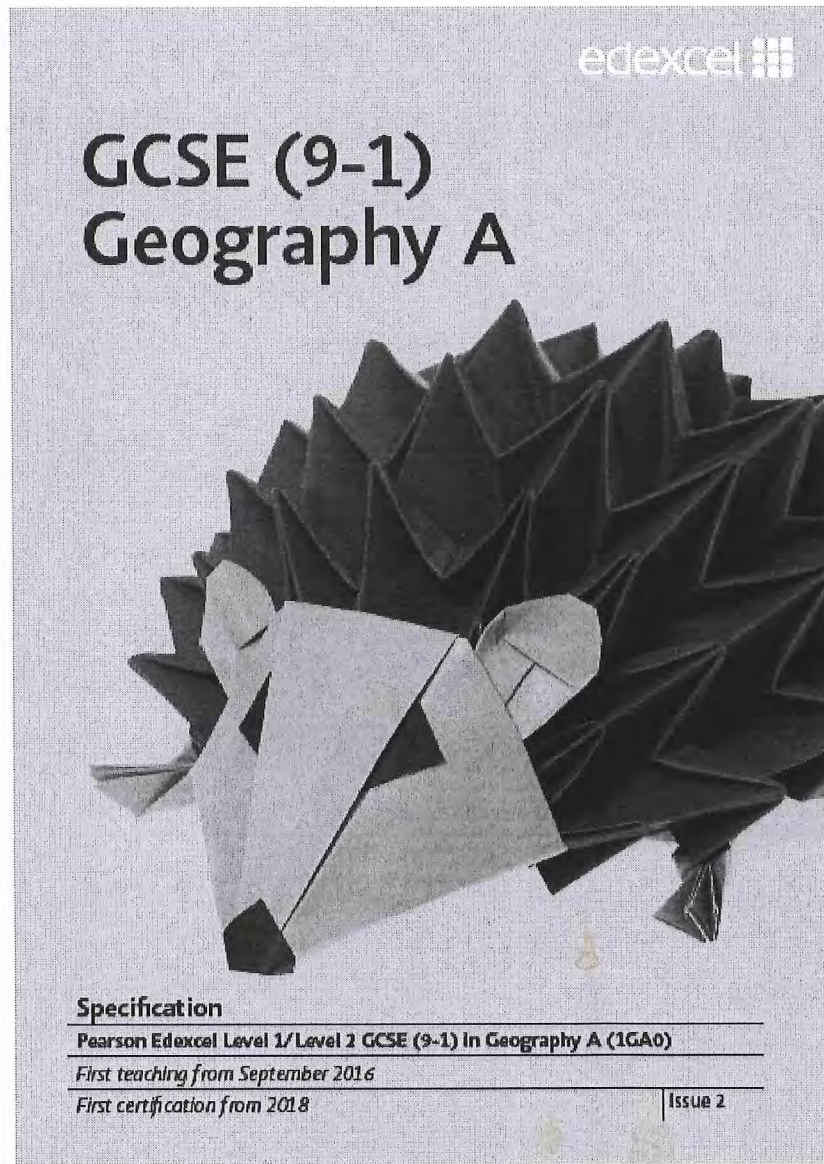


# Geography GCSE

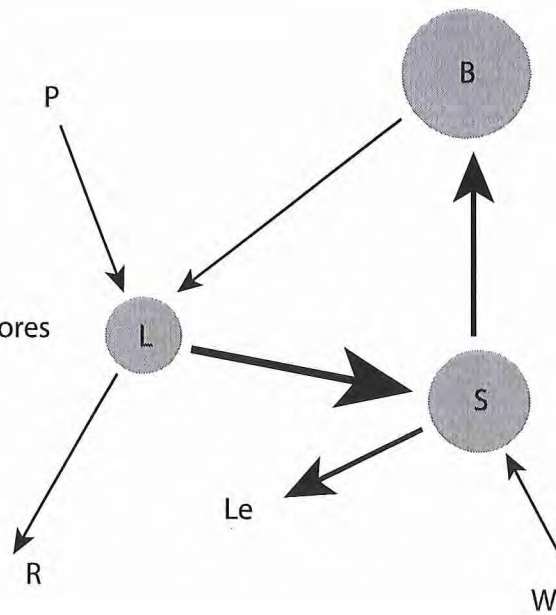
## Edexcel Specification A



PART B P84-164

Temperate deciduous forest

- balance between stores
- moderate transfers between stores



Tropical rain forest

- biomass is main store
- rapid transfer between stores and environment

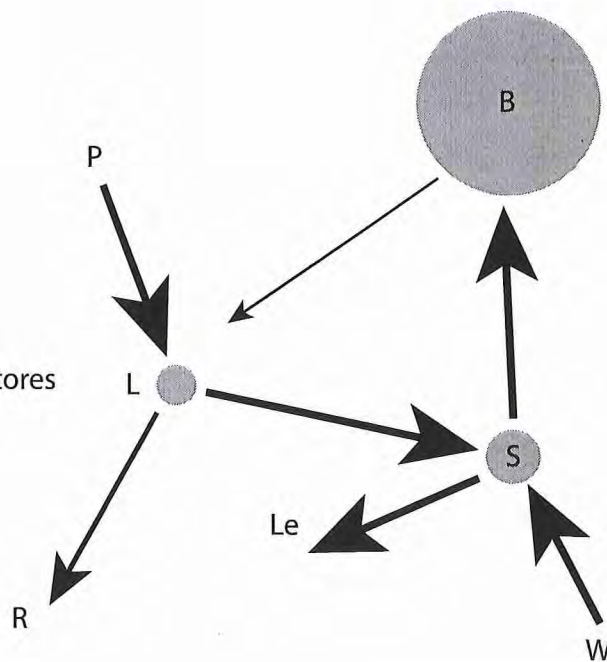


Figure 11

Nutrient cycle models

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(c) Explain **one** reason why energy consumption per person has increased in the last 100 years.

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(d) Explain **one** reason why non-renewable energy resources need to be managed.

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Question number	Answer	Mark
4(c)	<p>Award 1 mark for change in energy consumption and a further 1 mark for an explanation of the effect of this, up to a maximum of 2 marks:</p> <p>increased incomes/personal wealth (1), leading to growth in consumerism of products that require electricity (1)</p> <p>growth in ownership of hi-tech products (1) that requires electricity/electrical products to function (1)</p> <p>rising car ownership/2 to 3-car families (1), which increases the demand for oil (1).</p> <p><b>Accept any other appropriate response</b></p>	(2)

Question number	Answer	Mark
4(d)	<p>Award 1 mark for point about energy source and a further one mark for explanation of its effect, up to a maximum of 4 marks:</p> <p>non-renewable energy resources are finite (1), which means they will eventually run out (1) so alternatives in the form of renewables are needed that can be recycled/reused/replenished (1) over a shorter period of time (1)</p> <p>non-renewable energy resources emit carbon dioxide (1) which is a greenhouse gas (1) and causes global warming (1), which causes sea level rise/extremes in climate (1)</p> <p><b>Accept any other appropriate response</b></p>	(4)



Question number	Answer	Mark
2(e)	<p>Award 1 mark for a basic change and a further one mark for extension through description or explanation, up to a maximum of 4 marks:</p> <p>Birth rate has decreased (1) due to wider availability of contraception (1)</p> <p>Death rates have decreased (1) as there is better health care (1)</p> <p>Life expectancy is increasing (1) because there is a greater awareness of the causes of disease (1)</p> <p>There is a population of working age (1), infant mortality is reducing and people are surviving to adulthood (1)</p> <p><b>Accept any other appropriate response.</b></p>	(4)

Question number	Answer	Mark
2(c)(i)	<p>Award 1 mark for identifying a relevant advantage/disadvantage and a further one mark for justification of how top-down development projects have this impact, up to a maximum of 2 marks each.</p> <p>Advantages</p> <p>Large-scale government investment and political support/will (1) has the potential to affect positively the lives of a large number of people (1).</p> <p>Political and government support provides conditions for a multiplier effect/'take off' (1) which could lead to rapid economic development (1).</p> <p>The local economy could be improved (1) so there are more funds available to spend on healthcare, education and training (1).</p> <p>Disadvantages</p> <p>High capital expenditure costs (1), which could lead to government debt/the diversion of spending from education/healthcare to pay off the debt (1).</p> <p>Government/politicians are sometimes removed from local people/needs are often ignored (1) so they do not benefit in terms of economic and social development (1).</p> <p>Often focussed on the needs of cities or a government power base, not rural areas/more marginal areas (1) so could exacerbate existing development inequalities (1).</p> <p><b>Accept any other appropriate response</b></p>	(4)

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(f) Explain **one** impact on the Central Business District (CBD) of recent changes in retailing.

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Question number	Answer	Mark
1(f)	<p>Award 1 mark for impact on CBD and a further one mark for explanation of its effect, up to a maximum of 3 marks:</p> <p>Growth in out-of-town shopping centres (1), which offered cheaper prices (1) took customers away from the CBD (1)</p> <p>Many shops in the CBD lost customers (1), which meant that they were making less money (1) and some eventually closed down (1)</p> <p>Many CBDs have become pedestrianised (1), with improved street lighting (1) to make them more appealing to shoppers (1)</p> <p><b>Accept any other appropriate response</b></p>	(3)

90

**SECTION B**

**Geographical Investigations – Human Environments**

**Answer only one question from Question 3: Investigating human landscapes (central/inner urban area) and Question 4: Investigating human landscapes (rural settlements).**

**Indicate which question you are answering by marking a cross . If you change your mind, put a line through the box  and then indicate your new question with a cross .**

Chosen question number: **Question 3**  **Question 4**

**Question 3: Changes in the central urban area/CBD**

**3** You have carried out fieldwork when investigating urban environments.

Name of your urban fieldwork location .....

(a) Explain **one** way in which the secondary data you collected supported your urban geographical investigation.

Name secondary data collection method .....

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(b) Explain **one** way the physical features of the urban area you studied influenced the land use of the inner/central urban area.

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(c) Explain **one** disadvantage of the sampling strategy you used when investigating views of people on quality of the urban environment.

Name of sampling strategy .....

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Question number	Answer	Mark
3(a)	<p>Award 1 mark for the identification of an appropriate secondary data source and a further 2 marks expansion of how this explicitly supported the enquiry/investigation, up to a maximum 3 marks.</p> <p>There are a number of different contexts, e.g.:</p> <p>a large scale Goad plan map of the city centre dated 2005 (1) was used to compare current shop types collected as part of the primary fieldwork to establish a rate of shop turnover (1) which helped us to understand whether the town centre was 'healthy' (1)</p> <p>ONS neighbourhood statistics/Census data (1) was used to compare housing tenure with our primary data on environmental quality (1) so that we could make an overall judgement about the place (1).</p> <p><b>Accept any other appropriate response.</b></p>	(3)

Question number	Answer	Mark
3(b)	<p>Award 1 mark for the identification of a physical feature of the urban area you studied and, and a further mark expansion up to a maximum 3 marks:</p> <p>where the land was steepest (1) accessibility was reduced (1) which meant there were fewer larger retail outlets and services and more historical buildings and tourist attractions (1)</p> <p>the town centre area was limited by its proximity to the flood plain (1) which resulted in a concentration of retail outlets and light industry on the higher land to the north (1) and open space on the lower land/floodplain.</p> <p><b>Accept any other appropriate response.</b></p>	(3)

Question number	Answer	Mark
3(c)	<p>Award 1 mark for a disadvantage of the sampling strategy and a further 3 marks for an explanation of this disadvantage, up to a maximum of 4 marks:</p> <p>a disadvantage of random sampling is that you can unintentionally introduce bias (1) because you might be drawn to a certain social group (1), which could cause you to oversample them (1) and therefore affect the reliability of the results (1)</p> <p>a disadvantage of systematic sampling is that you might miss groups of people (1) because you are only sampling at nth intervals (1), which could cause some views to not be recorded (1) which could skew the results (1)</p> <p>a disadvantage of stratified sampling is that you need to access to background population information (1) in order to identify the correct groups to sample from (1) in order to avoid under-/over representation of a particular group within a population (1), otherwise the sample could lead to a biased/unreliable conclusion (1).</p> <p><b>Accept any other appropriate response.</b></p>	(4)

Question number	Answer	Mark
1(c)	<p>Award 1 mark for identification of a reason and a further mark for an explanation of the reason, up to a maximum of 3 marks:</p> <p>the sampling points are just below the confluences (1), therefore this is where you would expect a change in the discharge of the river (1) so that sampling between confluences is unlikely to show a change in discharge (1)</p> <p>stratified sampling will ensure that similar sites are used down the river, e.g. just below the confluence (1), other sampling approaches such as random and systematic (1) will miss the significant changes in discharge (1).</p> <p><b>Accept any other appropriate response.</b></p>	(3)

Question number	Answer	Mark
1(d)(iii)	<p>Award 1 mark for identification of a reason and a further mark for an explanation of the reason, up to a maximum of 2 marks:</p> <p>site 5 is an outlier (1), which means using median, rather than mean ignores the influence of the outlier (1)</p> <p>median uses a rank of data whereas mean is an arithmetic measure of central tendency (1), therefore influence of anomalies is ignored (1).</p> <p><b>Accept any other appropriate response.</b></p>	(2)

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(c) Study Figure 1a in the Resource Booklet. It shows a sketch of sites used to collect river data.

Explain **one** reason why the students chose a stratified sampling approach.

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(iii) Using Figure 1b, explain **one** reason why a student might choose to use the results from the median, rather than the mean.

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**Examiner**

**Marked**

**Responses**

**Examine**

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**Example 4, GCSE A, Paper 1 question 2 (a) (iv)**

(iv) Study Figure 2.

Examine how physical processes work together in the formation of the spit shown in Figure 2.

(8)

**Indicative content**

Question number	Indicative content
2(a)(iv)	<p style="text-align: center;"><b>AO3 (4 marks)/AO4 (4 marks)</b></p> <p><b>A03</b></p> <ul style="list-style-type: none"> <li>• Wave direction is determined by the prevailing wind resulting in the wash proceeds up the beach at an angle to the coast.</li> <li>• Sediment is moved along the coast. The swash pushes sediment up the beach, its direction determined by the prevailing wind. The back wash causes material to move back down the beach at right angles to the coast.</li> <li>• The swash/back wash process produces a zig zag movement of sediment along the coast. Over time, large amounts of material can be transported along the beach.</li> <li>• Where the coast changes direction, material is deposited offshore. Over time, there is a buildup of material off the coast – this forms a spit. Long-shore drift is a dominant process in maintenance of the spit.</li> <li>• Once material moves to the east of the headland, there is a lower energy environment, allowing deposition to occur, which encourages the deposition of fine materials resulting in the creation of mudflats/a salt marsh area.</li> <li>• Over time, the spit can develop a hook/become recurved and its shape is influenced by both river currents/tidal movement and localised wind in the estuary mouth.</li> <li>• The estuary is important in the diagram as it limits the growth of the spit due to the deep water and the currents.</li> <li>• Transportation occurs until a change in direction of the coastline.</li> </ul> <p><b>A04</b></p> <ul style="list-style-type: none"> <li>• The prevailing wind is south-westerly.</li> <li>• The long shore drift is moving west to east.</li> <li>• There is evidence of a narrow strip of beach/sand in front of the mainland (before the headland).</li> <li>• There is fast water flowing out of the river mouth in a north south direction.</li> <li>• The landform is a recurved spit, which curves towards the north/mouth of river estuary.</li> <li>• Behind the spit there is a build-up of sediment forming a salt marsh area.</li> </ul>

## Mark scheme

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

### Student responses to part 2 (a) (iv)

Processes (8)

There are many physical processes working together to form the spit shown in figure 2. Longshore drift is one of them. Longshore drift <sup>moves</sup> ~~is where~~ sediment along a beach through erosion and transportation in the waves. Swash carries the sediment up the beach.

at a  $45^\circ$  angle, and back wash pull the sediment back down at a  $90^\circ$  angle. This is caused by the wind from <sup>the</sup> south-west direction shown in figure 2. The result is the sediment being transported from west to east. The coast then changes direction and the sediment is deposited at the end of the beach. This is repeated until the spit is bigger, but it cannot grow across an estuary because of the fast flowing water flowing from north to south, shown in the

diagram. The area **(Total for Question 2 = 12 marks)** behind the spit is protected from erosion and transportation, so then it develops a salt marsh from deposition.

### Examiner's comments

This response is awarded worth 8 marks. This response reaches the top of Level 3 because the candidate has focused on the command word 'examine' and has both described and explained the physical processes which work together to form a spit. A range of information has been used from the resource including:

- direction of the prevailing wind
- direction of sediment movement
- change in direction of the coastline
- fast flowing river (from north to south)

This information has been used to support the explanation of physical process and to help provide a balanced account which synthesises relevant understanding of process.

It should be noted that the candidate has not used all the evidence from the resource (e.g. scale, re-curved end) – the key in this question is for the candidate to selectively use the evidence to help explain the role of physical processes in the formation of the landform.

It is important to note that as the command word is 'examine', ongoing judgements or a final conclusion are not required.

Many different physical processes work together to form the spit in figure 2. The main process involved is longshore drift, which works through erosion and transportation. Sediments are washed up the beach by surf at a  $45^\circ$  angle, and then moved back down by the backwash at a  $90^\circ$  angle. The prevailing wind in figure 2 is <sup>coming</sup> coming from a south westerly direction, which moves sediments west to East.

When the sediments reach the end of the beach they build up at the headland shown in figure 2, which causes it to stretch out to sea. This is called a spit. The fast flow of the river prevents the spit reaching the other side of the coast. As the area behind the spit is protected from erosion and transportation, it forms a salt marsh.

In conclusion, longshore drift is the main process involved, but then could not work without some erosion and transportation.

#### Examiner's comments

This response is awarded 7 marks. As in the previous example, the candidate has reached Level 3 because they have met the demands of the command word 'examine' in their answer; again, this requires the candidate to combine their geographical knowledge and understanding with the scenario presented by the resource. In this response, a range of information from the resource has been used, including:

- direction of prevailing wind
- 'sediment building up at the headland'
- fast flowing river
- protection of the salt marsh by the spit

As with the 8 mark response above, this candidate has not used all the evidence from the resource and it is important again to note that the key is how the information is used rather than just listing evidence from the resource.

This candidate has also made links between physical processes and has, overall, written a balanced, well-developed account. However, this response does not get to the top of Level 3 because some of the links between the evidence from the resource and the physical processes at work are not as clearly stated as in the 8 mark response above. For instance, while this candidate does identify the role of swash and backwash in moving sediments along the beach and then goes on to write about the prevailing wind (end of the first paragraph) the link between these two elements is not made. It is important to note that as the command word is 'examine', ongoing judgements or a final conclusion are not required.

There are many processes that work together to form a spit (shown in figure 1). Long shore drift is the main process at work to form a spit. Longshore drift works to move sand along a beach by erosion and transportation. Swash moves the sediment along the beach in a 45° degree angle and then backwash pulls the sediment down the beach at a 90° angle. These angles are caused by prevailing winds in the waves going in a South-westerly direction. This creates a zig-zag movement along the beach going from east to west.

(When the spit changes direction (shown in figure 2 by the sea estuary) The spit deposits its sediment into the sea at the end of a beach. This happens time and time again to make the spit bigger. It can't carry on across the estuary as there is fast flowing water from the sea in a north to south direction. Because of this behind the spit is protected, there from erosion and transportation, therefore there is slow calm water behind the spit allowing a salt marsh to form (shown in figure 2).

Overall longshore drift is the main (Total for Question 2 = 12 marks)

© P Process However a spit couldn't form without the erosion, deposition and transportation therefore they have to work together

**Examiner's comments**

This response is awarded 5 marks. This response is Level 2 because there is some evidence from the resource, but the links between this evidence and the role of physical processes is not always clearly stated. The range of evidence used is also more limited than in the previous two responses. In this case the following information from the resource has been referred to:

- Prevailing wind direction
- Fast flowing water from the sea in a north to south direction
- Salt marsh forming behind the spit

It should also be noted that some of the information provided (e.g. movement of sediment 'from east to west' and the 'fast flowing water from the sea' is either incorrect or poorly expressed). However, the candidate has used some evidence and has obtained some accurate information from the resource. This has been used to help explain the formation of the spit and there is some accurate physical process. The inaccuracies in some of the information have meant that the response has been assessed as a mid-level 2 answer. If the information used had been more accurate it would then have been a top level 2 answer.

Many different physical processes work together to form a spit. The movement of sediment is along the beach because the swash takes the material up the beach at a 45° angle and then gravity takes it back down the beach at a 90° angle. This is caused by the direction of the prevailing wind. The process is called Longshore drift.

Longshore drift moves the sediment along the beach until a headland. The sediment then continues to be moved out to sea and builds up a spit. The spit does not continue across an estuary because its end is removed by a river.

**Examiner's comments**

This response is awarded 4 marks. Although the candidate has explained the role of longshore drift in the formation of a spit – and has made links to prevailing wind direction – the answer could have been completed without the aid of the diagram. In this case, all the marks have been awarded for the AO3 component and no marks have been awarded for AO4. Both aspects of the mark scheme (AO3 and AO4) need to be addressed at least in part to be gain entry into Level 2.

# Examine

This command should always come with a figure. You should spend some time annotating the figure and you should be able to link it to a range of processes that you have learnt about.

The mark scheme is very specific:

- ⇒ 4 marks for your use of the figure.
- ⇒ 4 Marks for your own knowledge.

You should aim to use the PEEL sentence starters.

The language in the mark scheme suggests that you should be able to put a range of processes in order and explain how they work while linking them to the figure.

If the figure is a:

- ⇒ Map
  - ⇒ Use the scale.
  - ⇒ Use compass directions
  - ⇒ Use the key.
  - ⇒ Use grid references.
  - ⇒ Measure distances.
- ⇒ Drawing
  - ⇒ Use the scale.
  - ⇒ Look for labels that you can quote.
  - ⇒ Use compass directions.
  - ⇒ Label features you know from your revision.
- ⇒ Photo
  - ⇒ Label key feature you know about.
  - ⇒ Talk about the foreground, middle ground and background.
  - ⇒ If a key, scale or compass direction is available, use.

## Examine sentence Starters:

There are many ..... In .....

According to figure....

..... can be seen in figure.....

..... Process. Is involved in the development of.....

As can be seen in ....

It is possible to see in .....

In the background of.....

In the foreground.....

In the middle ground.....

..... Is ..... (compass direction)

The distance between .....

The width/height

.... Gets wider at .....

Go into because sentence starters....

(iv) Study Figure 2.

Examine how physical processes work together in the formation of the spit shown in Figure 2.

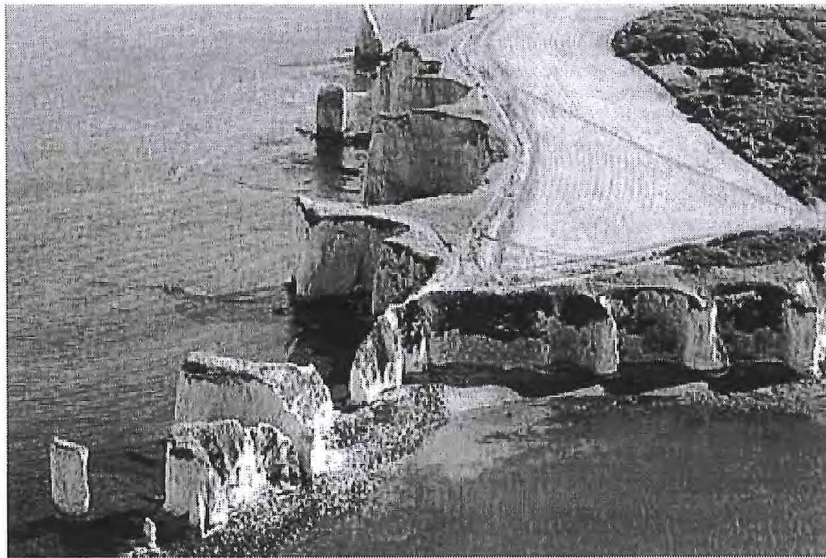
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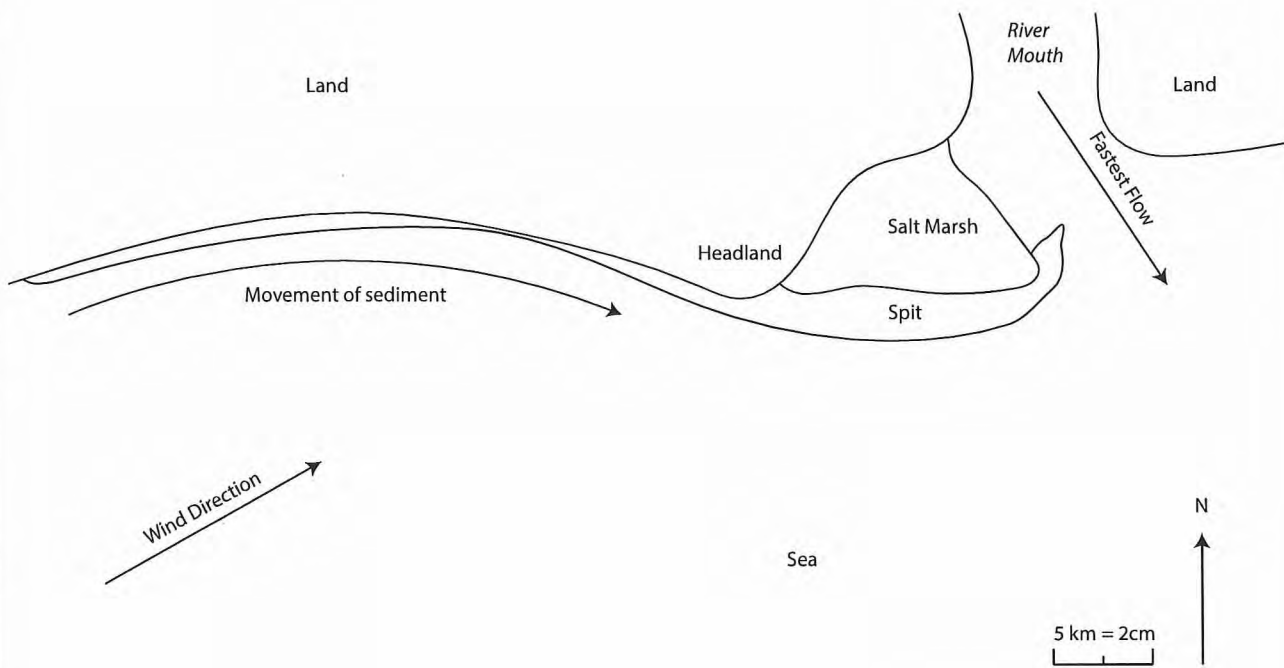
**(Total for Question 2 = 12 marks)**



(Source: [thetimes.co.uk/tto/multimedia/archive/00361/117597242\\_361456c.jpg](http://thetimes.co.uk/tto/multimedia/archive/00361/117597242_361456c.jpg))

**Figure 1**

**A diagram showing a stretch of coastline in Southern England**



(Source: David Holmes)

**Figure 2**

**A diagram showing the formation of a spit**

Question number	Indicative content
3(a)(iv)	<p style="text-align: center;"><b>AO3 (4 marks)/AO4 (4 marks)</b></p> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Illustrates the dynamic process of erosion, transport, and deposition occurring over the length of a river – though in the formation of an oxbow lake, erosion might be seen as the dominant factor.</li> <li>• Material is eroded from the outside of the meander creating a river cliff – the water travels at greater speed on the outside bend and has more energy for erosion. This process also leads to the provision of sediment in the river.</li> <li>• In the lower-energy environments on the diagram, deposition will take place, e.g. on the inside of meanders where the water level is shallow, friction is high and deposition occurs forming point bars.</li> <li>• The high-energy areas of the meander (erosional areas) were extended with the result of a narrowing of the neck of the meander. Subsequently, high flow/flood broke through the neck of the meander leaving a body of water cut off, forming an oxbow lake.</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• The river flows from north to south.</li> <li>• There are alternate areas of erosion (river cliffs) and deposition (point bars).</li> <li>• The river meanders across the flood plain.</li> <li>• The flood plain is approximately 100 m wide.</li> <li>• The diagram indicates differential rates of erosion and deposition, with the greatest amount of erosion taking place on the outside of meanders,</li> <li>• There is a wide valley floor with hills/cliffs/steep valley sides on either side,</li> <li>• There is a body of water separate from the main channel, an oxbow lake.</li> </ul>

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>• Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

(iv) Study Figure 4.

Examine how physical processes work together in the formation of the oxbow lake shown in Figure 4.

(8)

Area for writing the answer, consisting of multiple horizontal dotted lines.

**(Total for Question 3 = 12 marks)**

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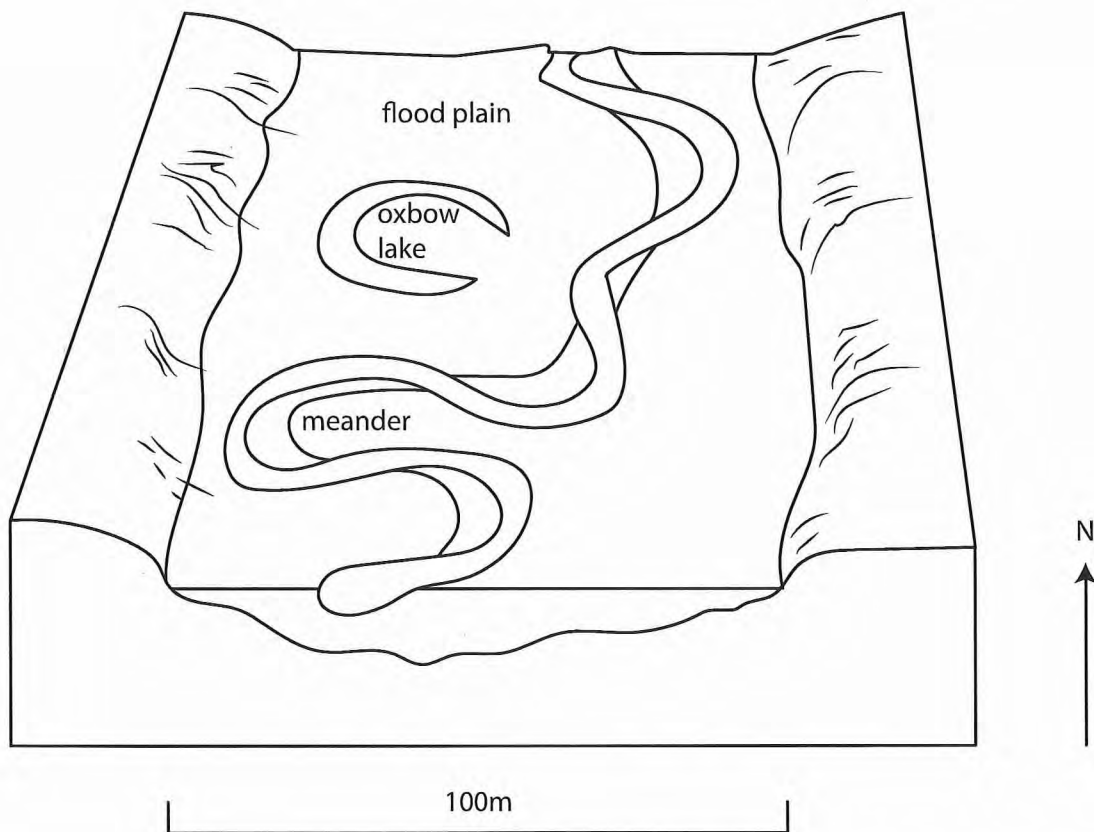
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(Source: David Holmes)

**Figure 3**

**A diagram showing a stretch of river in Shropshire, England**



(Source: David Holmes)

**Figure 4**

**A diagram showing the formation of an oxbow lake**

Question number	Indicative content
2(a)(iv)	<p style="text-align: center;"><b>AO3 (4 marks)/AO4 (4 marks)</b></p> <p><b>A03</b></p> <ul style="list-style-type: none"> <li>• Wave direction is determined by the prevailing wind resulting in the wash proceeds up the beach at an angle to the coast.</li> <li>• Sediment is moved along the coast. The swash pushes sediment up the beach, its direction determined by the prevailing wind. The back wash causes material to move back down the beach at right angles to the coast.</li> <li>• The swash/back wash process produces a zig zag movement of sediment along the coast. Over time, large amounts of material can be transported along the beach.</li> <li>• Where the coast changes direction, material is deposited offshore. Over time, there is a buildup of material off the coast – this forms a spit. Long-shore drift is a dominant process in maintenance of the spit.</li> <li>• Once material moves to the east of the headland, there is a lower energy environment, allowing deposition to occur, which encourages the deposition of fine materials resulting in the creation of mudflats/a salt marsh area.</li> <li>• Over time, the spit can develop a hook/become recurved and its shape is influenced by both river currents/tidal movement and localised wind in the estuary mouth.</li> <li>• The estuary is important in the diagram as it limits the growth of the spit due to the deep water and the currents.</li> <li>• Transportation occurs until a change in direction of the coastline.</li> </ul> <p><b>A04</b></p> <ul style="list-style-type: none"> <li>• The prevailing wind is south-westerly.</li> <li>• The long shore drift is moving west to east.</li> <li>• There is evidence of a narrow strip of beach/sand in front of the mainland (before the headland).</li> <li>• There is fast water flowing out of the river mouth in a north south direction.</li> <li>• The landform is a recurved spit, which curves towards the north/mouth of river estuary.</li> <li>• Behind the spit there is a build-up of sediment forming a salt marsh area.</li> </ul>

<b>Level 1</b>	1-3	<ul style="list-style-type: none"> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> <li>• Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
<b>Level 2</b>	4-6	<ul style="list-style-type: none"> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
<b>Level 3</b>	7-8	<ul style="list-style-type: none"> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>



**Evaluate**

**Examiner**

**Marked**

**Responses**

### Example 3 – GCSE A, Paper 2, Question 1 (g)

- (g) You have studied a major UK city and a major city in a developing or emerging country.

Evaluate which of these cities have been most successful in improving the quality of life for its people.

(8)

### Mark scheme

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

## Indicative content

1(g)	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Quality of life is a combination of different factors such as health, sanitation, education, employment, wealth, access to clean drinking water.</li> <li>• Major cities in developing/emerging countries are faced with a number of challenges that affect quality of life; in particular, the need to develop infrastructure and services such as water, sewage, drainage and waste collection.</li> <li>• Environmental issues such as increased air pollution due to a growing number of car users and/or industries, affect the quality of life in major cities and require careful management.</li> <li>• Social and economic issues such as the spread of disease, crime, unemployment and education need to be managed.</li> <li>• The UK and developing/emerging countries manage the economic, environmental and social issues in different ways.</li> <li>• In major cities in the UK, strategies to improve the quality of life may include waste management (e.g. recycling), developing job opportunities, increasing the quality and quantity of schools, improving healthcare and welfare provision, the development of integrated transport systems and increasing the supply of affordable and energy-efficient housing.</li> <li>• In major cities in developing/emerging countries, bottom-up (e.g. site and service schemes and self-help schemes) and top-down approaches (e.g. government policies and investment in improving transport, education and waste disposal) have been taken to improve the quality of life.</li> </ul> <p><b>AO3</b></p> <p>Evaluation will depend on the specific case studies, but may include:</p> <ul style="list-style-type: none"> <li>• The quality of life in some areas of major cities is low and the reasons for this vary – and these reasons are a combination of social, economic, environmental and political factors.</li> <li>• The type of strategy(s) relative impact of an approach used to improve the quality of life vary and are influenced by factors such as the level of development of a country, national government policy and international relations with other countries. Some countries have greater economic power and influence to prioritise urban improvements.</li> <li>• Approaches to improving the quality of life vary in their effectiveness, e.g. a strategy may target only a particular area or is dependent on a reliable supply of funding.</li> <li>• The advantage of some approaches is the consequential effect on other aspects of quality of life, e.g. by improving access to clean</li> </ul>
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	<p>drinking water the spread of disease is limited, residents experience better health and are able to go out to work.</p> <ul style="list-style-type: none"> <li>• In some cities, there are barriers preventing approaches being successful, such as a lack of funding, rapidly-growing populations and the legacy of deindustrialisation.</li> </ul>
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**Student responses to part 1 (g)**

Sao Paulo is a city in Brazil, an emerging country. There have been a range of strategies used to improve the quality of life: A top down project has been the Chinguanza Housing Project which involved the building of about 100000 new homes, improving conditions in favelas. However, only 14000 were built in the end and there was a lack of community spirit as residents were living in 10-storey high rise tower blocks. Another scheme was the self-help scheme in Santo Andre where favelas were not knocked down, but upgraded with better health, education and recreational facilities. This is better than the top-down project as it retained community spirit and included locals in the decision-making process; however, with so many people several strategies were introduced. Bristol Council set up a website called walkit.com which had lots of maps to encourage walking rather than using cars - which would lower CO<sub>2</sub> emissions. Also, Car hubs and 2+ only lanes have been set up in Bristol to encourage car sharing and therefore reduce CO<sub>2</sub> emissions. Overall, both of these schemes have been fairly successful, but there is always

(Total for Question 1 = 30 marks)

going to be people who drive on their own to work as it is more convenient.

TOTAL FOR SECTION A = 30 MARKS

**Examiner's comments**

This response is awarded 8 marks.

The candidate has demonstrated an accurate understanding of the attempts to improve the quality of life in a major UK city (Bristol) and a major city in a developing/emerging country (Sao Paulo). This is done by considering a range of strategies and how they are designed to improve the quality of life for the residents of both cities. There is good use of supporting detail (e.g. facts and figures) and logical connections are made between what the strategy is and how it is going to improve the quality of life.

The command word here is 'evaluate', which means that the candidate needs to show degree of reflection – for example in terms of the effectiveness of the strategies that have been used. In this response, the candidate opts to provide judgements throughout the answer, rather than one final statement – which is absolutely fine.

## Fieldwork questions

### Example 1 – GCSE A, Paper 3, Question 1e

You have studied a river as part of your own fieldwork.

(e) Evaluate the reliability of your conclusions.

(8)

### Indicative content and mark scheme

Question number	Indicative content
1(e)	<p style="text-align: center;"><b>A03 (4 marks)/AO4 (4 marks)</b></p> <p><b>A03</b></p> <ul style="list-style-type: none"> <li>• Reliability is about making judgements on how close conclusions are to the actual changes occurring in the river channel/catchment.</li> <li>• Reliability will be most likely linked to results via methods – evaluation including equipment errors and operator errors.</li> <li>• How far data-collection methods used produced reliable results.</li> <li>• Judgement about limitations of equipment used/ operator error.</li> <li>• Recognition of issue in design methodology/sampling methodology may be flawed in terms of number of sites (spatial) and time of year (temporal).</li> <li>• A supported judgement is reached about the reliability of the results and conclusions.</li> <li>• An evaluation of how far the outcomes can be trusted (or repeated to obtain the same results).</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• There is evidence of using different skills and techniques to identify river changes.</li> <li>• There is evidence of using different skills and techniques to reach conclusions about river changes downstream.</li> <li>• There is evidence of own fieldwork conclusions linked to data and information.</li> </ul>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> <li>Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> <li>All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)</li> </ul>

## Student responses to part 1e

*My first conclusion for my investigation was the velocity of the River Ure increased from four equally spaced sites from source (site 1) to mouth (site 4).*

*The first data collection technique I conducted was to measure the velocity of the river. One of the problems when calculating the velocity is we used different sized floats at each of the sample sites; this is something that may have affected our results because a larger/heavier would have led to a slower velocity reading and therefore would may have skewed the results to show an increase in velocity downstream if lighter floats had been used at sites 3 and 4. This means that if lighter floats had been used at sites 3 and 4, the conclusion could have been that velocity decreases with distance downstream instead. On reflection, it would we could have reached a more reliable conclusion had we used identical floats (e.g. biodegradable dog biscuits) at each site – and repeated the method at each site 5 times so that we could arrive at a median result which would eliminate external influences such as a gust of wind.*

*My second conclusion for my investigation was the width of the River Ure increased from site 1 to 4. The data collection technique used to measure the width and depth was a measuring tape. One of the problems with this technique was ensuring that the tape measure was tight to each side of the river bank to ensure we got an accurate measurement. At sites 1 and 2 the river was flowing faster and there was more wind, which shifted the middle of the tape down the river so we measured a curve. This could have affected the reliability of my conclusion because at the sites further downstream, we measured the width straight across the river channel, which would have provided accurate width measurement; however, further upstream at sites 1 and 2, the width readings may have been inaccurately larger due to flaws in the measuring technique. Therefore, the conclusion that width increases downstream from sites 1 to 4 may be unreliable as the results have been influence by external factors such as velocity and wind speed.*

**Examiner's comments**

This response is awarded 8 marks.

The response is Level 3 because the candidate provides a balanced and well-developed argument on the reliability of the candidate's conclusions with accurate judgements made about the issues related to the data-collection methods. The issues related to the data-collection methods have been clearly explained with supporting references to their own study, for example, indicating the survey sites of a named river and the external variables that have affected the results which have led to a potentially unreliable conclusion being reached.

Overall, it was judged that the response did have the depth of the candidate's own evidence to support the judgements required for top of band, and was therefore awarded full marks.

For my river study, I measured the width and depth. I used a tape measure with my group and one person went to the other side of the river. The problem was that the tape measure was getting stuck in the river. This might have meant that my results weren't great because the measurement might not have been right and therefore my conclusions could have been affected.

**Examiner's comments**

This response is awarded 2 marks.

The candidate attempts to discuss the issues related to the data collection methods used, but their ideas are unbalanced, with limited development and no clear conclusion provided; for the top of Level 1, expect a conclusion to be included, e.g. "I concluded that width and depth increases with distance downstream" .

The candidate has provided no specific reference to their study and therefore the response is generic, with limited relevant geographical terminology, therefore this would be a Level 1 response; it would be expected that a candidate would include some specific evidence from their own fieldwork to move into Level 2.

# Evaluate

These questions are about making judgements. You should aim to use PEEL in every paragraph and make judgement in every paragraph. This is different from ASSESS largely because they would like a conclusion.

You can get PEEL sentence starters from the EXPLAIN section.

These can be 8 or 12 marks:

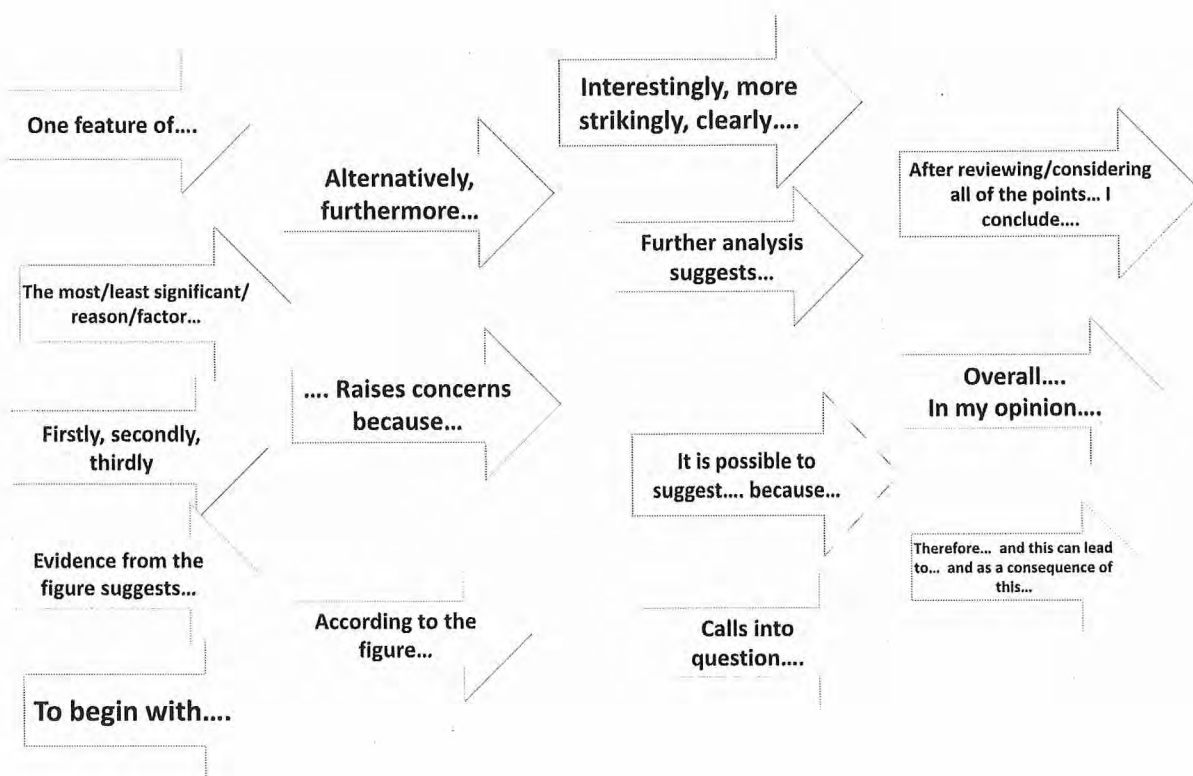
- ⇒ 4 Marks for selecting and using information accurately.
- ⇒ 4 Marks for explaining and making judgements.
- ⇒ 4 Marks for your spelling, punctuation and grammar.

It is marks using levels that are described in the mark scheme.

You should aim to use high level language regularly and example from you case studies if you can.

It is not overly important to have lots and lots of information, but you do need to be able to explain a range of points effectively.

Lastly, if they give you prompt idea to talk about in the question, you need to be able to judge it against other ideas that you know about.



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Question number	Indicative content
6(d)	<p style="text-align: center;"><b>4 Marks for AO2 / 4 marks for AO3</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Potential environmental impacts include flooding, damage to environment from industrial damage, contaminated ground water/water supplies, soil erosion leading to crop damage/failure.</li> <li>• Different groups of people respond to the environmental impacts, including individuals, organisations and local governments/the national government.</li> <li>• Individuals can construct makeshift flood defenses to prevent their land from being flooded (e.g. sandbags).</li> <li>• Local governments ensure that education is provided and messages are given to locals to warn residents about potential hazards such as flooding and contaminated drinking water supplies.</li> <li>• Organisations identify hazard-prone areas at risk of flooding/environmental damage.</li> <li>• The national government ensures that relevant monitoring bodies produce the necessary information in prediction/forecasting the weather.</li> <li>• The national government may mobilise military/emergency aid resources to prepare flood defenses/respond to contamination/protect crops and wildlife.</li> </ul> <p><b>AO3</b></p> <p>Evaluation will depend on specific case study but may include:</p> <ul style="list-style-type: none"> <li>• Because the country is developed, the economic development/wealth and technology provide access to more accurate information about potential cyclone events and more advanced ways to deal with the environmental impacts.</li> <li>• Individual responses have a relatively small impact on reducing environmental damage. They can protect their own land/environment but not much beyond that.</li> <li>• The relative value of an organisation's response to environmental impacts will depend on the organisation's priorities. Some environmental groups may focus on environmental impacts (e.g. wildlife protection) but other aid organisations may focus on social impacts (safety, food, shelter).</li> <li>• National governments can have the biggest impact because they have the resources, capacity and authority to respond to environmental effects on a large scale.</li> <li>• National governments can collaborate with other national governments in providing aid, which enables them to respond to environmental impacts that cross national borders.</li> </ul>

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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

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Question number	Indicative content
1(g)	<p style="text-align: center;"><b>A02 (4 marks)/A03 (4 marks)</b></p> <p><b>A02</b></p> <ul style="list-style-type: none"> <li>• Quality of life is a combination of different factors such as health, sanitation, education, employment, wealth, access to clean drinking water.</li> <li>• Major cities in developing/emerging countries are faced with a number of challenges that affect quality of life; in particular, the need to develop infrastructure and services such as water, sewage, drainage and waste collection.</li> <li>• Environmental issues such as increased air pollution due to a growing number of car users and/or industries, affect the quality of life in major cities and require careful management.</li> <li>• Social and economic issues such as the spread of disease, crime, unemployment and education need to be managed.</li> <li>• The UK and developing/emerging countries manage the economic, environmental and social issues in different ways.</li> <li>• In major cities in the UK, strategies to improve the quality of life may include waste management (e.g. recycling), developing job opportunities, increasing the quality and quantity of schools, improving healthcare and welfare provision, the development of integrated transport systems and increasing the supply of affordable and energy-efficient housing.</li> <li>• In major cities in developing/emerging countries, bottom-up (e.g. site and service schemes and self-help schemes) and top-down approaches (e.g. government policies and investment in improving transport, education and waste disposal) have been taken to improve the quality of life.</li> </ul> <p><b>A03</b></p> <p>Evaluation will depend on the specific case studies, but may include:</p> <ul style="list-style-type: none"> <li>• The quality of life in some areas of major cities is low and the reasons for this vary – and these reasons are a combination of social, economic, environmental and political factors.</li> <li>• The type of strategy(s) relative impact of an approach used to improve the quality of life vary and are influenced by factors such as the level of development of a country, national government policy and international relations with other countries. Some countries have greater economic power and influence to prioritise urban improvements.</li> <li>• Approaches to improving the quality of life vary in their effectiveness, e.g. a strategy may target only a particular area or is dependent on a reliable supply of funding.</li> <li>• The advantage of some approaches is the consequential effect on other aspects of quality of life, e.g. by improving access to clean</li> </ul>

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Question number	Indicative content
	<p>drinking water the spread of disease is limited, residents experience better health and are able to go out to work.</p> <ul style="list-style-type: none"> <li>• In some cities, there are barriers preventing approaches being successful, such as a lack of funding, rapidly-growing populations and the legacy of deindustrialisation.</li> </ul>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

128

You have studied a river as part of your own fieldwork.

(e) Evaluate the reliability of your conclusions.

(8)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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DO NOT WRITE IN THIS AREA

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**(Total for Question 1 = 18 marks)**

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Question number	Indicative content
1(e)	<p style="text-align: center;"><b>A03 (4 marks)/A04 (4 marks)</b></p> <p><b>A03</b></p> <ul style="list-style-type: none"> <li>• Reliability is about making judgements on how close conclusions are to the actual changes occurring in the river channel/catchment.</li> <li>• Reliability will be most likely linked to results via methods – evaluation including equipment errors and operator errors.</li> <li>• How far data-collection methods used produced reliable results.</li> <li>• Judgement about limitations of equipment used/ operator error.</li> <li>• Recognition of issue in design methodology/sampling methodology may be flawed in terms of number of sites (spatial) and time of year (temporal).</li> <li>• A supported judgement is reached about the reliability of the results and conclusions.</li> <li>• An evaluation of how far the outcomes can be trusted (or repeated to obtain the same results).</li> </ul> <p><b>A04</b></p> <ul style="list-style-type: none"> <li>• There is evidence of using different skills and techniques to identify river changes.</li> <li>• There is evidence of using different skills and techniques to reach conclusions about river changes downstream.</li> <li>• There is evidence of own fieldwork conclusions linked to data and information.</li> </ul>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> <li>Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> <li>Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> <li>All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4)</li> </ul>

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**Assess**

**Examiner**

**Marked**

**Responses**

### Example 5 GCSE A, Paper 1, Question 7 (d) (iv)

\*(iv) Assess the following statement.

*Climate change presents a greater threat to tropical rainforests than it does to deciduous woodlands.*

(12)

### Indicative content

Question number	Indicative content
7(d)(iv)	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Climate change will have an impact on soil, temperature, rainfall, and weather events, which could threaten tropical rainforests' and deciduous woodlands' structure, function and biodiversity.</li> <li>• Tropical rainforest structure will be threatened by rising sea levels caused by climate change.</li> <li>• Tropical rainforest biodiversity could be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat.</li> <li>• Deciduous woodland structure could be threatened by nutrient and moisture depletion in soils, leading to reduced tree growth.</li> <li>• Deciduous woodland biodiversity could be threatened, as increased numbers of pests are introduced into ecosystems through migration.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Threats to tropical rainforests and deciduous woodlands are naturally similar, since climate change may bring an increase in temperature and a decrease in moisture, which will have common effects on vastly different ecosystems.</li> <li>• Attempts to mitigate against climate change threats, for example through sustainable management, can vary significantly for tropical rainforests and deciduous woodlands (judgements will depend on case studies).</li> <li>• A specific ecosystem's natural ability to adapt to climate change can vary, which means impacts of climate change will be 'threats' only to ecosystems that cannot adapt.</li> <li>• Climate change will not have the same impact everywhere (e.g. some areas may get colder/wetter rather than hotter), so the degree of threat is dependent on the impacts in the given area.</li> </ul>

## Mark scheme

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

### Student answers to part 7 (d) (iv)

Tropical rainforests and deciduous woodlands are both likely to be damaged by global warming.

As the Earth gets hotter this may lead to some of the plants in tropical rainforests dying. As it gets warmer it may also get drier. Trees and plants which are adapted to the warm, wet conditions will die out. This may also cause animals which live in them to die as well.

In deciduous woodland areas the trees and plants also rely on the climate. If they get hotter it may also get drier here too. This may cause more droughts which will put stress on trees and kill them. If winter get warmer then pests and diseases may not be killed and this may also cause plants and animals to die. I think that the plants in deciduous woodlands are likely to be damaged by global warming but probably not as much as the tropical rainforest ones. This is because the rainforests have been there for a very long time and the plants won't be able to adapt to the changes fast enough. The trees in the deciduous woodland may be able to move north and survive.

**Examiner's comments**

This response has been awarded 7 marks in total.

5 marks have been awarded for the AO2 and AO3 parts. The candidate has written a reasonably balanced approach which addresses both ecosystems. The answer does demonstrate understanding of some of the key concepts and connections between cause and effect. There have been attempts to make judgements, particularly at the end of the second paragraph.

2 marks have been awarded for SPGST. The spelling and punctuation is usually accurate although there are some mistakes. The grammar is of a reasonable standard and errors do not affect the overall meaning. The candidate has used some specialist terms.

Global warming is a real threat to people and is likely to cause lots of people to be killed and animals to be wiped out. It is being caused by the release of Carbon Dioxide into the air by cars and aeroplanes. The heat from the sun is being trapped by the ozone layer which is getting thicker and the earth is getting hotter.

I think that this will mean that lots of trees will die and be wiped out in places like Brazil. This is because it is really hot and wet here and if gets hotter the plants won't be able to live. This will also happen in deciduous woodlands where the leaves will fall off the trees when it gets hotter.

**Examiner's comments**

This response has been awarded 3 marks in total. 2 marks have been awarded for the AO2 and AO3 parts.

Although the candidate has tried to address the impacts of global warming on both tropical rainforests and deciduous woodlands, the depth of explanation is limited. The main reference is to the idea that trees will die because of the hotter climate. While some attempts have been made to deconstruct information, the level of understanding and connections between points is limited.

The first paragraph on the causes of global warming is irrelevant to the question and should not be credited.

1 mark has been awarded for SPGST. The spelling and punctuation is usually accurate although there are some mistakes. The grammar is of a reasonable standard and errors do not affect the overall meaning. The candidate has used some specialist terms.

Many scientists believe that the Earth is getting warmer. This process is called global warming and it may threaten many ecosystems around the world. Two of the ecosystems which may be threatened are tropical rainforests and deciduous woodlands.

The tropical rainforests are located 5-10° north and south of the Equator. They have been located here for many millions of years and are very vulnerable to change because of the nature of their nutrient cycling. While it appears like there are lots of nutrients available, in fact there are relatively small amounts. The plants are able to grow so large and support such a wide varieties of species of plants and animals because the ideal growing conditions of hot temperatures and lots of rainfall mean that plants are able to photosynthesis. When they die organic matter is rapidly decomposed and absorbed by the plants through their long roots.

The tropical rainforest ecosystem is very vulnerable because it is so reliant on the hot, wet climate for its nutrient cycling. If the climate becomes hotter and possibly drier this will mean that the type of vegetation may change. It could start to be replaced by species which are more suited to a drier climate like those found in the tropical grassland areas. If the species of plants change then the animal life which rely on them may also change. The plants in tropical rainforest areas will not be able to adapt to the changing climate quickly enough and may die out. For example, in drier tropical grassland areas the plants tend to drop their leaves in the dry season.

If the drier conditions lead to less vegetation cover in tropical rainforests this may also mean that the soil is less protected from heavy rain when it does occur. This may lead to the soil being washed away and nutrients lost. This could also silt up rivers and harm freshwater fish species.

The deciduous forest is also threatened by the change to global climate. If the temperate areas (40-60° north and south of the Equator) become milder in winter then key processes such as seed germination triggered by cold temperatures may not happen. Pests and diseases which are normally killed off in cold winters may also survive harming plant and animal species. There may also be an increased risk of drought if the climate becomes warmer which may mean that tree species such as oak and beech may be killed by stress.

While tree species in deciduous woodlands may be able to migrate north they may not be able to do this quickly enough. This could lead to species becoming extinct. There may also be a greater risk of fire as the climate becomes drier which could lead to more forest fires. These may also damage plant species.

It is difficult to conclude about whether the threat is greater to tropical rainforests than to deciduous woodland. This is because the rate and scale of change in the future is still unknown. It is also difficult to predict because climate change may not have the same effect everywhere and some areas may actually get colder/ wetter rather than hotter. However, I think that the tropical rainforests are more threatened because their nutrient cycling is so closely linked to the climate and their conditions have not changed for millions of years.

### **Examiner's comments**

This response has been awarded 12 marks in total. 8 marks have been awarded for the AO2 and AO3 parts.

The answer is well structured and focuses on both tropical rainforest and deciduous woodlands. The description and explanation of the possible impacts of global warming on both areas are clear with an accurate understanding of concepts. The answer shows logical connections between the key ideas and concepts and is well-balanced between the two ecosystems.

Judgements have been made both through the main body of the text (e.g. the likelihood of a negative impact) and also in the final paragraph. It should be noted that 'assess' as a command word does not require a formal conclusion. However, the final paragraph in this answer is focused on making judgements.

4 marks have been awarded for SPGST. The answer is accurate spelling and grammar throughout. There is a wide range of specialist terms used.

**Example 6, GCSE A, Paper 2, Question 2 (f)**

(f) Assess the social and economic impacts of private investment by TNCs in a named developing/emerging country.

(8)

**Indicative content and mark scheme**

Question number	Indicative content
2(f)	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• There has been a growth in private investment by TNCs into developing/emerging countries.</li> <li>• This growth is a result of TNCs being attracted by cheap supplies of raw materials, cheap workers, good transport links and infrastructure, proximity to markets and favourable government policies that sometimes offer incentives to TNCs to locate in their country.</li> <li>• Positive social and economic impacts of this growth include the provision of new jobs and skills for local people, local/national economy is improved, sharing of ideas, e.g. in terms of the production of goods or the organisation and management of industry.</li> <li>• Negative social and economic impacts of this growth could include the idea of 'exploitation' workers.</li> <li>• Understanding the impacts of changes to economic sectors can benefit a country can have positive and negative impacts on people and the economy.</li> <li>• Social/economic positive impacts are likely to be linked to increased wages/standard of living and the growth of a consumer society.</li> <li>• Social/economic negative impacts are likely to be linked to workers being exploited – low pay – long working hours – poor working conditions.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Growth in private investment by TNCs will often result in a combination of positive and negative impacts for people and the economy.</li> <li>• Impacts are inter-related, e.g. new jobs are created, which increases disposable income and consumer spending/this contributes to a positive multiplier effect on a larger scale for goods and services, e.g. improved infrastructure, better education etc.; TNCs exploit cheap labour, which means that workers are often badly paid, they are footloose and move out of a country at any point, which creates economic uncertainty for the host country.</li> <li>• Positive impacts can be short term and longer term and can impact on different groups of people. For example, in the short term, jobs are created for locals which, in the longer term, could provide them with the skills to set up their own business. Also, short term improvements in the economy may facilitate the reinvestment of money into education, health and infrastructure.</li> <li>• The negative impacts can also affect different groups of people over different timescales. For example, in the short term, labourers may</li> </ul>

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Question number	Indicative content
	experience low wages and a poor working environment (as the TNC wants to maximise profit), but in the longer term, a country may become reliant on a particular TNC – which is not sustainable.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> <li>* Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>* Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>* Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>* Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>* Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>* Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

### Student answers to part 2f

*The growth of ICT in Bangalore has brought a number of social and economic impacts for India. Many large companies like Siemens and Nokia are attracted to India because of the cheaper labour and government incentives offered to locate their factories in the country. Locating their factories in India means the people of Bangalore are provided with jobs and a more stable income. This provides Indian people with a higher disposable income so encourages consumer spending, benefits local businesses, creating a positive multiplier effect. Another impact for India is the increase in skilled workers as a direct result of the training provided by Siemens and Nokia. The infrastructure in the areas close to the factories have been improved to enable the movement of goods for export.*

*Whilst the private investment from TNCs has brought many social and economic advantages it has also brought some negatives. The profits made by TNCs do not always benefit India because of a concept called leakage, where profits made by TNCs are taken out of the country. Secondly, exploitation of workers because of poor working conditions where people are expected to work long hours for low pay and little time for breaks.*

#### **Examiner's comments**

This response is awarded 8 marks.

The candidate has started by explaining why TNCs (like Siemens and Nokia) have located in a India (named developing/emerging country), going on to consider the broader impacts that these TNCs can have (e.g. the multiplier effect). This demonstrates an accurate understanding of the question and this has been used to make logical connections between concepts throughout the answer.

In the second paragraph, the candidate considers the role of private investment and here the candidate directly meets the demands of the command word 'assess' by considering both the positive and negatives that TNCs have had on the named country.

# Assess

These questions are about making judgements. You should aim to use PEEL in every paragraph and make judgement in every paragraph.

You can get PEEL sentence starters from the EXPLAIN section.

These can be 8 or 12 marks:

- ⇒ 4 Marks for selecting and using information accurately.
- ⇒ 4 Marks for explaining and making judgements.
- ⇒ 4 Marks for your spelling, punctuation and grammar.

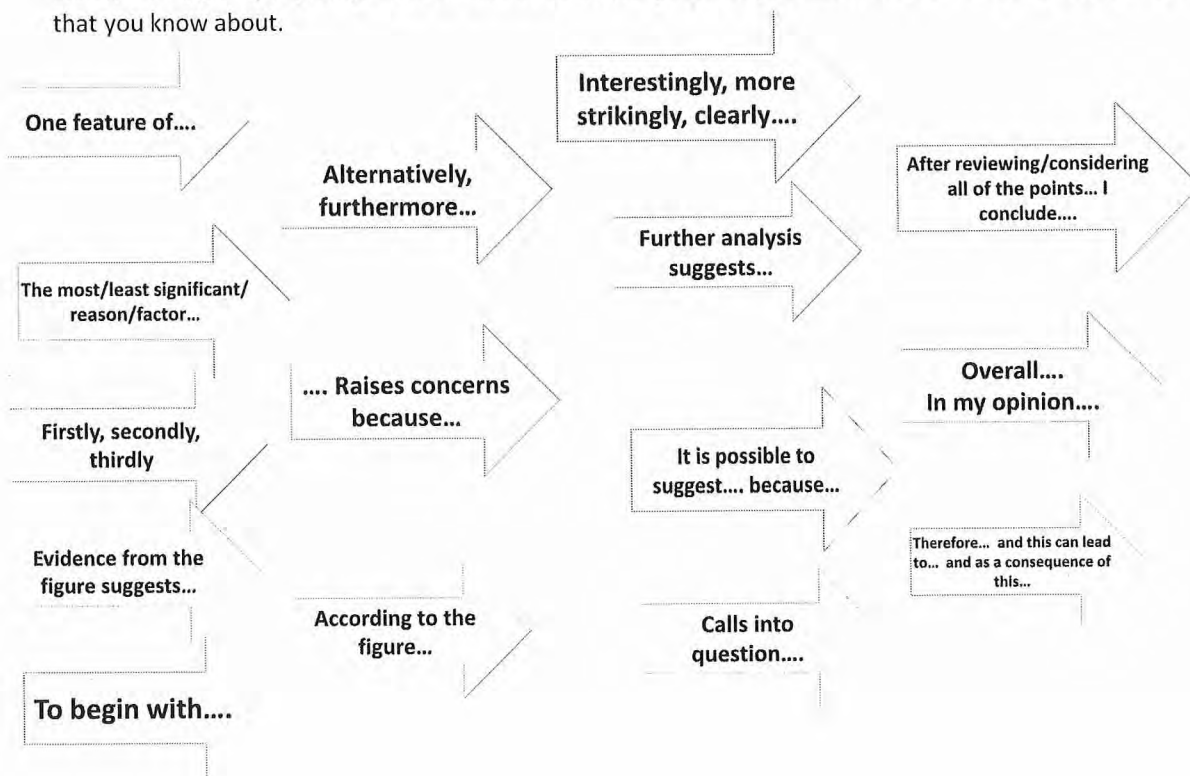
It is marks using levels that are described in the mark scheme.

You should aim to use high level language regularly and example from you case studies if you can.

It is not overly important to have lots and lots of information, but you do need to be able to explain a range of points effectively.

The exam board has suggested that an overall conclusion is not as important in this question as on going assessments throughout the answer.

Lastly, if they give you prompt idea to talk about in the question, you need to be able to judge it against other ideas that you know about.



**In this question, 4 of the marks awarded will be for your spelling, punctuation and grammar and for your use of specialist terminology.**

\* (iv) Assess the following statement.

*Climate change presents a greater threat to tropical rainforests than it does to deciduous woodlands.*

(12)

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(Total for Question 7 = 34 marks)

**TOTAL FOR SECTION C = 34 MARKS**

**TOTAL FOR PAPER = 94 MARKS**

Question number	Indicative content
7(d)(iv)	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Climate change will have an impact on soil, temperature, rainfall, and weather events, which could threaten tropical rainforests' and deciduous woodlands' structure, function and biodiversity.</li> <li>• Tropical rainforest structure will be threatened by rising sea levels caused by climate change.</li> <li>• Tropical rainforest biodiversity could be threatened by animals migrating because they cannot adapt to the changing climate of their current habitat.</li> <li>• Deciduous woodland structure could be threatened by nutrient and moisture depletion in soils, leading to reduced tree growth.</li> <li>• Deciduous woodland biodiversity could be threatened, as increased numbers of pests are introduced into ecosystems through migration.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Threats to tropical rainforests and deciduous woodlands are naturally similar, since climate change may bring an increase in temperature and a decrease in moisture, which will have common effects on vastly different ecosystems.</li> <li>• Attempts to mitigate against climate change threats, for example through sustainable management, can vary significantly for tropical rainforests and deciduous woodlands (judgements will depend on case studies).</li> <li>• A specific ecosystem's natural ability to adapt to climate change can vary, which means impacts of climate change will be 'threats' only to ecosystems that cannot adapt.</li> <li>• Climate change will not have the same impact everywhere (e.g. some areas may get colder/wetter rather than hotter), so the degree of threat is dependent on the impacts in the given area.</li> </ul>

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Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1-3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7-8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	<i>No marks awarded</i> <ul style="list-style-type: none"> <li>• Learners write nothing.</li> <li>• Learner's response does not relate to the question.</li> <li>• Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>
SPaG 1	1	<i>Threshold performance</i> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with reasonable accuracy.</li> <li>• Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Learners use a limited range of specialist terms as appropriate.</li> </ul>

SPaG 2	2-3	<p><i>Intermediate performance</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with considerable accuracy.</li> <li>• Learners use rules of grammar with general control of meaning overall.</li> <li>• Learners use a good range of specialist terms as appropriate.</li> </ul>
SPaG 3	4	<p><i>High performance</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with consistent accuracy.</li> <li>• Learners use rules of grammar with effective control of meaning overall.</li> <li>• Learners use a wide range of specialist terms as appropriate.</li> </ul>



Question number	Indicative content
2(f)	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• There has been a growth in private investment by TNCs into developing/emerging countries.</li> <li>• This growth is a result of TNCs being attracted by cheap supplies of raw materials, cheap workers, good transport links and infrastructure, proximity to markets and favourable government policies that sometimes offer incentives to TNCs to locate in their country.</li> <li>• Positive social and economic impacts of this growth include the provision of new jobs and skills for local people, local/national economy is improved, sharing of ideas, e.g. in terms of the production of goods or the organisation and management of industry.</li> <li>• Negative social and economic impacts of this growth could include the idea of 'exploitation' workers.</li> <li>• Understanding the impacts of changes to economic sectors can benefit a country can have positive and negative impacts on people and the economy.</li> <li>• Social/economic positive impacts are likely to be linked to increased wages/standard of living and the growth of a consumer society.</li> <li>• Social/economic negative impacts are likely to be linked to workers being exploited – low pay – long working hours – poor working conditions.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Growth in private investment by TNCs will often result in a combination of positive and negative impacts for people and the economy.</li> <li>• Impacts are inter-related, e.g. new jobs are created, which increases disposable income and consumer spending/this contributes to a positive multiplier effect on a larger scale for goods and services, e.g. improved infrastructure, better education etc.; TNCs exploit cheap labour, which means that workers are often badly paid, they are footloose and move out of a country at any point, which creates economic uncertainty for the host country.</li> <li>• Positive impacts can be short term and longer term and can impact on different groups of people. For example, in the short term, jobs are created for locals which, in the longer term, could provide them with the skills to set up their own business. Also, short term improvements in the economy may facilitate the reinvestment of money into education, health and infrastructure.</li> <li>• The negative impacts can also affect different groups of people over different timescales. For example, in the short term, labourers may</li> </ul>

Question number	Indicative content
	experience low wages and a poor working environment (as the TNC wants to maximise profit), but in the longer term, a country may become reliant on a particular TNC – which is not sustainable.

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements that are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

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Question number	Indicative content
4 (e)*	<p style="text-align: center;"><b>AO2 (4 marks)/AO3 (4 marks)</b></p> <p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• Renewable energy sources are those energy sources whose flow is continuous and will never run out, whereas non-renewable energy resources (e.g. fossil fuels – oil, coal and natural gas) will eventually run out.</li> <li>• The development of non-renewable energy resources can have <b>negative</b> impacts on people, e.g. coal mining can be dangerous and damaging to health as workers may have to endure cramped conditions deep below the surface.</li> <li>• The development of non-renewable energy resources can have <b>positive</b> impacts on people such as providing employment opportunities.</li> <li>• The development of renewable energy resources can have <b>negative</b> impacts on people, e.g. through the development of windfarms, which some people believe spoil the scenery or disrupt TV/radio/mobile phone signals.</li> <li>• The development of renewable energy resources can have <b>positive</b> impacts on people such as it agrees with their ethics/viewpoints about reducing the effects of global warming. The development of renewable energy resources (e.g. solar, wind, tidal) that do not emit greenhouse gases – which is ultimately healthier for people as no air pollution is created.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Impacts are often inter-related, with one impact often leading to another, potentially more serious, impact. The burning of non-renewable energy resources (e.g. coal, oil) can lead to air pollution, which can then lead to respiratory problems and an increase in the cases of asthma in a particular region.</li> <li>• People are often aware of the negatives of developing non-renewable resources but accept these as the potential outcomes (i.e. jobs/money) are perceived to be worth the risk.</li> <li>• Different groups of people can be affected differently within a country, e.g. in some parts of the world, owners of TNCs will benefit from non-renewable resources as their development is relatively cheap and the technology is readily available. However, other people in the same country may suffer as a result of the environmental impacts and on an international scale there might be wider impacts such as global warming or the increasing cost of these resources for consumers.</li> <li>• The impacts of non-renewable and renewable energy resources can vary significantly depending on the type of resource, the nature of the country wanting to develop it and the way it is being (sustainably) managed. For example, laws about planning permission, carbon emissions and waste disposal can all have indirect positive or negative impacts on people.</li> </ul>

(15)

Marks for SPGST		
Performance	Marks	Descriptor
SPGST 0	0	<p><i>No marks awarded</i></p> <ul style="list-style-type: none"> <li>• Learners write nothing.</li> <li>• Learner's response does not relate to the question.</li> <li>• Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>
SPGST 1	1	<p><i>Threshold performance</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with reasonable accuracy.</li> <li>• Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Learners use a limited range of specialist terms as appropriate.</li> </ul>
SPGST 2	2-3	<p><i>Intermediate performance</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with considerable accuracy.</li> <li>• Learners use rules of grammar with general control of meaning overall.</li> <li>• Learners use a good range of specialist terms as appropriate.</li> </ul>
SPGST 3	4	<p><i>High performance</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with consistent accuracy.</li> <li>• Learners use rules of grammar with effective control of meaning overall.</li> <li>• Learners use a wide range of specialist terms as appropriate.</li> </ul>

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Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> </ul>
Level 2	4–6	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> </ul>
Level 3	7–8	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> </ul>

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# Discuss

This command will only come up in paper 3.

You will have lots of information to use, perhaps 4-5 figures that should be analysed.

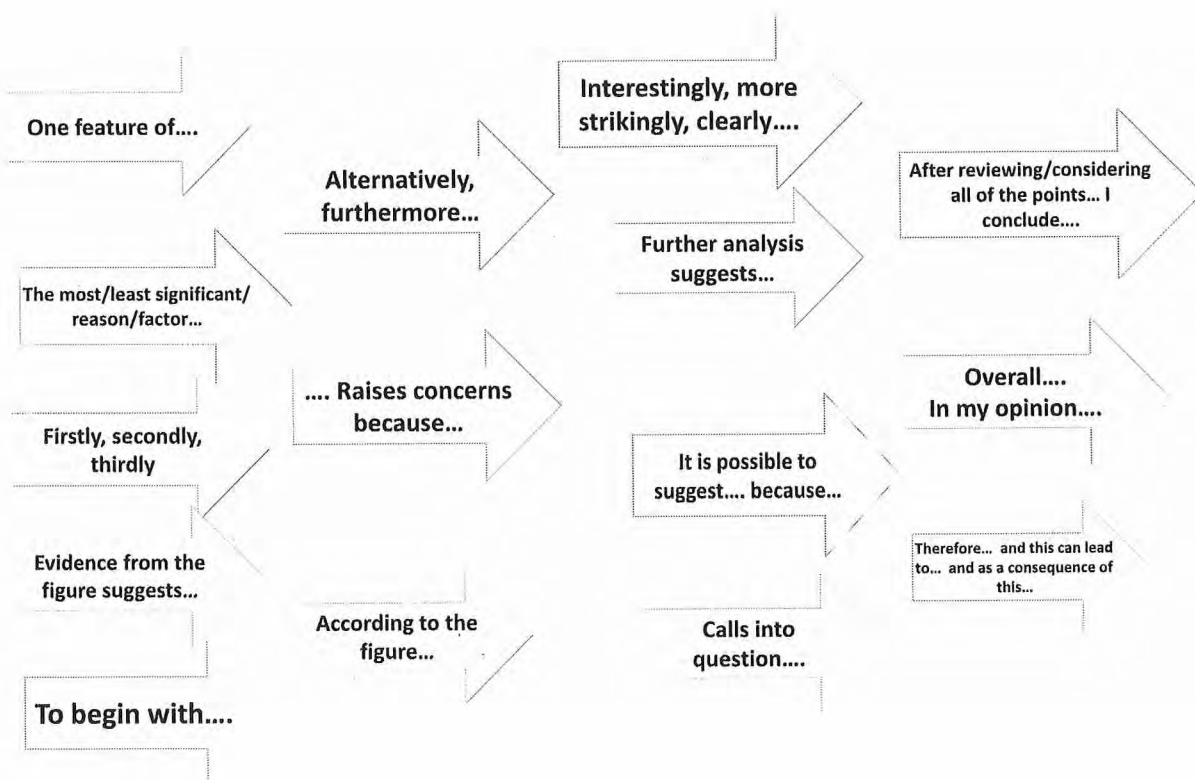
You should look to use you knowledge from the teaching of UK section of PAPER 3 and the other sections of the course.

It will be marked out of 16:

- ⇒ 12 marks for you knowledge, use of sources and how you communicate.
- ⇒ 4 marks for spelling, punctuation and grammar.

You should spend a good amount of time reading the sources, analysing the information, annotate the figures and then plan your answers.

The arrow sentence starters below will be very helpful.



**In this question, 4 of the marks awarded will be for your spelling, punctuation and grammar and your use of specialist terminology.**

\*(d) Use information from the Resource Booklet and knowledge and understanding from the rest of your geography course of study to support your answer.

Discuss the view that UK population growth and net migration will create pressures on the UK's ecosystems.

(16)

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**(Total for Question 5 = 28 marks)**

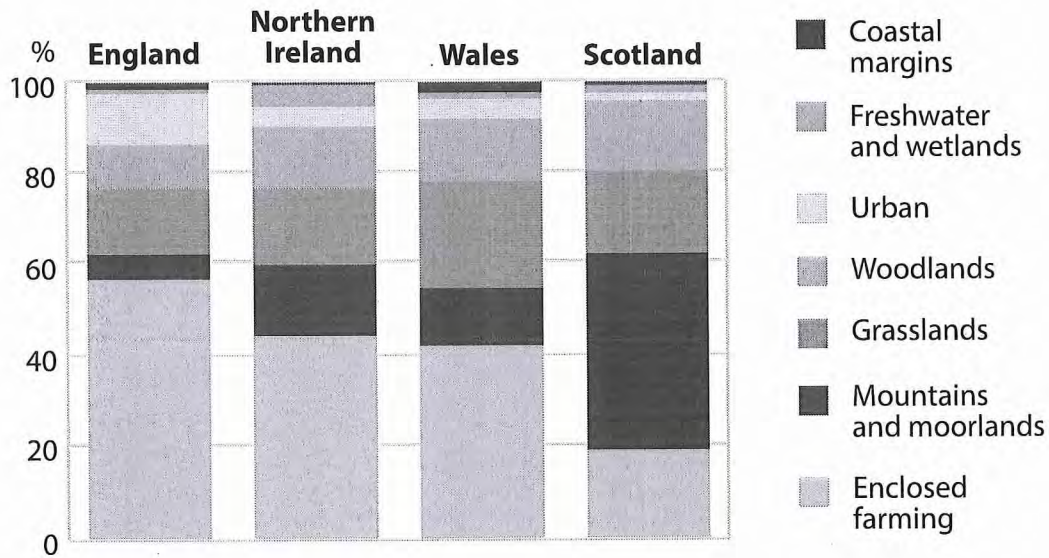
**TOTAL FOR SECTION C = 28 MARKS**  
**TOTAL FOR PAPER = 64 MARKS**

156

The UK faces social and political challenges from its increasing population growth. This growth, including that from migration, will lead to an increased demand for housing and competition for land resources and space. This may have a negative impact on UK habitats and ecosystems

### Ecosystems across the UK

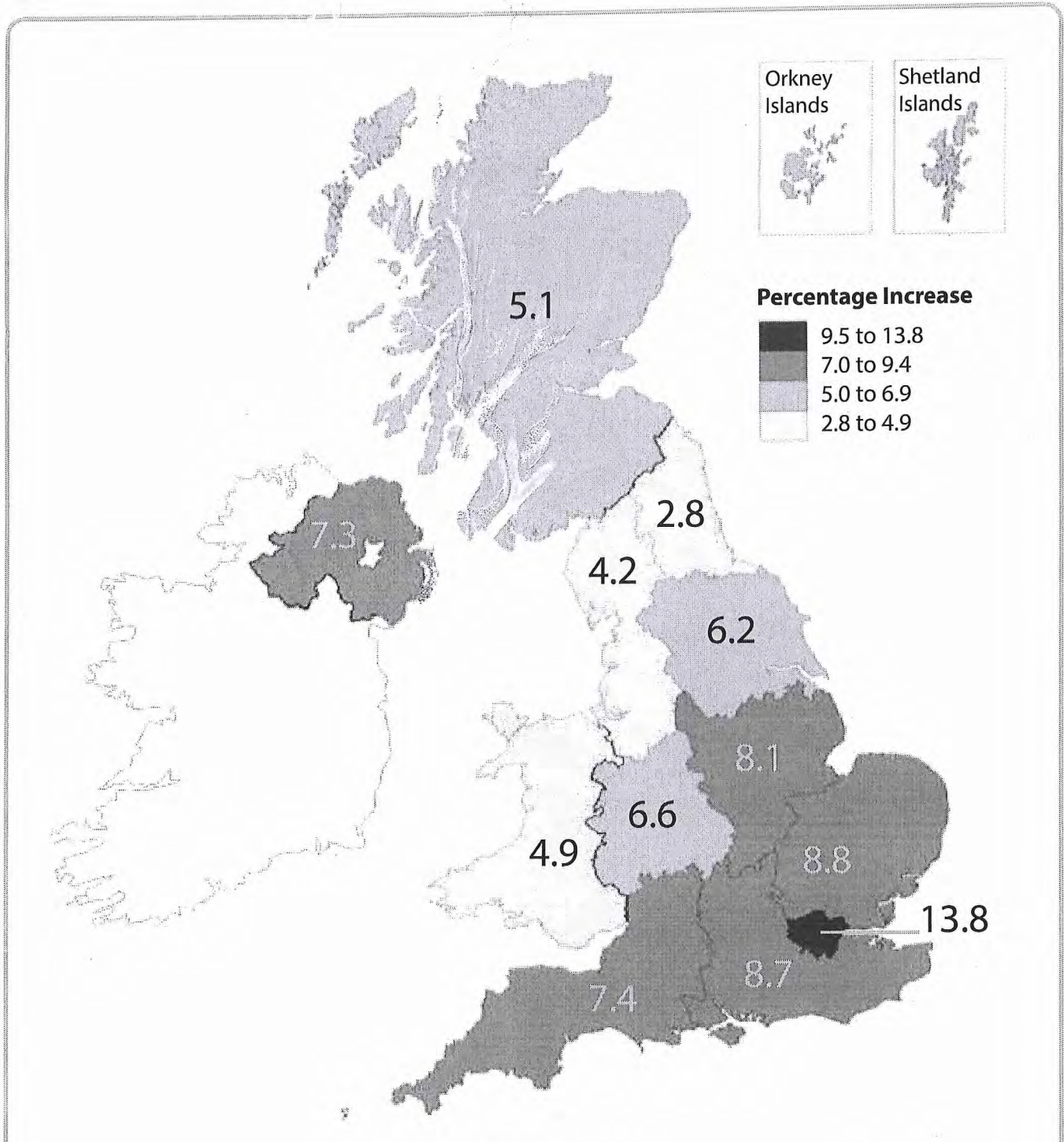
Land in each nation broken down by ecosystem



(Source: UK National Ecosystem Assessment)

**Figure 5a**

**Proportions of different ecosystems within the UK.**



(Source: Office for National Statistics © Crown copyright 2015)

**Figure 5b**

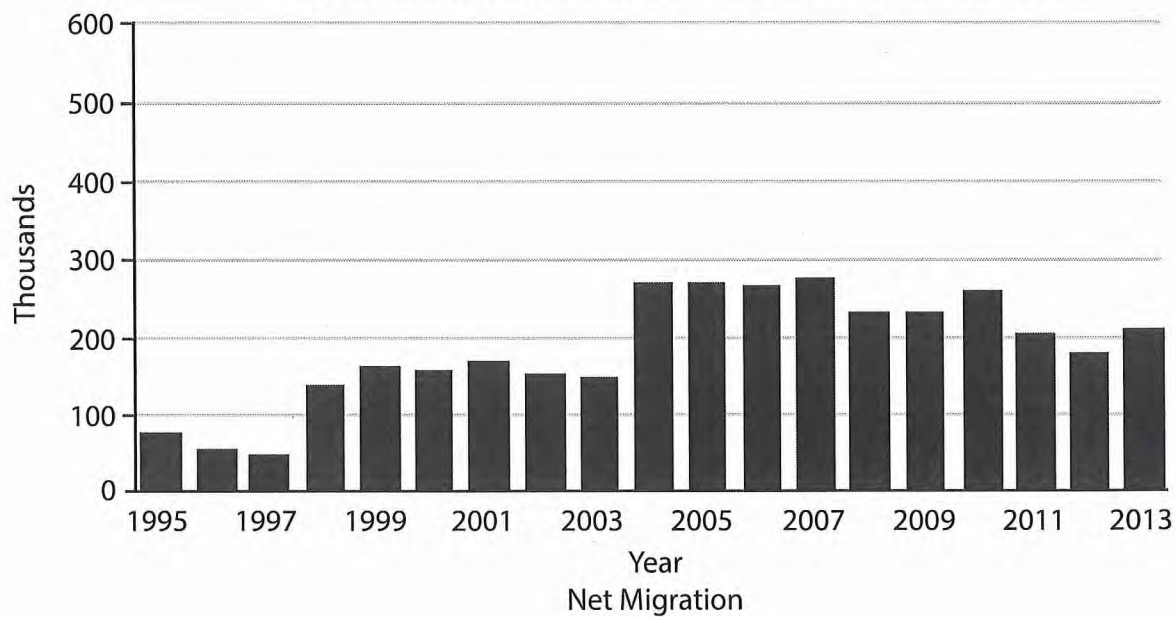
**Percentage population increase in UK regions 2001-2011**

Region	North East	North West	Yorks and Humber	East Midlands	West Midlands	East of England	London	South East	South West	Total
Area (ha)	960	1700	1840	2830	1530	2660	170	2520	2780	16990

**Figure 5c**

**Amount of greenbelt in England (2011).**

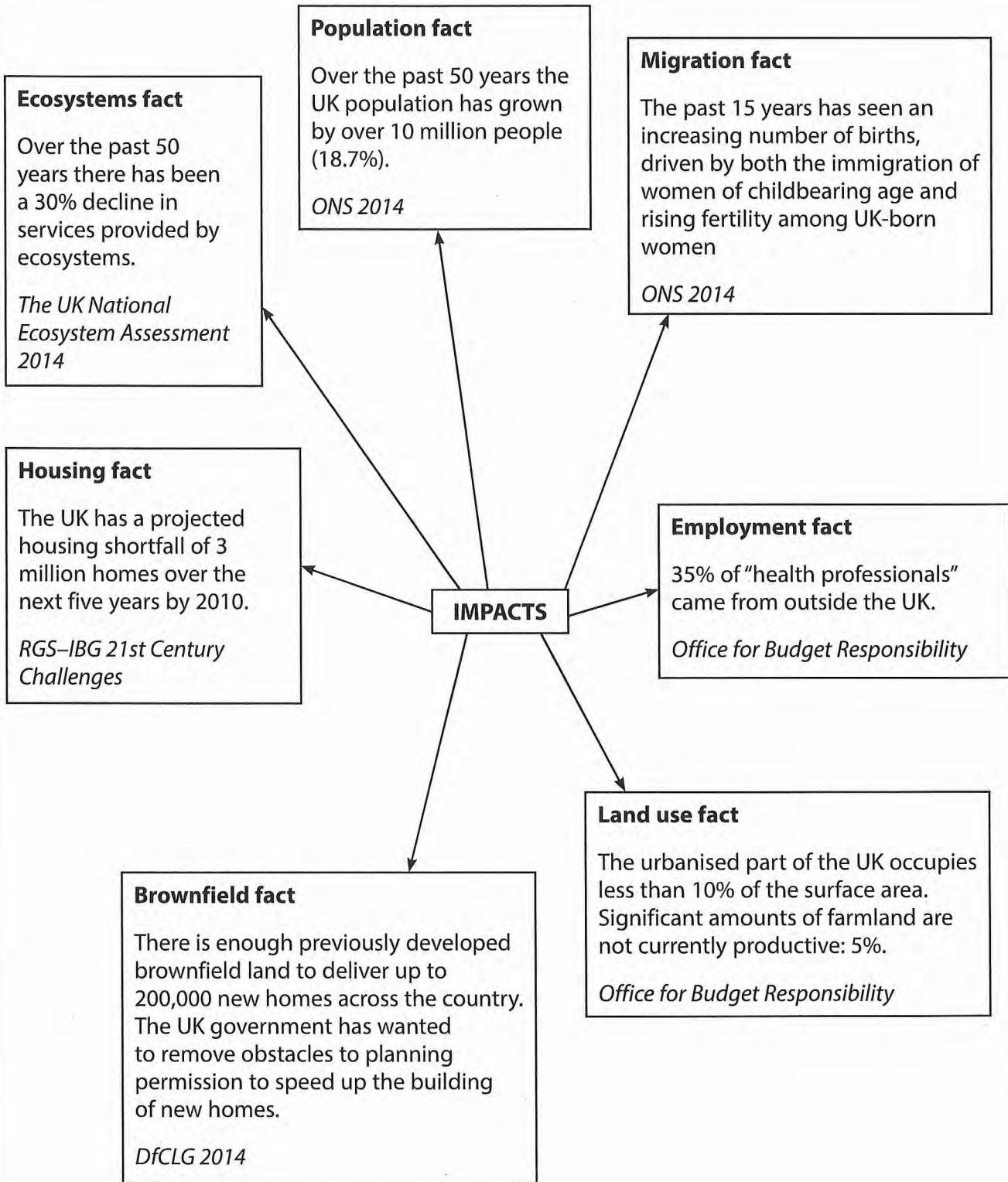
**Long-term international migration for the UK, 1995–2013**



(Source: from: Office for National Statistics. © Crown copyright 2015 )

**Figure 5d**

**Net migration for the UK, 1995 to 2013.**



**Figure 5e**  
**Social, economic and environmental facts about the UK.**

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Question number	Indicative content
5(d)	<p><b>AO2</b></p> <ul style="list-style-type: none"> <li>• The UK's population has been increasing over the past 50 years and particularly in the last 15 years.</li> <li>• One of the main causes of the UK's population growth has been the large net migration (more people moving to the UK to live compared with the number of those leaving to live in a different country).</li> <li>• Population growth will lead to social, political, economic and environmental challenges.</li> <li>• The term 'environmental' can be defined to include aspects of both natural and man-made features.</li> <li>• The demand for resources, in particular land to build homes, of a growing population which exerts ever-increasing pressure on the ecosystems and their goods and services.</li> <li>• Development can threaten ecosystems by disrupting the cycling of nutrient and interdependence of biotic and abiotic conditions they need to function.</li> <li>• Other factors, such as climate change, can also contribute to the increased pressure on the UK's ecosystems.</li> <li>• Distribution and characteristics of the UK's main terrestrial ecosystems means that they are not all in suitable locations/land for development.</li> </ul> <p><b>AO3</b></p> <ul style="list-style-type: none"> <li>• Many of the UK's most valuable ecosystems are already heavily protected from development and new housing, so the impact of population growth will vary across the UK.</li> <li>• Many of the migrants to the UK are economic migrants and will therefore only be attracted to certain parts of the country where employment opportunities exist. This means that the demand for resources and the resultant pressure on UK ecosystems will be unevenly distributed. For example, more economic migrants will be attracted to London and the surrounding area compared to northern Scotland.</li> <li>• Population growth may have indirect impacts on UK ecosystems. For example, a rise in the population in one area may increase levels of noise and air pollution and exasperate waste disposal challenges – which can have a knock-on effect on local ecosystems.</li> <li>• The UK's ecosystems are not wholly natural: they are part of a managed landscape; it is possible to adapt approaches to managing ecosystems in response to our growing population and the associated pressures and challenges that this brings. However, the capacity to manage an ecosystem to completely mitigate the threats posed by population growth vary across the UK and are often dependent on funding available from local councils,</li> </ul>

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	<p>the presence of conservation groups and discussions linked to cost-benefit analysis.</p> <ul style="list-style-type: none"> <li>• The future trends of population growth and net migration are unknown, as are trends of natural increase. This may lead to different scenarios in terms of how much land is required for new housing. Also, figures for inbound and outbound migration are very unreliable so more secure data on this issue is required for the modelling and planning for different scenarios to be accurate.</li> </ul> <p><b>AO4</b></p> <ul style="list-style-type: none"> <li>• Figure 5a shows that England has the largest percentage of people living in urban areas already; England also has the smallest percentage of woodland (only about 10%).</li> <li>• Figure 5b shows that population growth is uneven: the largest population increases are in London (13.8%), SE England (8-9%), SW England (7.4%) and Northern Ireland (7.3%), whereas Wales (4.9%), Scotland (5.1%), NW England (4.2%) and NE England (2.8%) experience a smaller increase.</li> <li>• Figures 5a and 5b together indicate that highest levels of population growth are in England and Northern Ireland where farming is the largest ecosystem. Also, Figure 5e indicates that a large proportion of these farming areas are unproductive, e.g. 8.5% of farmland in SE England unproductive.</li> <li>• Figure 5c shows that the areas of high population growth (5b) are also areas with highest levels of greenbelt. For example, SE England has 2 520 ha and the SW has 2 780 ha.</li> <li>• Figure 5d does not provide evidence that net migration will continue to increase in the future.</li> </ul>

Level	Mark	Descriptor
	0	No acceptable response.
Level 1	1–4	<ul style="list-style-type: none"> <li>• Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3)</li> <li>• Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4)</li> </ul>
Level 2	5–8	<ul style="list-style-type: none"> <li>• Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4)</li> </ul>
Level 3	9–12	<ul style="list-style-type: none"> <li>• Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2)</li> <li>• Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3)</li> <li>• Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4)</li> </ul>

Marks for SPGST		
Performance	Marks	Descriptor
SPaG 0	0	<p><i>No marks awarded:</i></p> <ul style="list-style-type: none"> <li>• Learners write nothing.</li> <li>• Learner's response does not relate to the question.</li> <li>• Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.</li> </ul>
SPaG 1	1	<p><i>Threshold performance:</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with reasonable accuracy.</li> <li>• Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall.</li> <li>• Learners use a limited range of specialist terms as appropriate.</li> </ul>
SPaG 2	2–3	<p><i>Intermediate performance:</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with considerable accuracy.</li> <li>• Learners use rules of grammar with general control of meaning overall.</li> <li>• Learners use a good range of specialist terms as appropriate.</li> </ul>
SPaG 3	4	<p><i>High performance:</i></p> <ul style="list-style-type: none"> <li>• Learners spell and punctuate with consistent accuracy.</li> <li>• Learners use rules of grammar with effective control of meaning overall.</li> <li>• Learners use a wide range of specialist terms as appropriate.</li> </ul>