of soil erosion, training farmers to plough around the hillsides, building rock, wood and bamboo barriers across streams to slow down the flow of water, building terraces into the hillsides to reduce surface runoff and supplying fast-growing tree species to speed up re-forestation</p>

After awarding a band and a mark for the geographical response, apply the performance descriptors for writing accurately. Having decided on a band, award a second mark out of 3 marks.

Band	Marks	Performance descriptions for writing accurately
High	3	<ul style="list-style-type: none"> Learners spell and punctuate with consistent accuracy. Learners use rules of grammar with effective control of meaning overall. Learners use a wide range of specialist terms as appropriate.
Intermediate	2	<ul style="list-style-type: none"> Learners spell and punctuate with considerable accuracy. Learners use rules of grammar with general control of meaning overall. Learners use a good range of specialist terms as appropriate.
Threshold	1	<ul style="list-style-type: none"> Learners spell and punctuate with reasonable accuracy. Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. Learners use a limited range of specialist terms as appropriate.
None	0	<ul style="list-style-type: none"> The learner writes nothing. The learner’s response does not relate to the question. The learner’s achievement in writing accurately does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.



International aid is a form of help given from one country to another, from one person to another, or from a charity (non-governmental organisations or NGOs) to a country. Aid can be given short term for emergencies or given as development aid which is longer term and seeks to help people in poorer countries raise their standard of living. Aid includes money, equipment, training and loans.

Development aid aims to 'kick start' the development process. An example would be building a dam to provide drinking water and hydroelectric power, such as the Inga 3 dam on the Congo river funded by the World Bank. Small-scale projects work with local people and use local skills, for example in Malawi WaterAid (an NGO) supports communities to repair broken hand pumps, improve hygiene practices and train people to maintain their own resources. In villages without a toilet, WaterAid helps to build simple composting toilets that keep water sources clean and also provide fertiliser for crops.

Another project in Malawi is the Community Vitalization and Afforestation in Middle Shire (COVAMS), which is a ten-year project funded by the Japanese government. The project aims to prevent soil erosion by education on the causes of soil erosion, training farmers to plough around the hillsides, slowing surface runoff, building rock, wood and bamboo barriers across streams to slow down the flow of water, building terraces into the hillsides to reduce surface runoff and supplying fast-growing tree species to speed up re-afforestation.

Not everyone agrees that aid is improving the lives of people in the least developed countries. Local people can lose their land to large projects such as dams. Large-scale projects are often part of tied aid, where the country has to pay back loans or allow richer countries access to its resources. Senior posts created by aid projects are often given to foreigners as local people do not have the skills for those jobs. There are many views both for and against giving aid and whether aid is a good or bad thing. [8+ 3 for writing accurately]

Page 112

Give two reasons to explain why the consumption of water has increased globally. [4]

Rationale	Expected answers
Credit two valid statements, each for 1 mark. Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Increased size of the world's population [1], increase in the amount of water used for drinking, cooking, washing and cleaning [1] Increase in the level of economic development [1], increase in the amount of water used in industry [1], for example cooling purposes in the steel industry [1], increase in the amount of water used in agriculture [1], for example sprinklers [1], increase in the amount of water used in the home and leisure [1], for example swimming pools [1]

There are two reasons why the amount of water used globally has increased. First, the number of people in the world is increasing. In 2000 there were 6 billion people in the world, today there are over 7 billion. People use water for drinking, washing and growing the food we eat. Second, as countries develop and become richer, the people in those countries use more water for leisure purposes, for example swimming pools and golf courses, and also in farms where irrigation systems and sprinklers use vast quantities of water. [4]

Page 115

Explain why the demand for water is higher in high-income countries than in low-income countries. [6]

Rationale	Expected answers
Band 3 (5–6 marks): Demonstrates detailed understanding of the reasons for greater demand for water in high-income countries. Meaning is clear. The response has purpose, is organised and well structured	Responses should demonstrate understanding of why the demand for water is higher in high-income countries Responses in Band 3 should give examples to support understanding
Band 2 (3–4 marks): Demonstrates understanding	Examples include:



<p>of the reasons for greater demand for water in high-income countries. Meaning is generally clear. The response is structured</p> <p>Band 1 (1–2 marks): Simple statements show basic understanding. The answer may lack clarity. Statements are linked by a basic structure</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The global consumption of water has been rising over time. The water footprint of HICs is much higher than LICs</p> <p>In rich countries, agriculture is often mechanised with irrigation systems and sprinklers that use vast amounts of water. Richer countries have more industries such as steel that use huge quantities of water. The growth of consumerism has led to a growth in water consumption, with many homes having such appliances as dishwashers and showers. There has also been an increase in the amount of water used in the leisure industry in places such as swimming pools and golf courses</p> <p>The average family in the USA uses about 500 gallons of water a day, which is 100 times greater than the average African family living in a country such as Mali</p>
---	---

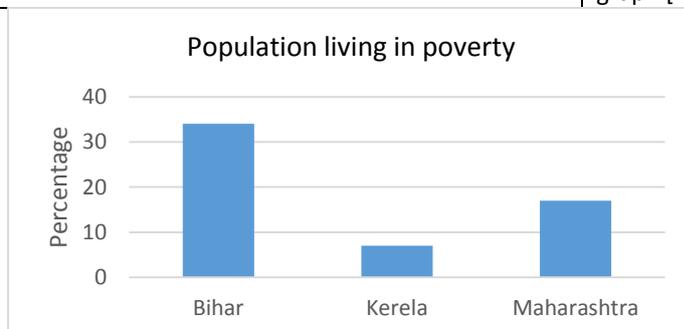
As a country becomes wealthier, there will be an increase in its demand for water. HICs are more industrialised and have a higher demand for water for industry. HICs may also have a higher demand for water for agriculture, even though more people are farmers in LICs, because farming is mechanised and sprinklers use vast amounts of water. In HICs people use a lot more water for domestic reasons. There are a lot of facilities which demand water use, such as showers, washing machines and swimming pools. With greater wealth there is also more demand for water for leisure purposes for spas, golf courses and even swimming pools.

In LICs, many people do not have access to piped water. In sub-Saharan Africa, for example, in countries such as Mali, people spend hours walking to collect water and in the home water is used more sparingly. In urban areas, people living in shanty towns often buy water from street vendors and can pay up to 50 times the amount for water paid by people living in European cities. The average family in the USA uses about 500 gallons of water a day whereas in Mali that figure is five gallons a day. [6]

Page 117

1 Display this information using a suitable graph. [4]

Rationale	Expected answers
Credit 1 mark for choice of a suitable graph and 3 marks for accurate construction	Bar graph, pie chart, pictogram are suitable Accurate axis with labelling [1], title [1], accurate graph [1]



[4]



2 Suggest two reasons to explain why a large percentage of the population of Bihar in India live in poverty. [4]

Rationale	Expected answers
Credit two valid statements Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Many people work in agriculture [1], farms are small and produce little more than a family needs to survive [1], many people work as landless farm labourers and are poorly paid [1] Government is more corrupt than elsewhere in India [1], health and other services are poorly funded [1] Education is poor [1], people are unable to find higher paid jobs [1] The birth rate is high [1], increasing the number of mouths to feed [1]

Bihar is a state in north-eastern India. It is one of the poorest states in India because the government there is more corrupt than in other parts of India and services such as education are poorly funded. Many of the people in Bihar are subsistence farmers who only produce enough food to feed their families or are landless labourers and poorly paid. [4]

Page 118

Name the process which results in a growing range of economic activities. Underline the correct answer from the following words: deindustrialisation, regeneration, diversification. [1]

Rationale	Expected answers
Credit this response only	Diversification [1]

Deindustrialisation, regeneration, diversification. [1]

Page 121

1 Give a four-figure grid reference for the location of the Amazon Distribution Centre. [1]

Rationale	Expected answers
Credit this response only	9637 [1]

9637. [1]

2 Give two reasons to explain why this site was chosen by Amazon for a distribution centre. [4]

Rationale	Expected answers
Credit two valid statements each for 1 mark. Each statement can be further elaborated for up to two additional marks. Hence candidates can achieve 4 marks via three routes (3+1, 2+2 or 1+3)	Gently sloping land [1], easier to build a large warehouse [1], needed to store the large range of goods sold by Amazon [1] Near main roads [1], for example M1 which links to the motorway network [1], easier to transport and deliver goods [1] Nearby villages [1], for example Aspley Guise [1], provide workers for Amazon [1]

There are many main roads nearby, such as the M1. This means that Amazon can easily deliver its goods all over the country. Also the land here is quite flat and this makes it easier to build the large warehouse needed to store all of the goods sold by Amazon. [4]



Theme 7

Page 123

1 Adult literacy rate is a social development indicator. Describe what is being measured by this indicator. [2]

Rationale	Expected answers
Award 1 mark for each valid statement up to 2 marks	The percentage of adults in a country that can both read and write with understanding [1], for this indicator an adult is classed as anyone over fifteen years [1]

Adult literacy rate refers to the number of adults who can read and write with understanding. [1]

2 Explain why people use the term 'continuum of social development'. [4]

Rationale	Expected answers
<p>Band 2 (3–4 marks): Explanation of the term continuum of social development with a reasoning of why this is a good way to view social development</p> <p>Band 1 (1–2 marks): A simple definition of the term is given but little reasoning for its benefits is given</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	Candidates will need to explain the term continuum of social development as part of their answer – 'a way of thinking about social development as a continuous process that does not have an end point'. The explanation would suggest that it is incorrect to say that countries are either healthy or unhealthy, for example, but they can be placed on a continuum in reference to each other

People use the term continuum of social development because it is a more accurate way to think about development. If we use the indicator of life expectancy as an example: if a country has a life expectancy of 79 and another country of 49 we would naturally say that one is high and the other one is low. However, what about countries in between these extremes? A continuum allows us to think of countries' development in relation to each other rather than in absolute terms of being one thing or another. [4]

3 Evaluate the advantages and disadvantages of using the HDI to measure social development. [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed description of advantages and disadvantages and clear evaluation</p> <p>Band 3 (5–6 marks): Advantages and disadvantages given with some evaluation</p> <p>Band 2 (3–4 marks): Some advantages or disadvantages given for using the HDI to measure social development</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of the HDI. No evaluation</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	Candidates may define what the HDI is before going on to give advantages and disadvantages. This is not a requirement of the question but it would help their explanation if they did this For Band 4, evaluation must be clear

The human development index (HDI) is an example of a complex indicator of development because it is a combination of a number of other development factors (average years in school, literacy rates, GNI per capita and life expectancy). This is opposed to a single indicator such as looking at literacy rates on



their own. The advantage of using HDI is that it gives a more accurate reflection of the overall social development of the country rather than focusing on one factor. For example, a country may have invested heavily in its education system but not in developing industry and trade links. Therefore, if looking at literacy rates on their own, we may think that the country has improved in social development, but when looking at HDI there will not be such an improvement seen. The danger with looking at single factors is that a biased picture can easily be misinterpreted as only one set of measurements is being considered. However, HDI also has its drawbacks as it does not take into account any health indicators other than life expectancy, or any environmental considerations. Therefore, it is not the only measure of social development that should be considered. Overall, I therefore think that the HDI is a valuable tool in assessing social development. However, it should not be used on its own, but in combination with other indicators. [7]

Page 129

‘Eradicating child labour is a key factor in the further development of countries in both South Asia and sub-Saharan Africa.’ To what extent do you think this is true? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of methods to eradicate child labour in both regions. To what extent is considered</p> <p>Band 3 (5–6 marks): Knowledge and understanding of methods to eradicate child labour in both regions. To what extent may be weak or missing</p> <p>Band 2 (3–4 marks): Some knowledge and understanding of methods to eradicate child labour in one region. Descriptions may be brief</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of methods to eradicate child labour. May not be region specific</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates need to consider child labour in both South Asia and sub-Saharan Africa, together with the relative development in each region</p>

When considering further development in areas of the world such as sub-Saharan Africa and South Asia, we would naturally hope that there is a reduction in the amount of child labour that takes place. In sub-Saharan Africa, child labour may take the form of children helping to collect water and firewood for their family, which may involve walking several miles each day carrying heavy material. Many families in this part of the world may not view this as child labour but as a necessary role within the family or village to maintain their survival. In South Asia, some children are involved in working in factories to produce clothing for Western companies. Again, their families may not view this as child labour but as an essential source of income to support their family. However, although these points of view can be clearly understood it is also true that a developed country cannot be one that forces children to undertake tasks which stop them from being educated. Therefore, I agree with the statement that if these regions of the world are going to develop further then child labour should be eradicated, but they need support in doing this. [8]



Page 131

1 What is meant by the term ‘infant mortality rate’? [2]

Rationale	Expected answers
Award 1 mark for each correct statement	The number of deaths of infants under one year old per 1000 live births [1], it is an indicator of the health of a country [1]

Infant mortality rate is the number of deaths of children under the age of one year old in a country for every 1000 live births. [1]

2 Why is this an important measure of development? [4]

Rationale	Expected answers
Award 1 mark for a reason and a further mark for the elaboration of that reason for up to three reasons	It gives an indicator of the health of a country compared to other countries [1], it provides an indication of how much investment is put into health services [1], it can measure the success of WHO vaccination programmes [1], it can illustrate a country’s priority for spending on health [1]

This measure of development is important because if a country is thought of as developed then large numbers of the population should not be dying before they reach one year old. It is an indicator of how healthy the country is – how healthy the mothers are in pregnancy and also the medical care that children receive when they are born. It can also indicate the amount of money that is spent on healthcare in a country, which shows how much the government values their population. [3]

3 Explain why either malaria or HIV is difficult to control and manage in sub-Saharan Africa. [6]

Rationale	Expected answers
<p>Band 3 (5–6 marks): Factors making the control of the disease difficult are described in detail in the context of sub-Saharan Africa</p> <p>Band 2 (3–4 marks): At least one factor as to why the disease is difficult to manage is described in detail. Sub-Saharan context is referred to but may only be briefly</p> <p>Band 1 (1–2 marks): Factors making control of the disease difficult are given but with little explanation. More of a generic explanation</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>For Band 3, candidates will probably discuss more than one factor making control of the chosen disease difficult and this will explicitly be within the sub-Saharan context</p> <p>Strategies discussed may include mosquito resistance to insecticides, funding, lack of availability of drugs, stigma and so on</p>

HIV is difficult to control in sub-Saharan Africa for a number of reasons. First, the lack of education. People in sub-Saharan Africa are often uneducated with regard to the spread of and the methods of prevention in contracting the disease. Also, the availability of methods of contraception, which can help stop the spread of the disease, is restricted and therefore even if people are educated on the benefits of using contraception, many areas of sub-Saharan Africa are unable to use them as they do not have access to them. Another difficulty is stigma. Many people do not want to get tested for HIV infection as they feel this may bring stigma and cause them to be rejected by their villages. Therefore, if they or other people do not know they are carrying the infection then they will not take precautions to prevent its spread. [6]



4 Describe the international responses to either malaria or HIV. [4]

Rationale	Expected answers
Award 1 mark for each valid statement and a further mark for elaboration of the description	<p>Malaria: Encourage people to use insecticide-treated bed nets [1], prevent people from being bitten [1] Charities provide nets to poor vulnerable communities [1], because there is a lack of money to buy nets [1] Development of new drugs [1], to combat drug-resistant strains</p> <p>HIV: Education programme [1], to reduce the number of new infections [1] Screening of pregnant women [1], to be able to treat babies born with the infection more quickly [1] Development of new drugs [1], to slow the progression of the virus [1]</p>

The international response to malaria mainly focuses on preventing people from being bitten by the mosquitoes that carry and spread the disease. The main charities together with the WHO have focused on getting insecticide-treated bed nets into vulnerable communities. These protect people when they are sleeping to prevent them getting bitten and contracting the disease. Much investment has also been put into developing new vaccinations to prevent people from contracting the disease. Continuous research is needed into new drugs because strains of the disease become resistant to drugs. [4]

Page 133

'In the twenty-first century, bottom-up approaches rather than top-down approaches are the way forward to speed up development in sub-Saharan Africa.' To what extent do you agree with this statement? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of the advantages of bottom-up approaches over top-down approaches and a clear link to how they speed up development. Clear sub-Saharan context and to what extent is addressed</p> <p>Band 3 (5–6 marks): Knowledge and understanding of the advantages of bottom-up approaches and how they speed up development. Top-down approaches may be absent. Some reference to sub-Saharan Africa but only in passing</p> <p>Band 2 (3–4 marks): Some knowledge and understanding of bottom-up approaches and a basic link to how these speed up development. Context may be implied</p> <p>Band 1 (1–2 marks): Basic knowledge of bottom-up approaches with a basic link to speeding up development</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>Candidates will be expected to describe a bottom-up approach and in the higher bands this should be compared to top-down approaches. For example, candidates could compare the success of hand pumps maintained by members of the village who use the pump to large-scale engineering projects like the Kaste Dam</p>

Bottom-up approaches to development in sub-Saharan Africa are a good way to help the area develop. Bottom-up approaches are projects that are planned and led by local communities to help their local



area. As a result of being involved in the implementation of the scheme, the local community is more likely to help it succeed. An example of this is when the charity WaterAid helps rural communities to put a hand pump in Ethiopian villages and train village members to maintain and repair the pump. This is opposed to top-down schemes which are more likely to be very large expensive schemes that are implemented by national governments. These schemes do not usually involve local communities and are 'imposed' on them rather than involving them in the decision-making process. An example of a top-down scheme is the development of the Kaste Dam in Lesotho. This is another project which aims to improve water supply. However, local communities that were destroyed by the creation of the dam did not benefit from this development. Whereas bottom-up development meets the needs of the local people more as they are focused on what the local community needs and are more sustainable. As such, this creates far more opportunities for individual communities to develop their own villages. Therefore, overall I agree with this statement as although large-scale top-down projects may appear to support the majority of a country's population, it is the small-scale projects that support individual communities. [7]

Theme 8

Page 137

1 What do you understand by the term 'consumerism?' [1]

Rationale	Expected answers
Award 1 mark for the correct answer	The idea that it is good if people buy an increasing amount of goods or services [1]

Consumerism is the idea that it is good if people buy large amounts of products as this generates more worldwide trade. [1]

2 Explain why one biome that you have studied is being destroyed due to consumerism. [4]

Rationale	Expected answers
Band 2 (3–4 marks): Reasons for destruction of the biome given with a clear link to consumerism as the cause	The answer will depend on the biome being used. The main focus of a Band 2 answer would be the link between the cause of destruction and consumerism
Band 1 (1–2 marks): Some reasons for destruction of the biome given but the link to consumerism weak or missing	Example: the destruction of tropical rainforest in Borneo so that palm oil plantations could be planted to contribute to the growing market for this product
No band (0 marks): Award 0 marks if wholly irrelevant	

Western diets generally have a relatively high amount of red meat. In order to produce the amount of beef needed, large herds of cattle need to be fed. In order to feed these large herds, areas of rainforest are being deforested so that the cattle can graze. Once the cattle have moved on, the ground is left compacted and the rainforest is unable to regrow, and so the biome is destroyed. [4]



3 'Destruction of ecosystems is necessary if global interdependence is to continue.' How far do you agree with this statement? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of the global interdependence between countries for food and resources. A clear link between the demand for a product in one country and the destruction of an ecosystem in another. How far statement is addressed</p> <p>Band 3 (5–6 marks): Detailed knowledge and understanding of the global interdependence between countries for food and resources. A link between the demand for a product in one country and the destruction of an ecosystem in another. How far statement is weak or missing</p> <p>Band 2 (3–4 marks): Knowledge and understanding of the global interdependence between countries for food and resources. A weak link between the demand for a product in one country and the destruction of an ecosystem in another</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of the global interdependence between countries for food and resources</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>The answer will depend on which ecosystem the candidate describes. There must be a clear link between why it is being destroyed and consumers' choice. The command term for the question is how far do you agree, so this must also be answered to gain Band 4</p>

As countries develop, they create trade links with other countries which lead to them being interdependent on each other. To generate this trade, countries need to either industrialise or develop agri-businesses so that they have products to sell. These businesses will occupy land which may lead to the destruction of ecosystems. For example, the production of palm oil in Borneo has added a great deal to the economies of the three countries and has aided their development. Many Western companies depend on buying this oil so that it can be used in their products and a profit can be made. This therefore leads to an interdependence between countries, but also a destruction of the natural ecosystem (tropical rainforests). However, I do not totally agree with this statement as agreements such as debt for nature swaps could be put in place to limit the size of palm oil farms to ensure that no new areas of rainforest are destroyed. Interdependence can therefore destroy ecosystems but this can be managed in a sustainable way. [7]

Page 141

1 Give two ways in which agri-businesses impact negatively on the environment. [2]

Rationale	Expected answers
<p>Award 1 mark for each correct statement up to a maximum of 2 marks</p>	<p>Chemicals such as herbicides, insecticides and fertilisers are used on large areas of land [1], fertilisers can cause eutrophication in rivers [1], use of large machinery will cause compaction of the soil [1]</p>

Two ways in which agri-businesses negatively impact the environment are through their use of artificial fertilisers which can cause eutrophication in rivers, and through their removal of hedgerows to have a larger space to farm which can decrease biodiversity in rural areas. [2]



2 Explain why the disposal of waste impacts on the environment. [4]

Rationale	Expected answers
Award 1 mark for a valid point and a further mark for the explanation of how it impacts the environment	Release of greenhouse gases [1] will increase the greenhouse effect [1] Fly tipping [1] causes visual pollution [1] Pollution of soil/water [1] due to chemicals released at landfill [1] E-waste contains hazardous materials [1], for example mercury [1]

The disposal of waste can impact on the environment in a number of ways. If the waste is sent to landfill then firstly this takes up large areas of land where the natural ecosystem is destroyed so that rubbish can be buried. Secondly, this rubbish, in years to come when it is breaking down, can release harmful chemicals into the soil or greenhouse gases such as methane into the atmosphere. Burning waste will also release these gases into the atmosphere. [4]

3 Describe the long-term impacts of climate change on the UK. [4]

Rationale	Expected answers
<p>Band 2 (3–4 marks): More than one impact is described which is long term</p> <p>Band 1 (1–2 marks): Brief description of one or more impacts of climate change but they might not necessarily be long term</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	Candidates may describe impacts such as increase in sea levels and loss of low-lying communities, opportunity to grow new crops in areas such as the southern UK, permanent loss of some glaciers and some sections of the ice caps and so on

There are many impacts of climate change that are likely to be long term. Sea level rise, for example, is likely to be long term as the extra water has come from the glaciers and therefore it is now stored in the ocean, raising its level. Migration of people due to the areas they currently live in becoming too inhospitable is also likely to be long term as the increasing lengths of droughts make some parts of Africa no longer able to support people. Permanent flooding due to sea level rise will also have long-term impacts as people will again need to permanently migrate. [4]

4 How might people’s lifestyles change in the future in a warmer world? [4]

Rationale	Expected answers
<p>Band 2 (3–4 marks): Detailed knowledge and understanding of how a warmer world will cause a change to people’s lifestyles</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of how a warmer world will cause a change to people’s lifestyles</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>At Band 2, candidates will be able to illustrate a chain of reasoning linking the change in lifestyle to climate change</p> <p>There is a large range of possible answers which may include migration to other regions/countries, change in the food eaten, increased use of air conditioning in the UK, increase in vaccinations for new diseases</p>

If you live in an area with low-lying land, you are very likely to be affected by a warmer world. Warmer temperatures will cause ice caps to melt and this will lead to a larger volume of water in the oceans and hence a rise in sea level. Islands such as the Maldives will therefore be under threat of completely being lost so people from these islands will need to permanently migrate, which greatly affects their lifestyle. In the UK, people’s lifestyles may need to change if temperatures increase as they may need to build new houses with air-conditioning and so on. [4]



'A debt for nature swap is the most effective environmental strategy to manage habitat and biodiversity.' To what extent do you agree? [8]

Rationale	Expected answers
<p>Band 4 (7–8 marks): Detailed knowledge and understanding of how effective a debt for nature swap is in managing habitat and biodiversity. Reference will be made to other strategies in order to answer the 'most effective' part of the question. Extent must be answered to gain Band 4</p> <p>Band 3 (5–6 marks): Detailed knowledge and understanding of how effective a debt for nature swap is in managing habitat and biodiversity. Reference to other strategies may be missing or weak and the 'extent' part of the question may be missing</p> <p>Band 2 (3–4 marks): Knowledge and understanding of how effective a debt for nature swap is in managing habitat and biodiversity</p> <p>Band 1 (1–2 marks): Basic knowledge and understanding of a debt for nature swap</p> <p>No band (0 marks): Award 0 marks if wholly irrelevant</p>	<p>It is expected that most candidates will answer this question through a case study. At Band 4, candidates need to link the debt for nature swap to effective management of habitats. The better candidates will briefly describe another environmental strategy so that they can answer the 'most effective' part of the question</p> <p>Examples may include the USA and Indonesia's Heart of Borneo project, Brazil and the USA conserving its Atlantic coastal rainforest, Cerrado and Caatinga ecosystems</p>

Debt for nature swaps are agreements between more wealthy and poorer countries where the poorer country agrees to spend money on conservation of a valuable ecosystem, in return for the richer country cancelling part of the debt that the poorer country owes them. An example of this is the USA converting \$21 million of Brazil's debt into a fund to protect tropical rainforests. Brazil uses this money to support conservation and boost the livelihoods of people who live in the threatened forest areas. This type of strategy is good as the poor country is incentivised to conserve areas because if they stick to the agreement they will save money in paying back debts. If other ecosystem management techniques are used, such as a wildlife corridor, the incentive is not as great as it will prevent further development within this area of the country. Wildlife corridors are areas of land that allow animals to move from one ecosystem to another. This does not necessarily give any financial benefit to the country and therefore the incentive is not as strong. I therefore agree strongly that the debt for nature swap agreements are one of the most effective ways to manage habitats and biodiversity because the country where the ecosystem is under threat is invested in ensuring the conservation takes place. [8]