

**GCSE Geography B**  
**Key Geographical Themes (Higher Tier)**  
**Specimen Paper**

# H

**B563/02**

**Duration:** 1 hour 45 minutes

Candidates answer on the question paper.  
**OCR supplied materials:** Resource Booklet

Candidate  
forename

Candidate  
surname

Centre number

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Candidate number

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### INSTRUCTIONS TO CANDIDATES

- The Resource Booklet will be found in the centre of this document.
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Answer **all** questions.
- Do **not** write in the bar codes.

### INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this paper is **99**.
- You will be assessed on the quality of written communication in your answer to the following questions: 1(f), 2(f) and 3(e). Questions marked with a pencil (✎) will carry 3 additional marks for spelling, punctuation and grammar.
- This document consists of **16** pages. Any blank pages are indicated.

**Section A**  
**RIVERS AND COASTS**

1 Use **Figs 1, 2** and **3** in the Resource Booklet.

**(a)** Study **Fig. 1**. Give **two** reasons why a reservoir is sited in grid squares 7588 and 7589. Support each reason with evidence from **Fig. 1**.

1 .....

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.....

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2 .....

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.....[4]

**(b)** Look again at **Figs 1** and **2** in the Resource Booklet.

**(i)** Describe the change in the rising limb during the period of rain.

.....

.....[1]

**(ii)** How does evidence from **Fig. 1** help to explain this change in the rising limb?

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..... [2]







**Section B**

**NATURAL HAZARDS**

2 Study **Fig. 4**, which shows the distribution of major earthquakes in California, USA (MEDC).

(a) (i) Name the scale, shown in **Fig. 4**, which measures the magnitude of an earthquake.

..... [1]

(ii) Describe the distribution of earthquakes shown in **Fig. 4**.

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..... [3]

**(b)** How does the movement of plates cause earthquakes? You may draw a labelled diagram in the box below.

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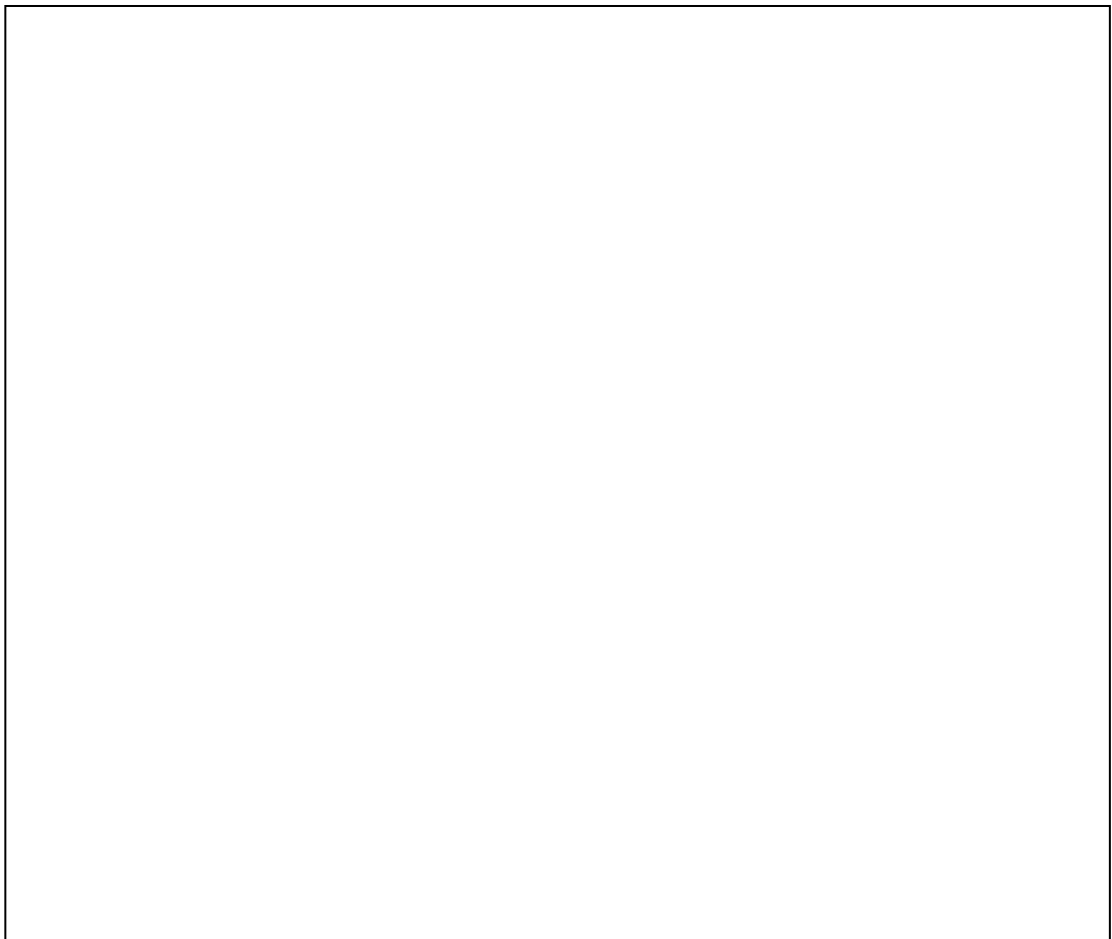
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**[4]**

(c) Study **Fig. 5**, which shows some of the survivors of the 1994 Northridge earthquake.

(i) Define the terms 'primary effects' and 'secondary effects' of an earthquake.

Primary effects .....

.....

Secondary effects .....

..... [2]

(ii) Give **three** ways in which the Northridge earthquake may have affected the people shown in **Fig. 5**.

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..... [3]

(d) Explain **two** reasons why people live in earthquake zones such as California.

1 .....

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2 .....

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..... [4]







Section C

ECONOMIC DEVELOPMENT

3 Study **Fig. 6** in the Resource Booklet. It shows the distribution of countries ranked by average income.

(a) (i) Describe the distribution of middle-income countries.

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

(ii) The Brandt Line was first used to divide the world into More Economically Developed Countries and Less Economically Developed Countries in 1980.

To what extent is this division still appropriate? Use evidence from **Fig. 6** to support your answer.

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..... [4]

(b) Study the table below which shows development indicators for three countries.

Development indicator	Cuba	Kenya	Mexico
Infant mortality rate (per 1000 births)	4.8	43.6	16.8
Literacy rate %	99.8	85.1	86.1

(i) Explain why infant mortality rate varies between countries at different levels of economic development.

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..... [3]

(ii) Explain **two** ways that low literacy rates in LEDCs like Kenya might affect people's lives.

1.....

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2.....

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..... [4]

(c) Name **two** other indicators which can be used to measure development. For each indicator explain how it can be used.

Indicator 1 .....

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Indicator 2 .....

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..... [4]

(d) Development can be affected by aid. Explain **two** problems associated with aid, for LEDCs.

1 .....

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2 .....

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..... [4]

**(e) CASE STUDY: The effects of economic development on the environment.**

Name and locate an economic activity.

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How has the economic activity affected the natural environment? What has been done to minimise damage to the environment? Include at least **three** developed ideas.

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**[9]**

 Spelling, punctuation and grammar **[3]**

**Paper Total [99]**







**General Certificate of Secondary Education**

**Geography B**

**J385**

B563/02: Key Geographical Themes (Higher Tier)


**Specimen Mark Scheme**

The maximum mark for this paper is **99**.

This document consists of **12** printed pages.


Question		Answer	Mark	Guidance
1	(a)	Streams flow into reservoir e.g. Bannock Burn/4 streams from the west. Valley suitable to flood, steep sided, flat floor. Upland area, land over 200m. Little disturbance to people, no settlements in area.	[4]	2 x 2 1 mark for each reason. 1 mark for each piece of supporting evidence.
	(b) (i)	Rises steeply/quickly	[1]	
	(ii)	Because water moves quickly to the river down steep slopes, river level increases quickly. Because there is no interception by vegetation, river level increases quickly.	[2]	2 x 1 1 mark for evidence, 1 mark for explanation of change in rising limb.
	(c)	Afforestation may have affected the flow of the Bannock Burn because: there is more interception (✓), therefore reduced river flow (dev) roots delay throughflow to river (✓), therefore river flow increases more slowly (dev) of evapotranspiration from trees (✓), therefore less water reaches the river (dev) there is less silting of the river (✓), therefore quicker flow (dev).	[4]	2 x 2 1 mark for each valid effect identified. 1 mark for each valid explanation which must be coherently linked to the effect identified.
	(d) (i)	Deposition on inside/convex bank. Erosion on outside/concave bank.	[2]	2 x 1
	(ii)	Where the river is slower there is less energy (✓), therefore it deposits load with larger particles deposited first (dev). Where the river is faster there is more energy (✓), therefore it erodes a channel (dev).	[4]	2 x 2 1 mark for each valid effect of velocity of flow identified. 1 mark for each valid explanation which must be coherently linked to the effect identified.
	(e)	Ideas such as: whole villages disappear over time loss of roads effect on income from tourism loss of tourist facilities loss of farmland	[4]	4 x 1 1 mark for each valid idea.

Question	Answer	Mark	Guidance
	<p>loss of livelihoods  loss of property/homes  financial loss/rising insurance costs/falling house prices.</p>		
(f)	<p><b>CASE STUDY: Coastal Management</b></p> <p><b>Indicative content:</b>  Coastline may be from any location or at any scale.</p> <p>Coastal protection methods may include hard or soft engineering or managed retreat.</p> <p>Sustainability could be considered as economic, social or environmental.</p> <p><b>Level 3 [7–9 marks]</b>  A comprehensive and place specific answer including <b>well developed</b> ideas which <b>both</b> describe how the coastline is protected <b>and</b> explain how sustainable these methods are.</p> <p>Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p>	<b>[9]</b>	<p>Case study will be marked using 3 levels.</p> <p>Annotate with <b>L3</b>, <b>L2</b> or <b>L1</b> at the end of the answer.  Use <b>DEV</b> in the answer to show development.  Use <b>PLC</b> to indicate place specific detail at Level 3.</p> <p><i>Note carefully:</i>  Answer consistently meets the criteria for the level - award mark at <b>top</b> of level.</p> <p>Answer meets the criteria but with some inconsistency - award mark at <b>middle</b> of level.</p> <p>Answer just meets the criteria for the level - award mark at <b>bottom</b> of level.</p> <p><b>Level 3</b>  A key discriminator of an answer at the top of Level 3 is place detail.</p> <p>Top of level answer needs three well developed ideas plus relevant place specific detail (such as place names, financial costs).</p> <p>Well developed ideas which make a <b>comprehensive</b> answer (i.e. describe and explain) = bottom of Level 3.</p> <p>A comprehensive answer + <b>place specific detail</b> = top of Level 3.</p>

Question			Answer	Mark	Guidance
			<p><b>Level 2 [4–6 marks]</b> Demonstrates sound knowledge through <b>developed</b> ideas which describe protection methods <b>and/or</b> explain their sustainability.</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 1 [1–3 marks]</b> Demonstrates limited knowledge through <b>simple/undeveloped</b> ideas which describe the protection methods <b>and/or</b> explain its sustainability.</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication.</p> <p><b>0 marks</b> No evidence submitted or the response does not address the question.</p>		<p><b>Level 2</b> A key discriminator of an answer at the top of Level 2 is that description and/or explanation are developed.</p> <p>Top of level needs three developed ideas plus a named example of a coastal area.</p> <p><b>Level 1</b> Top of level needs three simple ideas plus a named example of a coastal area.</p> <p>Credit name of coastal area at bottom of level if no other relevant idea.</p>
			Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 11.	SPaG <b>[3]</b>	
<b>2</b>	<b>(a)</b>	<b>(i)</b>	Richter	<b>[1]</b>	
		<b>(ii)</b>	<p>On/near San Andreas Fault.</p> <p>On/near plate margin/boundary.</p> <p>On/near margin of North American and Pacific plates.</p> <p>Near coast.</p> <p>In a line running SE to NW.</p> <p>Some near major settlements.</p>	<b>[3]</b>	<p>3 x 1</p> <p>1 mark for each valid point about distribution of earthquakes.</p>
	<b>(b)</b>		<p>Process:</p> <p>plates move towards/slide past each other</p> <p>collision/friction or plate forced down into the mantle</p> <p>build up of pressure</p> <p>release of pressure</p> <p>sudden movement of plates</p>	<b>[4]</b>	<p>4 x 1</p> <p>1 mark for each valid idea.</p> <p>Diagram could be a subduction or collision zone or a constructive margin.</p> <p>Diagram could be a block diagram, a cross section or an overhead view, but must make process clear.</p>

Question		Answer	Mark	Guidance
		earthquake triggered.		Credit information in text or on diagram.
	<b>(c)</b>	<b>(i)</b> Primary: happens straight away when an earthquake occurs. Secondary: later effects which are caused by primary effects.	<b>[2]</b>	2 x 1
		<b>(ii)</b> Ideas such as: loss of homes not safe to return home faced with poor sanitation/hygiene conditions shock/trauma bereavement missing family members unemployment loss of income unable to travel to work/home.	<b>[3]</b>	3 x 1
	<b>(d)</b>	People live in earthquake zones such as California because: people receive help/support from government/authorities (✓), therefore residents are confident of support, should a hazard occur, to rebuild their lives (e.g. new housing) (dev) they have always lived there (✓), therefore they have built up friends/family and feel part of a community (dev) they have businesses or employment there (✓), so cannot afford to relocate and live elsewhere there is a perception that severe hazards will not happen (again) in that area (✓), so people believe the area is relatively safe (dev).	<b>[4]</b>	2 x 2  1 mark for each valid reason identified.  1 mark for each valid explanation which must be coherently linked to the reason identified.
	<b>(e)</b>	The number of deaths caused by earthquakes of similar magnitude is higher in LEDCs such as Iran because: higher population density in LEDCs (✓) means that there are more people living in the affected area (dev) a lack of medical supplies/hospitals in LEDCs (✓) mean that it is more difficult/not possible to treat casualties (dev)	<b>[4]</b>	2 x 2  1 mark for each valid reason identified.  1 mark for each valid explanation of the reason which must be coherently linked to the reason identified.


Question	Answer	Mark	Guidance
	<p>poor transport links (✓) mean that it is difficult to access the affected areas (dev)</p> <p>housing is poorly built (✓) therefore cannot withstand earthquakes/collapses easily (dev)</p> <p>there is little emergency planning (✓) therefore a delay in setting up an action response (dev)</p> <p>water/gas/electricity supplies are vulnerable (✓) therefore there are more deaths from secondary effects (dev).</p>		
(f)	<p><b>CASE STUDY: Climatic hazard in an MEDC</b></p> <p><b>Indicative content:</b> Climatic hazard must be a drought or tropical storm which must be located in an MEDC.</p> <p>Processes must relate to named climatic hazard.</p> <p>Effect of human activities on the impacts may be positive or negative.</p> <p><b>Level 3 [7–9 marks]</b> A comprehensive and place specific answer including <b>well developed</b> ideas which <b>both</b> explain the processes causing the hazard <b>and</b> how human activities affected the impact.</p> <p>Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p>	<b>[9]</b>	<p>Case study will be marked using 3 levels.</p> <p>Annotate with <b>L3</b>, <b>L2</b> or <b>L1</b> at the end of the answer. Use <b>DEV</b> in the answer to show development. Use <b>PLC</b> to indicate place specific detail at Level 3.</p> <p><i>Note carefully:</i> <i>Answer consistently meets the criteria for the level - award mark at <b>top</b> of level.</i></p> <p><i>Answer meets the criteria but with some inconsistency - award mark at <b>middle</b> of level.</i></p> <p><i>Answer just meets the criteria for the level - award mark at <b>bottom</b> of level.</i></p> <p><b>Level 3</b> A key discriminator of an answer at the top of Level 3 is place detail.</p> <p>Top of level answer needs three well developed ideas plus relevant place specific detail (such as place names, specific activities).</p> <p>Well developed ideas which make a <b>comprehensive</b></p>

Question			Answer	Mark	Guidance
			<p><b>Level 2 [4–6 marks]</b> Demonstrates sound knowledge through <b>developed</b> ideas which explain the processes <b>and/or</b> human activities which affected the impact.</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 1 [1–3 marks]</b> Demonstrates limited knowledge through <b>simple/undeveloped</b> ideas which explain the processes <b>and/or</b> human activities which affected the impact.</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication.</p> <p><b>0 marks</b> No evidence submitted or the response does not address the question.</p>		<p>answer (i.e. explain natural processes and human activities) = bottom of Level 3.</p> <p>A comprehensive answer + <b>place specific detail</b> = top of Level 3.</p> <p><b>Level 2</b> A key discriminator of an answer at the top of Level 2 is that explanations are developed.</p> <p>Top of level needs three developed ideas plus a named and located example of a climatic hazard.</p> <p>A developed answer which focuses on a climatic hazard in an LEDC cannot gain full Level 2 credit.</p> <p><b>Level 1</b> Top of level needs three simple ideas plus a named and located example of a climatic hazard.</p> <p>Credit name of climatic hazard and MEDC at bottom of level if no other relevant idea.</p> <p>An answer which focuses on a tectonic hazard cannot be credited.</p>
			Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 11.	SPaG <b>[3]</b>	
<b>3</b>	<b>(a)</b>	<b>(i)</b>	Close to the Brandt Line, most of South America, most of northern Asia, not in North America and Europe, only one in Africa.	<b>[2]</b>	2 x 1
		<b>(ii)</b>	The Brandt Line division is still appropriate because: most rich countries are still north of the line many middle income countries are south of it Africa is still poor.	<b>[4]</b>	3 x 1 + 1  Three marks for valid conclusions about why the line is or is not appropriate.

Question		Answer	Mark	Guidance
		<p>It is no longer appropriate because:</p> <p>only uses income so not a true reflection of development, because GDP might be low while literacy high</p> <p>some countries south of the line have developed and now have higher incomes than countries north of the line</p> <p>some countries have developed rapidly since the Brandt Line was drawn e.g. NICs.</p>		1 mark for evidence from Fig. 6, such as a named country or region.
	<b>(b)</b>	<b>(i)</b>	<b>[3]</b>	<p>3 x 1</p> <p>1 mark for each valid explanation which must be coherently linked to the fact that the infant mortality rate varies between countries at different levels of economic development.</p> <p>Whilst not by all definitions an MEDC, Cuba is more developed economically than Kenya.</p> <p>Named examples from table are not required to achieve marks.</p>
		<b>(ii)</b>	<b>[4]</b>	<p>2 x 2</p> <p>1 mark for each valid reason identified.</p> <p>1 mark for each valid explanation of the reason which must be coherently linked to the reason identified.</p>
	<b>(c)</b>		<b>[4]</b>	<p>2 x 2</p> <p>1 mark for naming development indicator.</p> <p>1 mark for explaining how each named indicator can be used to show level of development.</p>
		<p>Indicators such as:</p> <p>calorie intake ✓ shows access to varied/healthy diet (dev)</p> <p>life expectancy ✓ shows availability of caring services (dev)</p> <p>number of people per doctor ✓ shows availability of medical treatment (dev)</p>		



Question		Answer	Mark	Guidance
		birth rate ✓ shows access to family planning services (dev) percentage employment in primary industry ✓ shows economic development/dependence on this sector of industry (dev).		
	(d)	Aid can be a problem for LEDCs because: they may become dependent on aid ✓, therefore limiting the will for self development (dev) aid may be bilateral ✓, and so tied to project and trade agreements (dev) an aid package may be tied aid ✓, so linking it to strategic/military support (dev) the country may be slow to react ✓, therefore aid may not get to where it is most needed (dev) large-scale aid projects may be unsuitable ✓, therefore they may not benefit/may disadvantage poor people (dev).	[4]	2 x 2  1 mark for each valid problem identified.  1 mark for each valid explanation of the problem which must be coherently linked to the problem identified.
	(e)	<b>CASE STUDY: The effects of economic development on the environment.</b>  <b>Indicative content:</b> The chosen economic activity may be primary, secondary, tertiary or quaternary.  Effects on the natural environment are most likely to be negative, but also credit positive effects, if appropriate.  Attempts to minimise damage may be at any scale from local to global.	[9]	Case study will be marked using 3 levels.  Annotate with <b>L3</b> , <b>L2</b> or <b>L1</b> at the end of the answer. Use <b>DEV</b> in the answer to show development. Use <b>PLC</b> to indicate place specific detail at Level 3.  <i>Note carefully:</i> <i>Answer consistently meets the criteria for the level - award mark at <b>top</b> of level.</i>  <i>Answer meets the criteria but with some inconsistency - award mark at <b>middle</b> of level.</i>  <i>Answer just meets the criteria for the level - award mark at <b>bottom</b> of level.</i>

Question	Answer	Mark	Guidance
	<p><b>Level 3 [7–9 marks]</b> A comprehensive and place specific answer including <b>well developed</b> ideas which <b>both</b> describe the effects of the economic activity <b>and</b> explain what has been done to minimise environmental damage.</p> <p>Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> <p><b>Level 2 [4–6 marks]</b> Demonstrates sound knowledge through <b>developed</b> ideas which describe the effects <b>and/or</b> explain what has been done to minimise environmental damage.</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 1 [1–3 marks]</b> Demonstrates limited knowledge through <b>simple/undeveloped</b> ideas which describe the effects <b>and/or</b> explain what has been done to minimise environmental damage.</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinders communication.</p> <p><b>0 marks</b> No evidence submitted or the response does not address the question.</p>		<p><b>Level 3</b> A key discriminator of an answer at the top of Level 3 is place detail.</p> <p>Top of level answer needs three well developed ideas plus relevant place specific detail (such as place names, specific methods).</p> <p>Well developed ideas which make a <b>comprehensive</b> answer (i.e. describe and explain) = bottom of Level 3.</p> <p>A comprehensive answer + <b>place specific detail</b> = top of Level 3.</p> <p><b>Level 2</b> A key discriminator of an answer at the top of Level 2 is that description and/or explanation are developed.</p> <p>Top of level needs three developed ideas plus a named and located example of an economic activity.</p> <p><b>Level 1</b> Top of level needs three simple ideas plus a named and located example of an economic activity.</p> <p>Credit name of economic activity and location at bottom of level if no other relevant idea.</p>
	Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 11.	SPaG <b>[3]</b>	

**Spelling, punctuation and grammar (SPaG) assessment grid*****High performance 3 marks***

Candidates spell, punctuate and use rules of grammar with consistent accuracy and effective control of meaning in the context of the demands of the question. Where required, they use a wide range of specialist terms adeptly and with precision.

***Intermediate performance 2 marks***

Candidates spell, punctuate and use rules of grammar with considerable accuracy and general control of meaning in the context of the demands of the question. Where required, they use a good range of specialist terms with facility.

***Threshold performance 1 mark***

Candidates spell, punctuate and use rules of grammar with reasonable accuracy in the context of the demands of the question. Any errors do not hinder meaning in the response. Where required, they use a limited range of specialist terms appropriately.

## Assessment Objectives Grid (includes QWC)

Question	AO1	AO2	AO3	SPaG	Total
1(a)		2	2		4
1(b)(i)			1		1
1(b)(ii)	1	1			2
1(c)		4			4
1(d)(i)	2				2
1(d)(ii)	4				4
1(e)	2	2			4
1(f)✎	9			3	12
2(a)(i)	1				1
2(a)(ii)			3		3
2(b)	4				4
2(c)(i)	2				2
2(c)(ii)		3			3
2(d)		4			4
2(e)	2	2			4
2(f)✎	9			3	12
3(a)(i)			2		2
3(a)(ii)		3	1		4
3(b)(i)	3				3
3(b)(ii)		4			4
3(c)	4				4
3(d)	2	2			4
3(e)✎	9			3	12
<b>Paper Total</b>	<b>54</b>	<b>27</b>	<b>9</b>	<b>9</b>	<b>99</b>