

**Geography B**

General Certificate of Secondary Education

Unit **B563/01**: Key Geographical Themes (Foundation Tier)

**Mark Scheme for June 2013**

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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## Annotations

Annotation	Meaning
	Correct point. Place tick where credit given or point awarded.
	Unclear
	Use within case study response to indicate incorrect content
	Omission mark. Use to indicate something missing from response
	Annotate at end of case study answer for overall Level 1
	Annotate at end of case study answer for overall Level 2
	Annotate at end of case study answer for overall Level 3
	Use DEV with case study answer to show creditable detail/development of response
	Use PLC within case study answer to show creditable place specific detail for Level 3
	Use to show that additional pages have been checked for content
	Not used
	Not used
	Not used
	Not used
	Not used
	Not used

Question			Answer	Marks	Guidance
1	(a)	(i)	8	1	
		(ii)	Malawi	1	
		(iii)	1080 killed	1	
	(b)	(i)	area of land drained (or similar) by a river	1	
		(ii)	lake	1	
	(c)		<p>Reasons for why flooding was more serious could include:</p> <ul style="list-style-type: none"> <li>• Some countries have more rivers/lakes,</li> <li>• Higher discharge, more water, larger area of land flooded</li> <li>• Higher discharge near end of river basin network</li> <li>• May have more settlements/higher population within basin</li> <li>• More people in living in flood risk areas eg, floodplains</li> <li>• May have limited flood impact reduction methods/strategies.</li> <li>• Credit closer to main rivers/lakes</li> <li>• Credit for lakes as stores to reduce flooding</li> <li>• Deforestation</li> <li>• More flood events</li> <li>• High rainfall events</li> <li>• Rock type and soil conditions</li> <li>• Proportion of country within the drainage basin.</li> </ul>	4	<p>4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.</p> <p>Must include two reasons for full marks.</p> <p>Credit use of Fig.1 to exemplify explanation.</p>

Question	Answer	Marks	Guidance
(d)	<p>Ideas about effects of flooding could include:</p> <ul style="list-style-type: none"> <li>• Death by drowning, disease, famine</li> <li>• Homelessness, hunger if crops destroyed, water shortage/contaminated water supplies, spread of disease</li> <li>• Difficulty in travelling, transport disrupted</li> <li>• Problems with relief/aid due to disruption of infrastructure.</li> </ul>	4	<p>4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea (either cause or consequences of the effects).</p> <p>At least two ideas needed for full marks.</p>
(e)	<p>Flood effects reduction ideas could include:</p> <ul style="list-style-type: none"> <li>• Barriers, embankments, levees to increase height of banks</li> <li>• Sandbags to stop entering property</li> <li>• Dredging channel to increase depth of river</li> <li>• Dams to store/control excess river discharge</li> <li>• Afforestation in catchment area to intercept/store rainfall</li> <li>• Monitoring of river network/discharge</li> <li>• Flood warnings/evacuation plans = people are safer</li> <li>• Restrict development on floodplains = less property affected</li> <li>• Housing on stilts/floating houses</li> <li>• Storm drains</li> <li>• Straightening of a river channel.</li> </ul>	4	<p>2 x 2 or 3 x 1 + 1</p> <p>1 mark for stated method, second mark for explanation</p> <p>Award up to 3 marks for one well explained method</p> <p>Must include two methods for full marks</p> <p>No credit for moving away from river unless as part of a management strategy</p>

Question	Answer	Marks	Guidance
(f)	<p><b>Case Study: an example of a landform in a river valley</b></p> <p><b>Indicative content</b></p> <p><i>Valid named river valley could be a named river such as the Thames or a named river landform such as High Force.</i></p> <p><i>Specification Content = meanders, interlocking spurs, floodplains, river cliffs, valleys, waterfalls, accept other valid landforms such as terraces, delta, ox-bow lake, gorge.</i></p> <p><i>Features described or shown in diagram will include correct shape/structure of landform or a basic definition/description.</i></p> <p><i>Relevant detail could include related features such as plunge pool, point bar, thalweg.</i></p> <p><i>Will need to explain how process(es) operate(s) for full L3 by describing how process may change the landform over time, such as a waterfall retreating, migration of a meander.</i></p> <p><i>No credit for simple repetition of words erosion and deposition must be linked to landform and how it is changed.</i></p> <p><i>Processes ideas must be relevant for chosen landform.</i></p> <p><b>Level 3 (7-8 marks)</b> Demonstrates good knowledge and understanding of the features of a valid river valley landform and the processes which change the landform over time.</p>	8	<p>Case study will be marked using three levels.</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level.</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency.</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level Use <b>DEV</b> within answer to show additional creditable detail/development. Use <b>PLC</b> to indicate place specific detail for Level 3.</p> <p><b>Level 3</b> Top of level will have detail about the features of a valid river landform and the processes which may change the landform over time, with some place specific detail. Detailed response lacking place specific detail = bottom of L3 (such as name of landform, rock type, geological structure or other features).</p>

Question	Answer	Marks	Guidance
	<p><b>Level 2 (4-6 marks)</b> Demonstrates sound knowledge and understanding of a river valley landform example. With valid detail for either the landform's features or processes.</p> <p><b>Level 1 (1-3 marks)</b> Demonstrates limited knowledge and understanding of a river valley landform with basic ideas about either the features of a relevant process.</p>		<p><b>Level 2</b> <b>Valid named river valley needed for top of Level 2</b></p> <p>Top of level will have a valid sketch/description of a river valley landform and relevant processes idea. Will have additional detail for either the features of the landform or how the processes may change the landform.</p> <p>Bottom of level will have a basic sketch/description of a river valley landform or a basic processes idea or detail about the landform feature with no valid process ideas.</p> <p><b>Level 1</b></p> <p>Top of level will have a valid landform with a basic sketch/description of a valid landform or a relevant process idea.</p> <p>Bottom of level will have a river valley or valid landform with no further valid information or a basic idea about a river landform or a basic idea about a relevant process.</p>
	Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 32.	3	

Question			Answer	Marks	Guidance
2	(a)	(i)	1350 km	1	
		(ii)	San Mateo	1	
		(iii)	\$2.2 billion	1	
	(b)		<p>Possible reasons could include:</p> <ul style="list-style-type: none"> <li>• Some counties have more settlements/property on coast</li> <li>• Difference in tidal action/waves</li> <li>• Some property is more valuable (richer people live there)</li> <li>• Tourist development</li> <li>• Buildings located on cliffs/beaches at greater risk</li> <li>• Some counties may have limited coastal defence methods/ cannot afford to protect all the coastline</li> <li>• Some areas of coastline have high rates of erosion</li> <li>• Differences in rock type could affect erosion rates.</li> </ul>	4	<p>4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.</p> <p>Must include two reasons for full marks.</p> <p>Credit use of Fig.3 to exemplify explanation.</p>
	(c)		<p>1 mark for each correct named process:</p> <p>Hydraulic action, abrasion/corrasion, corrosion/solution, attrition</p> <p>Credit if process described accurately without key words eg, waves use pebbles to erode base of cliff (abrasion).</p>	2	2 x 1



Question	Answer	Marks	Guidance
(d)	<p>Advantages of Surfers' Point plan could include:</p> <ul style="list-style-type: none"> <li>• Reduces/stops erosion</li> <li>• Cheaper than hard engineering methods to build/maintain</li> <li>• Environmentally friendly, natural, does not spoil landscape</li> <li>• Allows easy access to beach for tourists</li> <li>• Larger beach area created = more tourists, more business.</li> <li>• Car park safer from erosion or flooding</li> <li>• Explanation of how beach replenishment reduces impact of erosion.</li> </ul> <p>Disadvantages could include:</p> <ul style="list-style-type: none"> <li>• Will not stop erosion</li> <li>• Land not protected from future erosion</li> <li>• Possible costs of future beach replenishment</li> <li>• Possible loss of beach/amenity by future erosion = fewer tourists = loss of business.</li> <li>• Impact on the coast at other locations</li> <li>• Lack of other sea defences.</li> </ul>	4	<p>2 x 2 or 3 x 1 + 1</p> <p>1 mark for idea, second mark for explanation/detail/development.</p> <p>Award up to 3 marks for one well explained advantage or disadvantage.</p> <p>Must include one advantage and one disadvantage for 4 marks.</p> <p>Credit for beach replenishment if linked to rate of erosion.</p>
(e)	<p>Coastal management methods could include:</p> <p>Hard engineering methods such as sea walls, rip rap, rock armour, revetments or softer options such as groynes, beach nourishment, beach recycling, managed retreat.</p> <p>Description must include what is constructed or action taken.</p> <p>Must explain how method protects coast from erosion by creating a barrier or absorbing/reducing wave energy or allows an area to be eroded to reach natural equilibrium credit for compensation to relocate properties at risk.</p>	4	<p>1 x 4</p> <p>1 mark for a valid stated method</p> <p>Up to 2 marks for description of method</p> <p>Up to 2 marks for explanation of method</p> <p>Must state, describe and explain one method for 4 marks</p> <p>No credit for beach replenishment (included in Fig.4 – Q2d)</p> <p>No credit for reference to problems/bad points of method</p>

Question		Answer	Marks	Guidance
2	(f)	<p><b>Case Study: an example of a coastal landform</b></p> <p><b>Indicative content</b>  <i>Valid named coastal area could be a stretch of coastline such as Holderness Coast or a valid coastal place such as Flamborough.</i></p> <p><i>Specification Content = cliffs, headland, cave, arch, stack, beach, spit, accept other valid landforms e.g. wave cut platform, stump, bars, tombolo.</i></p> <p><i>Features described or shown in diagram will include correct shape/structure of landform or a basic definition/description.</i></p> <p><i>Relevant detail could include related features such as blowhole, recurved end, beach ridge.</i></p> <p><i>No credit for reference to erosion/deposition without some exemplification or explanation.</i></p> <p><i>Will need to explain how process(es) operate(s) for full L3 by describing how processes may change the landform over time, such as cliff retreating, stack collapsing, spit formation.</i></p> <p><b>Level 3 (7-8 marks)</b>            Demonstrates good knowledge and understanding of the features of a valid coastal landform and the processes which change the landform over time.</p>	8	<p>Case study will be marked using three levels.</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level.</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency.</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level            Use <b>DEV</b> within answer to show additional creditable detail/development.            Use <b>PLC</b> to indicate place specific detail for Level 3.</p> <p><b>Level 3</b>            Top of level will have detail about the features of a coastal landform and the processes which may change the landform over time, with some place specific detail. (such as name of landform, rock type, geological structure or other features)</p> <p>Detailed response lacking place specific detail = bottom of L3.</p>

Question	Answer	Marks	Guidance
	<p><b>Level 2 (4-6 marks)</b> Demonstrates sound knowledge and understanding of a coastal landform example. With valid detail for either the landform's features or processes.</p> <p><b>Level 1 (1-3 marks)</b> Demonstrates limited knowledge and understanding of a coastal landform with basic ideas about either the features of a relevant process.</p>		<p><b>Level 2</b> <b>Valid named coastal area needed for top of Level 2</b></p> <p>Top of level will have a valid sketch/description of a coastal landform and relevant processes idea. Will have additional detail for either the features of the landform or how the processes may change the landform.</p> <p>Bottom of level will have a basic sketch/description of a coastal landform and a basic processes idea or detail about the landform features with no valid process ideas</p> <p><b>Level 1</b> Top of level will have a valid landform with a basic sketch/description of a valid landform or a relevant process idea</p> <p>Bottom of level will have a coastal area or valid landform with no further valid information or a basic idea about a coastal landform or a basic idea about a relevant process</p>
	Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 32	3	

Question			Answer	Marks	Guidance
3	(a)	(i)	Ethiopia	1	
		(ii)	Somalia	1	
		(iii)	Less severe than	1	
	(b)		1 mark for shortage of rain, no rain or less than normal/expected.  Second mark for over a set period of time/ not enough for people and/or crops.	2	2 x 1  Second mark only available if definition given.  Credit evapo-transpiration ideas.
	(c)		Reasons for many deaths by drought in LEDCs could include: <ul style="list-style-type: none"> <li>• Dehydration, starvation due to food shortages/crop failure</li> <li>• Cannot access supplies of clean drinking water</li> <li>• Disease from contaminated/unsafe water sources</li> <li>• Lack of help/support for those in need</li> <li>• Lack of water supply schemes/contingency planning.</li> </ul>	4	4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.  At least two reasons needed for full marks.  Only credit LEDC ideas like poor health care if clearly linked to impact of drought.
	(d)		Possible human activities could include: <ul style="list-style-type: none"> <li>• Irrigation = less water for other uses</li> <li>• Overgrazing/cultivation in arid areas = soil erosion/crop failure</li> <li>• Deforestation = soil erosion = crop failure = hunger/famine</li> <li>• Population pressure = settling/farming marginal land</li> <li>• Pollution of existing supplies</li> <li>• Deforestation = less evapo-transpiration = less rain.</li> <li>• MEDC context such as wasteful consumption of water for gardens,/pools,/washing cars</li> <li>• Use of water by industry and intensive farming</li> <li>• Leaks from pipes (poorly maintained supply)</li> </ul>	4	4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.  At least two ideas needed for full marks.

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> <li>• Conflict over water sources 'water wars'</li> <li>• Global warming</li> <li>• Using dwindling stocks.</li> </ul>		
(e)	<p>Ideas linked to improving water supply could include:</p> <ul style="list-style-type: none"> <li>• Constant supply of clean water (for drinking)</li> <li>• Irrigate crops, for consumption and/or sale</li> <li>• Water stored to offset effects of future drought.</li> </ul> <p>Credit reference to valid methods such as water boreholes, storage tanks, reservoirs</p> <p>Ideas linked to restricting water use could include:</p> <ul style="list-style-type: none"> <li>• Less water waste, supplies will last longer</li> <li>• More careful use of water</li> <li>• Conservation of supplies to make available to all</li> <li>• Water for essential use only.</li> </ul> <p>Credit reference to valid methods such as: Water meters, rationing, standpipes.</p>	4	<p>2 x 2 or 3 x 1 + 1</p> <p>1 mark for description 1 mark for explanation Award up to 3 marks for one detailed response.</p> <p>Valid ideas needed for both sections for full marks.</p> <p>Must include at least one description point and one explanation idea for full marks within overall answer.</p> <p>More water alone is not creditworthy.</p>

Question	Answer	Marks	Guidance
3 (f)	<p><b>Case Study: an example of a climatic hazard event in an MEDC place</b></p> <p><b>Indicative content</b></p> <p><i>MEDC place can be a country, region or settlement</i></p> <p><i>Type = tropical storm or severe drought</i></p> <p><i>Impact could include loss of life/injury, loss of homes/destruction of other property/infrastructure and/or problems faced by people after the hazard e.g. homelessness, food shortages.</i></p> <p><i>Conditions for severe drought will include: long periods of high pressure, period of high temperature, high evapo-transpiration, negative water budget, effect of El Nino in southern hemisphere, Inter Tropical Convergence Zone in Africa.</i></p> <p><i>Conditions for tropical storms will include: high ocean temperatures, 26°C-27°C, deep ocean water, at least 60m, rapid evaporation of ocean water, effect of Trade winds/Coriolis Effect.</i></p> <p><i>Credible place specific detail could include accurate number data for impact ideas such as casualties, costs of damage and/or additional place names linked to chosen MEDC place e.g. Lake Pontchartrain, New Orleans and/or named places linked to conditions such as Atlantic Ocean for hurricanes, Red Centre for drought in Australia.</i></p> <p><b>Level 3 (7-8 marks)</b></p> <p>Demonstrates good knowledge and understanding of the impact of a climatic hazard event for a valid MEDC place and the natural conditions which caused the hazard.</p>	8	<p>Case study will be marked using three levels.</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level.</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency.</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level</p> <p>Use <b>DEV</b> within answer to show additional creditable detail/development.</p> <p>Use <b>PLC</b> to indicate place specific detail for Level 3.</p> <p><b>Level 3</b></p> <p>Top of level will have detail about the impact of the hazard and the natural conditions which caused the hazard, with some place specific detail (such as relevant place names or credible impact data).</p> <p>Detailed response lacking place specific detail = bottom of L3</p>

Question	Answer	Marks	Guidance
	<p><b>Level 2 (4-6 marks)</b>                      Demonstrates sound knowledge and understanding of a climatic hazard event for an MEDC place. With valid detail for either the impact of the hazard or the natural conditions which caused the hazard.</p> <p><b>Level 1 (1-3 marks)</b>                      Demonstrates limited knowledge and understanding of a climatic hazard event in an MEDC place with a basic idea about either the impact of the hazard or natural conditions which caused the hazard.</p>		<p><b>Level 2</b>  <b>Valid named MEDC place needed for top of Level 2</b></p> <p>Top of level will have an impact and a natural conditions idea. Will have additional detail for either the impact of the hazard or the natural conditions which caused the hazard.</p> <p>Bottom of level will have a basic impact idea and a basic natural conditions idea ... or detail about the impact with no valid natural conditions ideas...or detail about the natural conditions with no valid impact ideas</p> <p><b>Level 1</b>                      Top of level will have a valid place with a basic valid impact idea or a relevant preparation idea</p> <p>Bottom of level will have a place with no further valid information or a basic valid impact idea or a basic natural conditions idea</p>
	<p>Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 32</p>	<p><b>3</b></p>	

Question			Answer	Marks	Guidance
4	(a)	(i)	Cocos Plate	1	
		(ii)	Peru-Chile Trench	1	
		(iii)	South East	1	
	(b)		plates moving towards each other = 1 mark. accept converging, convergent, subduction, collision zone, destructive.  plates moving away from each other = 1 mark. accept diverging, divergent, constructive.	2	2 x 1
	(c)		Example could be a subduction zone, collision zone or conservative margin.  1 mark for describing/showing plates coming together. 1 mark for how plates move in relation to each other. 1 mark for plates get stuck/build up of pressure. 1 mark for release/movement causes earthquake.	4	4 x 1  Full marks available for: written explanation without diagram; or detailed, annotated diagram; or diagram with explanation  credit highest scoring response if candidate's diagrams/ explanations cover more than one type of plate margin.
	(d)		Reasons for worse impact in LEDCs could include: <ul style="list-style-type: none"> <li>• Fewer earthquake resistant buildings = more collapse</li> <li>• Poor quality materials eg, adobe bricks = more collapse</li> <li>• Lack of education/awareness eg, earthquake drills</li> <li>• Lack of preparation eg, emergency kit at home</li> <li>• Limited emergency services for rescue/support.</li> </ul>	4	2 x 2 or 3 x 1 + 1  1 mark for idea, second mark for explanation.  Award 3 marks for one well explained reason.  Two reasons needed for full marks.  Credit LEDC/MEDC comparisons  No credit for earthquake prediction ideas.



Question	Answer	Marks	Guidance
(e)	<p>Reasons why it can be safe in MEDCs could include:</p> <ul style="list-style-type: none"> <li>• Earthquake proof buildings</li> <li>• Earthquake drills to practice response</li> <li>• Education through leaflets</li> <li>• Home survival kits</li> <li>• Well trained rescue and emergency services</li> <li>• Relief readiness, such as shelters for homeless.</li> </ul>	4	<p>4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.</p> <p>At least two reasons needed for full marks.</p> <p>Credit MEDC/LEDC comparisons.</p> <p>No credit for earthquake prediction ideas.</p>
(f)	<p><b>Case Study: an example of a tectonic hazard event in an LEDC place</b></p> <p><b>Indicative content</b></p> <p><i>LEDC place can be a country, region, settlement, named volcano or the site of a tectonic event</i></p> <p><i>Type = earthquake or volcanic eruption</i></p> <p><i>Impact could include loss of life/injury, loss of homes/destruction of other property/infrastructure and/or problems faced by people after the hazard e.g. homelessness, food shortages.</i></p> <p><i>Hazard preparation ideas could be general such as well trained rescue/relief services.</i></p> <p><i>Planned relief/aid for hazard victims such as emergency refuges, food/water, medical treatment.</i></p> <p><i>Could be specific to volcanic eruptions such as volcano monitoring leading to warning and evacuation plans.</i></p> <p><i>Could be specific to earthquakes such as public awareness/readiness via practice drills, home emergency kits.</i></p> <p><i>Earthquake resistant buildings such as timber frames in LEDCs.</i></p> <p><i>No credit for earthquake prediction methods leading to evacuation.</i></p> <p><i>Credible place specific detail could include accurate number data for impact ideas such as casualties, costs of</i></p>	8	<p>Case study will be marked using three levels</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level</p> <p>Use <b>DEV</b> within answer to show additional creditable detail/development.</p> <p>Use <b>PLC</b> to indicate place specific detail for Level 3.</p>

Question	Answer	Marks	Guidance
	<p><i>damage and/or additional place names linked to chosen LEDC place.</i>  <i>e.g. Port au Prince in Haiti.</i></p> <p><b>Level 3 (7-8 marks)</b>            Demonstrates good knowledge and understanding of the impact of a tectonic hazard event for a valid LEDC place and how people may prepare for future hazard events.</p> <p><b>Level 2 (4-6 marks)</b>            Demonstrates sound knowledge and understanding of a tectonic hazard event for an LEDC place. With valid detail for either the impact of the hazard or how people may prepare for future hazards.</p> <p><b>Level 1 (1-3 marks)</b>            Demonstrates limited knowledge and understanding of a tectonic hazard event in an LEDC place with a basic idea about either the impact of the hazard or how people may prepare for future hazards.</p>		<p><b>Level 3</b>            Top of level will have detail about the impact of the hazard and how people may prepare for future hazard events, with some place specific detail. (such as relevant place names or credible impact data).            Detailed response lacking place specific detail = bottom of L3</p> <p><b>Level 2</b>  <b>Valid named LEDC place needed for top of level</b></p> <p>Top of level will have an impact and a preparation idea. Will have additional detail for either the impact of the hazard or how people may prepare for future hazard events.</p> <p>Bottom of level will have a basic impact idea and a basic preparation idea ... or detail about the impact with no valid natural preparation ideas...or detail about the preparation ideas with no valid impact ideas.</p> <p><b>Level 1</b>            Top of level will have a valid place with a basic valid impact idea or a relevant preparation idea.</p> <p>Bottom of level will have a place with no further valid information or a basic valid impact idea or a basic relevant preparation idea for given hazard.</p>
	Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 29	3	

Question			Answer	Marks	Guidance
5	(a)	(i)	A10	1	
		(ii)	0.5km <sup>2</sup>	1	
		(iii)	South East	1	
	(b)		<p>Location factors for Cambridge Science Park could include:</p> <ul style="list-style-type: none"> <li>• Edge of city site = space + space to expand</li> <li>• Edge of city site = cheaper land, reduce costs</li> <li>• Urban rural fringe = pleasant, healthy working environment</li> <li>• Junction of main roads = easy access for staff/workers/visitors</li> <li>• Access for deliveries/materials/components</li> <li>• Links to Cambridge University for research/scientists/expertise</li> <li>• International reputation of Cambridge University to attract</li> <li>• Workers/experts/companies/investors.</li> </ul>	4	<p>2 x 2 or 3 x 1 +1</p> <p>1 mark for idea, second mark for explanation.</p> <p>Award up to 3 marks for one well explained reason.</p> <p>Two reasons needed for full marks.</p>
	(c)	(i)	1 mark for each valid example of a tertiary job eg, retail or service such as teacher, doctor.	2	2 x 1
		(ii)	<p>Reasons for more tertiary workers in MEDCs could include:</p> <ul style="list-style-type: none"> <li>• Economic development = financial services eg, banking</li> <li>• Higher standard of living/consumer goods = large retail sector</li> <li>• Development in health/education = health workers, teachers</li> <li>• Ageing population = care workers</li> </ul>	4	<p>4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one idea.</p> <p>At least two reasons needed for full marks.</p>

Question	Answer	Marks	Guidance
	<ul style="list-style-type: none"> <li>• Mechanisation of farming, food imports, decline in mining eg, coal imports</li> <li>• Decline in manufacturing, relocation of industries to LEDCs.</li> </ul>		
(d)	<p>Reasons for MNCs locating in LEDCs could include:</p> <ul style="list-style-type: none"> <li>• Lower labour costs</li> <li>• Cheaper resources/raw materials/land</li> <li>• Access to expanding consumer markets</li> <li>• Fewer planning/environmental regulations</li> <li>• LEDC government support/incentives</li> <li>• Ideas should be linked to increased profits via reduced costs and/or increased revenues.</li> </ul>		<p>2 x 2 or 3 x 1 + 1</p> <p>1 mark for idea, second mark for explanation.</p> <p>Award 3 marks for one well explained reason.</p> <p>Two reasons needed for full marks.</p>
(f)	<p><b>Case Study: an economic activity that has damaged the physical environment</b></p> <p><b>Indicative content</b>  <i>Valid type of economic activity needed</i>  <i>Location can be a settlement, region or country.</i></p> <p><i>Valid features could include reference to:</i></p> <p><i>Inputs, raw materials, resources used, methods, production, technology used</i>  <i>outputs, products, services provided</i>  <i>transport/infrastructure, correct company names linked to chosen economic activity.</i></p> <p><i>Examples of damage to the physical environment could include reference to pollution of air, water, soil, habitats impact upon wildlife/natural vegetation and/or ecosystems such as oiled seabirds</i>  <i>Credit for impact of pollution on human health</i></p>	8	<p>Case study will be marked using three levels.</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level.</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency.</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level.</p> <p>Use <b>DEV</b> within answer to show additional creditable detail/development.</p> <p>Use <b>PLC</b> to indicate place specific detail for Level 3.</p>

Question	Answer	Marks	Guidance
	<p><i>Place specific detail could include accurate data about scale of economic activity such as number of workers, volume of output.</i></p> <p><i>and/or named examples of companies, products, businesses.</i></p> <p><i>and/or credible data about level of environmental damage e.g. area of rainforest destroyed and/or place names linked to environmental damage e.g. rivers, nature reserves.</i></p> <p><b>Level 3 (7-8 marks)</b> Demonstrates good knowledge and understanding of a valid economic activity and how it has damaged the physical environment</p> <p><b>Level 2 (4-6 marks)</b> Demonstrates sound knowledge and understanding of a valid economic activity and how it has damaged the physical environment.</p>		<p><b>Level 3</b> Top of level will have detail about the features of the economic activity and how it has damaged the physical environment, with some place specific detail (such as relevant places names, data about economic activity or scale of damage). Detailed response lacking place specific detail = bottom of L3.</p> <p><b>Level 2</b> <b>Valid economic activity and location needed for top of level</b></p> <p>Top of level will have an economic activity feature and an environmental damage idea. Will have additional detail for either the features of the economic activity and how it has damaged the physical environment,</p> <p>Bottom of level will have a basic feature idea and a basic damage idea ... or detail about the economic activity features with no valid environmental damage ideas ... or detail about the environmental damage with no valid economic activity features</p>

Question	Answer	Marks	Guidance
	<p><b>Level 1 (1-3 marks)</b>            Demonstrates limited knowledge and understanding of a valid economic activity or how it has damaged the physical environment.</p>		<p><b>Level 1</b>            Top of level will have a valid economic activity with a basic feature or a relevant environmental damage idea</p> <p>Bottom of level will have a valid economic activity with no further valid information or a basic idea about environmental damage</p>
	<p>Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 29.</p>	3	

Question			Answer	Marks	Guidance
6	(a)	(i)	0.4	1	
		(ii)	1990	1	
		(iii)	less developed than	1	
	(b)		1 mark for 'can read and/or write'.  Second mark for additional detail given as a % or definition of adult (grown ups/not children).	2	2 x 1  No credit for 'adult' alone. Second mark only available if definition given.
	(c)		Life expectancy will increase due to improvements in health care, higher standards of living, healthier lifestyles.  Car ownership will increase due to higher incomes, development of transport infrastructure, availability of high cost consumer goods such as cars.	4	2 x 2 or 3 x 1 + 1  1 mark for measure will increase, 2nd mark for explanation.  Award 3 marks for one well explained response.  Two valid responses needed for full marks.  Credit for valid reasons if change not stated.  No credit for definitions of the measures.
	(d)		Benefits of access to clean water could include:  <ul style="list-style-type: none"> <li>• less disease = healthier</li> <li>• less time spent collecting water</li> <li>• better sanitation/hygiene = healthier</li> <li>• healthier diet, increased crop yields = income.</li> </ul>	4	4 x 1 for basic ideas or up to 3 marks for a well developed explanation of one benefit.  Two benefits needed for full marks.  Credit valid ideas not shown in figure 9.  No credit for describing uses of clean water.

Question	Answer	Marks	Guidance
(e)	<p>Problems for LEDCs caused by MEDC aid could include:</p> <ul style="list-style-type: none"> <li>• Damage to environment eg, large scale aid schemes</li> <li>• Depletion of resources eg, deforestation, soil depletion</li> <li>• Exploitation of resources used by local people eg, water</li> <li>• May result in future debt = not economically sustainable</li> <li>• May be linked to MEDC products</li> <li>• May encourage dependency on aid instead of stimulating local development</li> <li>• May depend on MEDC donations = compassion fatigue</li> <li>• May not support/help those most in need due to corruption</li> <li>• May not be enough emergency aid to save lives.</li> <li>• Credit refusal of aid.</li> </ul>	4	<p>2 x 2 or 3 x 1 +1</p> <p>1 mark for valid problem, 2<sup>nd</sup> mark for explanation (cause or consequence of problem).</p> <p>Award 3 marks for one well explained problem.</p> <p>Two problems needed for full marks.</p>
(f)	<p><b>Case Study: an economic activity in an LEDC</b></p> <p><b>Indicative content</b>  <i>Valid type of economic activity needed</i></p> <p><i>Credit an LEDC aid project if linked to an economic activity such as: output for sale (milk, crops) service provided (education, health care, IT training)</i></p> <p><b>Up to mid Level 2 (5 Marks)</b></p> <p><i>LEDC location can be a settlement, region or country</i>  <i>Valid features could include reference to:</i>  <i>Inputs, raw materials, resources used</i>  <i>Methods, production, technology used</i>  <i>Outputs, products, services provided</i>  <i>Transport/infrastructure , correct company names linked</i></p>	8	<p>Case study will be marked using three levels.</p> <p><b>Award mark at top of level</b> if answer consistently meets all the criteria for the level.</p> <p><b>Award mark at middle of level</b> if answer meets the criteria with some omissions, errors or inconsistency.</p> <p><b>Award mark at the bottom of level</b> if answer only just meets the criteria with several omissions, errors or inconsistency.</p> <p>Annotate end of answer with <b>L3</b>, <b>L2</b> or <b>L1</b> for overall level.</p> <p>Use <b>DEV</b> within answer to show additional creditable detail/development.</p> <p>Use <b>PLC</b> to indicate place specific detail for Level 3.</p>



Question	Answer	Marks	Guidance
	<p><i>to chosen economic activity.</i></p> <p><i>Location factors could include references to physical factors such as: access to raw materials/resources, energy supply needs, climate, relief, soils and/or human factors such as: transport networks, labour supply, access to markets, population thresholds, national/regional policies/support which affect location such as grants.</i></p> <p><i>Place specific detail could include accurate data about scale of economic activity such as number of workers, volume of output and/or named examples of companies, products, businesses and/or place names linked to location such as road numbers, rivers.</i></p> <p><b>Level 3 (7-8 marks)</b> Demonstrates good knowledge and understanding of a valid LEDC based economic activity and its location factors.</p> <p><b>Level 2 (4-6 marks)</b> Demonstrates sound knowledge and understanding of a valid LEDC based economic activity and its location factors.</p>		<p><b>Level 3</b> Top of level will have detail about the features of the economic activity and its location factors, with some place specific detail (such as relevant places names or data about economic activity).</p> <p>Detailed response lacking place specific detail = bottom of L3.</p> <p><b>Level 2</b> <b>Valid economic activity and LEDC location needed for top of Level 2</b></p> <p>Top of level will have an economic activity feature and a location factor idea. Will have additional detail for either the features of the economic activity or the location factors</p> <p>Bottom of level will have a basic feature idea and a basic location factor idea ... or detail about the economic activity features with no valid location factor ideas ... or detail about the location factors with no valid economic activity features.</p>

Question	Answer	Marks	Guidance
	<p><b>Level 1 (1-3 marks)</b> Demonstrates limited knowledge and understanding of a valid LEDC based economic activity or its location factors.</p>		<p><b>Level 1</b> Top of level will have a valid economic activity with a basic feature or a relevant location factor idea.</p> <p>Bottom of level will have a valid economic activity with no further valid information or a basic idea about a location factor.</p>
	Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 29.	3	

### Spelling, punctuation and grammar (SPaG) assessment grid

<b>High performance 3 marks</b>
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.
<b>Intermediate performance 2 marks</b>
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.
<b>Threshold performance 1 mark</b>
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.

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