

Geography B

General Certificate of Secondary Education

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

Mark Scheme for June 2011

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Question		Expected Answers	Marks	Rationale
1	Use Fig. 1 in the Resource Booklet and the OS map extract.			
(a)	Study Fig. 1 , a photograph of the River Esk at Whitby, and the OS map extract.			
(i)	State the number of the A road which crosses the River Esk in Fig. 1 .	(A) 171	[1]	
(ii)	Give the 4 figure grid reference of the grid square where the A road crosses the river. Circle the correct answer.	8910	[1]	
(iii)	In which direction was the camera pointing when the photograph, Fig. 1 , was taken? Circle the correct answer.	North East	[1]	
(b)	Fig. 1 shows the lower course of the River Esk. Describe the river landforms shown in Fig. 1 .	1 mark for each valid landform and/or landscape feature and/or second mark if developed with descriptive detail Content Guide: <i>Wide river/ wide channel, river mouth, estuary, gentle gradient, meanders, floodplain/flat land, confluence, tributary, slip off slope, point bar, island, river cliff.</i> Credit for descriptions of valid features e.g. meander, a bend in the river (2 marks)	[4]	4 x 1 or 2 x 2 = 4 marks 4 marks for list of 4 valid features No credit for lower course landforms not shown in Fig. 1 e.g. delta No credit for human features e.g. harbour, embankment

	Question	Expected Answers	Marks	Rationale
(c)	The upper course of the river has different landforms. Describe the river landforms in the upper course of a river.	1 mark for each valid landform and/or landscape feature and/or second mark if developed with descriptive detail Content Guide: <i>Narrow river channel, river valley will be narrow, with steep V- shape, interlocking spurs, waterfalls, gorge, rapids, potholes, source, spring, tributaries, confluences</i> Credit for descriptions of valid features e.g. waterfall, a vertical drop in the river course (2 marks) Credit valid reference to lower course landforms if described in comparative terms e.g. meanders in upper course are smaller/straighter.	[4]	4 x 1 or 2 x 2 = 4 marks 4 marks for list of 4 valid features
(d) (i)	Labels X and Y are on a bend in the river. What is the correct landform name for a bend in a river?	Meander	[1]	1 x 1
(d) (ii)	Find the labels X and Y on Fig 1 . At which place, X or Y will erosion be happening? At which place, X or Y will deposition be happening?	Erosion = Y Deposition = X	[1]	1 x 1 Both correct for 1 mark

	Question	Expected Answers	Marks	Rationale
(e)	<p>Explain why erosion and deposition take place on different sides of the bend in the river.</p> <p>You may draw a labelled diagram as part of your answer</p>	<p>Max 3 marks for ideas to explain why erosion on outer bend</p> <p>Max 3 marks for ideas to explain why deposition on inner bend</p> <p>Content Guide: <i>Deeper/faster/ flow on outer bend, river has more energy/ stronger/more powerful to erode/remove material.</i> <i>Shallower/slower/ flow on inner bend, river has less energy/ weaker/less powerful river has less energy and deposits load</i></p> <p>Credit erosion processes if linked to explanation e.g. hydraulic action where there is faster flow on outside of bend</p>	[4]	<p>Full marks available for detailed written explanation without diagram or detailed annotated diagram or diagram with explanation</p> <p>No credit for stating/showing erosion on outer/deposition on inner [same as Q d(ii)]</p> <p>No double credit for repetition of idea in text and diagram.</p>

	Question	Expected Answers	Marks	Rationale
(f)	<p>CASE STUDY: An example of a place where river flooding is managed</p> <ul style="list-style-type: none"> • Name your chosen place. • Describe, with detail, the effects of flooding at your chosen place. • Describe, with detail, the methods used to manage river flooding at your chosen place. 	<p>Case study will be marked using 3 levels</p> <p>0 marks No response given or response does not address the requirements of the question.</p> <p>Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and describes one basic idea</p> <p>Names a valid place affected by river flooding and Gives a basic description of one effect of river flooding or Gives a basic description of one method used to manage flooding</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding Names a valid example, describes a basic idea in each section, with one section developed with detail.</p> <p>Names a valid place affected by river flooding and Gives a basic description of one effect of river flooding and Gives a basic description of one method used to manage flooding</p>	<p>[8]</p>	<p>Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3.</p> <p>Named place can be a river, settlement or region affected by river flooding.</p> <p>Bangladesh is the only valid whole country example.</p> <p>L1 (1 mark) if only gives a valid named river/credible place</p> <p>If no valid named place: Max L1 (1/2 marks) if valid ideas for effects <u>or</u> methods</p> <p>If no valid named place: Max L2 (4/5 marks) if valid ideas for both effects <u>and</u> methods</p>

	Question	Expected Answers	Marks	Rationale
		<p>and develops the description of the effects or the methods with valid detail or additional ideas</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8 marks)</p> <p>Demonstrates good knowledge and understanding Names a valid example, with both sections developed with detail, including place specific detail</p> <p>Names a valid place affected by river flooding</p> <p>and develops both the description of the effects and the methods with valid detail or additional ideas with some credible place-specific detail</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated very clearly.</p> <p>Content Guide <i>Flood effects could include: Damage destruction of property and infrastructure, loss of life/injuries, homelessness not being able to return to home, destruction of crops, distress/upset for victims</i> <i>Flood management methods could include: Monitoring of precipitation/discharge for flood warning system, construction of flood barriers/embankments, flood control dams, storage basins, flood channels, increased drainage, restricting development on floodplains, afforestation of catchment areas, increased green space in urban</i></p>		<p>L3 (7 marks) if both sections are developed but without any credible place-specific detail</p>

Question		Expected Answers	Marks	Rationale
		<p><i>areas, education/awareness of public</i></p> <p><i>Credible place detail could include accurate number data such as flood levels, date(s), casualties and/or other place names/names of features such as name of river/tributaries, streets/districts affected in addition to named example given</i></p> <p>Accept additional location information for place detail.</p>		
2	Use the OS map extract and Fig. 2 in the Resource Booklet.			
(a)	Study the OS map extract and the map key.	8514 = flat rock (accept mud or mud and shingle)	[3]	3 x 1
(i)	Complete the table by writing the correct coastal feature for each grid square, from the selection below.	8811 = sand 8612 = shingle		
(b)	Study Fig. 2 , a photograph of Saltwick Bay. Identify two coastal landforms shown in Fig. 2 .	<p>1 mark for each valid landform shown in Fig. 2</p> <p>Content Guide</p> <p><i>Stack, stump, cliff, beach, wave cut platform, headland, bay</i></p>	[2]	2 x 1 No credit for cave, arch, cove, wave cut notch.

	Question	Expected Answers	Marks	Rationale
(c)	Describe two processes of erosion which will affect the landforms at Saltwick Bay.	<p>1 mark for naming or describing a valid process. Additional marks are awarded for describing how erosion takes place/operates. Maximum 3 marks for one process.</p> <p>Content Guide</p> <p><i>Hydraulic Action = force of water, air forced into cracks</i></p> <p><i>Abrasion/Corrasion = waves pick up sand/pebbles, hurled against cliffs/features</i></p> <p><i>Corrosion/Solution = sea water dissolves soluble material in the rock</i></p> <p><i>Attrition = pebbles hit each other to become smaller and rounder.</i></p>	[4]	<p>2 x 2 or 3 + 1</p> <p>Can achieve full marks for detailed descriptions without naming the processes</p> <p>no credit for use of word erosion if not linked to how process operates</p> <p>No credit for weathering or vague idea of waves hitting coastline.</p>
(d)	Explain how rock type (geology) can affect coastal landforms.	<p>1 mark for each valid idea</p> <p>Additional marks for exemplification and/or explanation and/or links to landforms</p> <p>Content Guide:</p> <p><i>Softer rocks easier to erode e.g. boulder clay</i></p> <p><i>Harder rocks more resistant e.g. granite</i></p> <p><i>Softer rocks= landslides and slumping</i></p> <p><i>Harder rocks= caves, arches, stacks</i></p> <p><i>Headlands and bays due to different rock types</i></p> <p><i>Joints/faults/cracks which can be widened e.g. limestone</i></p> <p><i>Creates landforms such as caves, arches, stacks</i></p> <p><i>Solubility, limestone and chalk – calcium carbonate which is dissolved by sea water (corrosion)</i></p> <p>Credit for valid named examples e.g. Old Harry</p>	[4]	<p>4 x 1 or 2 x 2 or 3 + 1</p> <p>No double credit for soft and hard rock ideas</p>

Question		Expected Answers	Marks	Rationale
(e)	Describe the process of longshore drift. You may draw a labelled diagram as part of your answer.	<p>Must include ideas about both swash and backwash for full marks</p> <p>Content Guide: <i>Longshore drift moves material along the coastline. Valid zig-zag pattern. Waves approach the beach at an angle (swash) Swash carries material up the beach at the angle of approach. Backwash carries material straight back down the beach at 90° to the coastline, under influence of gravity.</i></p>	[4]	<p>4 x 1</p> <p>Full marks available for detailed written explanation without diagram or detailed annotated diagram or diagram with explanation</p> <p>No double credit for repetition of idea(s) in text and diagram.</p>

	Question	Expected Answers	Marks	Rationale
(f)	<p>CASE STUDY: An example of a place where coastal erosion is managed</p> <ul style="list-style-type: none"> Name your chosen place. Describe, with detail, the effects of coastal erosion on your chosen place. Describe, with detail, the methods used to manage coastal erosion at your chosen place. 	<p>Case study will be marked using 3 levels</p> <p>0 marks No response given or response does not address the requirements of the question.</p> <p>Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and describes one basic idea</p> <p>Names a valid place where coastal erosion is managed and Gives a basic description of one effect of coastal erosion or Gives a basic description of one method used to manage coastal erosion</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding</p> <p>Names a valid example, describes a basic idea in each section, with one section developed with detail.</p> <p>Names a valid place where coastal erosion is managed and Gives a basic description of one effect of coastal</p>		<p>Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3.</p> <p>Named place can be a settlement e.g. Hornsea region e.g. Yorkshire coast stretch of coastline e.g. Holderness Coast</p> <p>L1 (1 mark) if only gives a valid named place</p> <p>If no valid named place: Max L1 (1/2 marks) if valid ideas for effects or methods</p> <p>If no valid named place: Max L2 (4/5 marks) if valid ideas for both effects and methods</p>

	Question	Expected Answers	Marks	Rationale
		<p>erosion and Gives a basic description of one method used to manage coastal erosion</p> <p>and develops the description of the effects or the methods with valid detail or additional ideas</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8 marks) Demonstrates good knowledge and understanding</p> <p>Names a valid example, with both sections developed with detail, including place specific detail</p> <p>Names a valid place where coastal erosion is managed</p> <p>and develops both the description of the effects and the methods with valid detail or additional ideas with some credible place-specific detail</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated very clearly.</p> <p>Content Guide <i>Coastal erosion effects could include: Damage, destruction of property and infrastructure, not being able to return to home, loss of farm land, inability to insure/sell property at risk, distress/upset for victims</i></p>		<p>L3 (7 marks) if both sections are developed but without any credible place-specific detail</p>

	Question	Expected Answers	Marks	Rationale
		<p><i>Coastal management methods could include: hard engineering such as concrete sea walls, rock armour/barriers, groynes, beach replenishment, drainage pipes in cliffs and managed retreat, compensation for loss of land/property</i></p> <p><i>Credible place detail could include accurate number data such as erosion rates, date(s), properties lost and/or other place names/names of features such as names of, streets/districts/settlements affected in addition to named example given</i></p> <p>Accept additional location information for place detail.</p>		
3	Use Figs 3a and 3b in the Resource Booklet.			
(a)	Study Figs 3a and 3b , population pyramids for Sweden and Lesotho.			
(i)	Which country had the higher percentage of people over 80 years old?	Sweden	[1]	
(ii)	Which country had the higher percentage of children under 15 years old?	Lesotho	[1]	
(iii)	What was the percentage of males aged 15 to 19 in Lesotho?	6%	[1]	No need for %
(b)	State two features of Lesotho's population pyramid which show that it is an LEDC.	<p>1 mark per relevant feature eg</p> <p><i>Large numbers of children/high birth rate/wide base</i></p> <p><i>Fewer older people/high death rate/lower life expectancy/narrow top</i></p> <p><i>Expanding population, increasing youthful dependents/pyramid shape</i></p>	[2]	<p>2 x 1</p> <p>Credit for description of shape and/or interpretation.</p> <p>No double credit for same feature e.g. high birth rate and wide base</p>

	Question	Expected Answers	Marks	Rationale
(c)	Suggest and explain two changes which could happen to Lesotho's population pyramid over the next twenty years.	<p>1 mark per relevant change, additional marks for explanation Maximum 3 marks for one change.</p> <p>Content Guide <i>Birth rate could decline/narrow base e.g. due to increased use of/education about family planning, reduced child mortality, economic prosperity = fewer children needed, women having increased control over their fertility rates, improved education/career choices for women</i></p> <p><i>Death rate could decline/wider at top/due to improved health care, improved care for the elderly, better standard of living/improved quality of life</i></p> <p><i>Credit references to possible impact of HIV/Aids eg decrease for sexually active sections of population</i></p> <p><i>Credit plausible alternative changes: Barrel shape due increased survival at base and mid-section Reference to Demographic Transition Model stage change 2/3/4 increased number of deaths due to famine, war increased number of births due to a 'baby boom' as in post-war UK Credit migration effects</i></p>	[4]	<p>2 x 2 or 3 + 1</p> <p>No credit for increase/decrease in total population unless related to changes in structure</p>

	Question	Expected Answers	Marks	Rationale
(d)	Explain why life expectancy is usually higher in MEDCs such as Sweden.	1 mark per relevant idea, additional marks for explanation Full marks for development of one idea. Content Guide: <i>MEDCs have better health care re: access to medicines, doctors, hospitals</i> <i>improved care of the elderly</i> <i>welfare state benefits e.g. state pensions</i> <i>Better standard of living/quality of life/more money</i> <i>eg access to clean water, improved diet/enough food, decent housing</i> <i>Fewer life threatening situations</i> <i>Credit less disease as a basic point</i>	4	
(e)	Describe the problems that an ageing population can cause for MEDCs.	1 mark per relevant problem, additional marks for explanation Full marks for detailed development of one idea. Content Guide <i>Increasing number of elderly dependents</i> <i>Loss of tax revenue if fewer workers</i> <i>Loss of pension revenue for retired workers</i> <i>Increased cost of providing pensions</i> <i>Costs of health care/residential care for pensioners</i> <i>Financial burden on children to care for elderly parents</i> <i>Retirement migration exacerbates problems in specific areas e.g. Torbay, Costa del Sol</i>		

	Question	Expected Answers	Marks	Rationale
(f)	<p>CASE STUDY: An example of a country with a strategy about natural population change</p> <ul style="list-style-type: none"> Name your chosen country. Describe, with detail, the strategy used to influence natural population change in your chosen country. Explain, with detail, how the strategy has affected the people who live in your chosen country. 	<p>Case study will be marked using 3 levels</p> <p>0 marks No response given or response does not address the requirements of the question.</p> <p>Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and gives one basic idea</p> <p>Names a valid country and Gives a basic description of one feature of its population strategy <u>or</u> basic idea about an effect of the population strategy</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding</p> <p>Names a valid example and gives one basic idea in each section, with one developed with detail</p> <p>Names a valid country and Gives a basic description of one feature of its population strategy and Gives a basic description of one effect of the strategy on the people of the country and develops the description of the strategy <u>or</u> the effects with valid detail or additional ideas</p>		<p>Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3.</p> <p>L1 (1 mark) if only gives a valid named country</p> <p>If no valid named country: Max L1 (1/2 marks) if valid ideas for effects <u>or</u> methods</p> <p>If no valid named country: Max L2 (4/5 marks) if valid ideas for both effects <u>and</u> methods</p>

	Question	Expected Answers	Marks	Rationale
		<p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (7-8 marks) Demonstrates good knowledge and understanding Names a valid example, with both sections developed with detail, including place specific detail</p> <p>Names a valid country</p> <p>and develops the description of the strategy and the effects with valid detail or additional ideas with some credible place-specific detail</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated very clearly.</p> <p>Content Guide <i>Strategies should focus on influencing the country's birth rate and people's attitudes to having children.</i> <i>Family planning/access to contraception</i> <i>Tax incentives, health care/education incentives</i> <i>China's one child law re: rewards and sanctions</i> <i>Incentives to have more children eg Singapore</i> <i>Laws to prevent abortions eg Ireland, Philippines</i> <i>Effects must be related to strategy(ies) given and could include:</i> <i>improved health/quality of life for women</i> <i>improved health for babies/children</i> <i>shortage of child workers in rural areas</i> <i>increased termination of female babies</i> <i>4-2-1 problem in China –looking after older relatives</i> 'Little emperors' spoilt children and 'spare branches' in China with male/female imbalance</p>		<p>L3 (7 marks) if both sections are developed but without any credible place specific detail</p>

	Question	Expected Answers	Marks	Rationale
		<p><i>Credible place-specific detail could include valid data such as birth/fertility rates, rate of population change and/or place names within given named country, rural-urban variations.</i></p> <p>For China credit as a developed point clear reference to One Child Policy as a rule, law, government policy</p> <p>Credit additional strategy information for place detail</p> <p>No credit for reasons for population strategy.</p>		
4	Use Figs 4 and 5 in the Resource Booklet.			
(a)	Study Fig. 4 , a graph showing population change in some of the world's largest cities.			
(i)	Name the city with the largest population in 1990.	Tokyo	[1]	
(ii)	State the estimated population for the city of Karachi in 2015.	15 million Accept 15 m No mark for 15	[1]	
(iii)	Name the city with the largest estimated population increase between 2005 and 2015.	Lagos	[1]	

Question		Expected Answers	Marks	Rationale
(b)	Explain why, in LEDCs, many people migrate from rural areas to live in large cities.	1 mark per relevant idea, additional marks for explanation Full marks for developments of one idea. Content Guide: <i>Credit valid rural push factors such as poverty, lack of services, boredom, lack of opportunity, shortage of land for farming</i> <i>Credit valid urban pull factors such as better services, greater job opportunities, exciting lifestyle</i> <i>Credit references to forced migration eg war, famine</i>	[4]	No double credit for repetition of same idea in urban/rural context e.g. few jobs in countryside and many jobs in city
(c)	Study Fig. 5 , a photograph of a squatter settlement in an LEDC city. State two features of the squatter settlement shown in Fig. 5 .	1 mark for each relevant feature eg <i>poor quality building materials, lack of space, different shapes and sizes of dwellings, built by residents, hillside location</i> Credit any feature visible in Fig. 5 e.g. church	[2]	2 x 1 No credit for overcrowding
(d)	Describe the problems for people who live in squatter settlements.	1 mark per relevant idea, additional marks for explanation Max 3 marks for development of one idea. Content Guide: <i>Cramped living conditions, lack of sanitation, no access to clean water = poor health</i> <i>Insecurity of tenure – could be evicted by city authorities – housing destroyed/cleared</i> <i>Unemployment/irregular employment/no access to social security/welfare,</i> <i>High crime levels, lack of law and order</i> <i>Lack of services/limited access to education/health care</i> <i>Risk of fire/landslide/flood/disease</i>	[4]	4 x 1 or 2 x 2 or 3 + 1 No credit for reference to poverty/people are poor

	Question	Expected Answers	Marks	Rationale
(e)	In MEDCs, many people migrate from large cities to live in rural areas. Give two reasons to explain why.	1 mark per relevant reason, additional marks for explanation Max 3 marks for development of one reason. Content Guide: <i>Credit urban push factors and/or rural pull factors</i> <i>Improved quality of life, reduced stress, lower crime, lower house prices, more garden space in rural areas</i> <i>Can live outside city and commute to work</i>	[4]	2 x 2 or 3 + 1 No double credit for repetition of same idea in urban/rural context e.g. peaceful in countryside and noisy in city

	Question	Expected Answers	Marks	Rationale
(f)	<p>CASE STUDY: An example of a recent change in an urban area</p> <ul style="list-style-type: none"> Name your chosen urban area. Describe, with detail, the recent change in your chosen urban area. Explain, with detail, the reasons for the change in your chosen urban area. 	<p>Case study will be marked using 3 levels</p> <p>0 marks No response given or response does not address the requirements of the question.</p> <p>Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and gives one basic idea</p> <p>Names a valid urban area and Gives a basic description of one feature of recent change in the urban area</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding Names a valid example and gives one basic idea in each section, with one developed with detail</p> <p>Names a valid urban area and Gives a basic description of one feature of recent change in the urban area and Gives a basic, linked reason to explain the change and develops the description of the change or the explanation with valid detail or additional ideas Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p>	[8]	<p>Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3.</p> <p>Urban area will be named town or city Can also be part of a named town or city eg city centre, inner city area, suburb, retail park, industrial estate</p> <p>L1 (1 mark) if only gives a valid urban area</p> <p>If no valid urban area: Max L1 (1/2 marks) if valid ideas for effects or methods</p> <p>If no valid named urban area: Max L2 (4/5 marks) if valid ideas for both effects and methods</p> <p>Max Level 2 (4/5 Marks) if change(s) not recent (<1990)</p> <p>Max Level 2 (4/5 Marks) if settlement is a village or smaller</p>

	Question	Expected Answers	Marks	Rationale
		<p>Level 3 (7-8 marks) Demonstrates good knowledge and understanding Names a valid example, with both sections developed with detail, including place specific detail</p> <p>Names a valid urban area and</p> <p>and develops the description of the change and the explanation with valid detail or additional ideas with some credible place-specific detail</p> <p>Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> <p>Content Guide <i>Credit for changes in land use, urban growth or decline, transport, infrastructure, employment, retail/service provision. Can focus on part of the urban area eg CBD, a suburb, inner city area</i> <i>Reasons could include population change, migration, economic development or decline, urban planning or lack of planning, local authority/government interventions</i></p> <p><i>Credible place specific detail could include named streets, areas, districts within given example and/or data related to change such as numbers of houses, shops, cost of development, area covered</i></p> <p>Accept additional location information for place detail</p>		<p>L3 (7 marks) if both sections are developed but without any credible place-specific detail</p>

Question		Expected Answers	Marks	Rationale
5	Use Figs 6, 7a and 7b in the Resource Booklet.			
(a)	Explain what is meant by the term 'drought'.	1 mark for amount of rain/water, second mark for additional point <i>No rain, shortage of rain/water/less rain than normal over a (set) period of time credit reference to evapotranspiration idea</i>	[2]	1 x 2
(b)	Look again at Fig. 6 .			
(i)	What is the level of risk of death by drought in the continent of North America?	No risk	[1]	
(ii)	Which continent has the highest level of risk of death by drought?	Africa	[1]	
(iii)	Tick one box <input checked="" type="checkbox"/> below, to complete correctly the sentence which follows. Nearly all the areas with highest risk of death by drought are located...	between the Tropic of Cancer and the Tropic of Capricorn.	[1]	
(c)	Explain why the risk of death by drought is high in some LEDCs.	1 mark per relevant idea, additional marks for explanation Full marks for developments of one idea. Content Guide <i>Less secure/reliable supplies of water in drought risk areas in LEDCs, importance of water for growing food crops in LEDCs = greater risk of hunger/famine, risk of disease from contaminated supplies in LEDCs</i>	[4]	

	Question	Expected Answers	Marks	Rationale
(d)	Describe, with detail, two methods which can reduce the effects of drought in MEDCs.	1 mark per relevant method, additional marks for explanation Max 3 marks for development of one method. Content Guide <i>Water conservation measures such as rationing, restrictions on usage eg hosepipe bans, provision of emergency supplies.</i> <i>Water supply/storage/transfer schemes</i> <i>Use of domestic water meters to monitor/reduce consumption</i>	[4]	2 x 2 or 3 + 1
(e)	Study Figs 7a and 7b , photographs showing some drought management methods in LEDCs. Explain how sustainable these methods are for LEDCs.	1 mark per relevant idea Max 3 marks for development of one idea. Ideas must focus on sustainability of the two methods shown in Fig. 7 <u>not</u> how they work. Content Guide <i>Schemes are small scale/low cost = affordable for locals</i> <i>Low level technology can be built/maintained by locals</i> <i>Will conserve potential water supply for future use</i> <i>Credit comments about unsustainability such as ground water supply may be used up, it may not rain to fill tank</i>	[4]	4 x 1 or 2 x 2 No credit for any other drought management methods.
(f)	CASE STUDY: An example of an LEDC place which has experienced a climatic hazard (such as a drought or tropical storm) <ul style="list-style-type: none"> • Name your chosen LEDC place. • State the type of climatic hazard • Describe, with detail, the effects of the climatic hazard on your chosen LEDC place. 	Case study will be marked using 3 levels 0 marks No response given or response does not address the requirements of the question. Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and place and gives one basic idea	[8]	Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3. LEDC place can be settlement, region or country.

	Question	Expected Answers	Marks	Rationale
	<ul style="list-style-type: none"> Describe, with detail, the climatic conditions which cause the hazard. 	<p>Names a climatic hazard and an LEDC place and Gives a basic description of one effect or one idea about climatic conditions</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding</p> <p>Names a valid example and place, gives one basic idea in each section, with one section developed with detail</p> <p>Names a climatic hazard and an LEDC place and Gives a basic description of one effect and one idea about climatic conditions with either effects or conditions developed with detail</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly</p> <p>Level 3 (7-8 marks) Demonstrates sound knowledge and understanding</p> <p>Names a valid example and place, with both sections developed with detail, including place specific detail Names a climatic hazard and LEDC place with both effects and conditions developed with</p>		<p>Example must be drought or tropical storm. (Only credit flooding if linked to tropical storm)</p> <p>L1 (1 mark) if only gives a valid LEDC place</p> <p>If no valid named LEDC place: Max L1 (1/2 marks) if valid ideas for effects or methods</p> <p>If no valid named LEDC place: Max L2 (4/5 marks) if valid ideas for both effects and methods</p> <p>L3 (7 marks) if both sections are developed but without any credible place-specific detail</p>

	Question	Expected Answers	Marks	Rationale
		<p>detail with some place specific detail</p> <p>Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> <p>Content Guide: <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 eg homelessness, food shortages</i></p> <p><i>Conditions for severe drought will include</i> <i>Long period of high pressure = few clouds form</i> <i>High temperatures = high evapotranspiration leading to a negative water budget</i> <i>Local/regional climatic factors eg prevention of northwards migration of Inter Tropical Convergence Zone into Sahel</i> <i>For tropical storms = high ocean temperatures causing rapid evaporation of large volumes of water, which sucks in warm air to generate storm energy and high winds</i></p> <p><i>Credible place detail could include accurate number data for effects such as casualties, costs of damage and/or names of settlements/regions affected within the named LEDC and/or named places linked to causes such as named oceans for tropical storms.</i></p> <p>Accept additional location information for place detail.</p>		

Question		Expected Answers	Marks	Rationale
6	Use Figs 8 and 9 in the Resource Booklet.			
(a)	Study Fig. 8 , a map of active volcanoes in Japan.			
(i)	How many volcano observation centres are shown on Fig. 8 ?	Four	[1]	
(ii)	Name the Japanese island with the greatest number of active volcanoes.	Honshu	[1]	
(iii)	Tick one box below, to complete correctly the sentence which follows. The Eurasian plate is moving...	towards the Philippine and Pacific plates.	[1]	
(b)	State two pieces of useful information that could be used to predict a volcanic eruption.	1 mark per relevant idea eg <i>build up of magma, volcanic gases, smoke, steam, ground movement/deformation, plate movements, (detection of frequent small) earthquakes, noise (gurgling magma), remote sensing, changes in water discharge</i>	[2]	2 x 1
(c)	Explain how the movement of plates can cause volcanic eruptions. You may draw a labelled diagram as part of your answer.	1 mark for describing/showing a relevant type of plate movement (could be a destructive or constructive margin) second mark for how plates interact, third mark for explaining how magma/lava builds up/is created/rising fourth mark for additional relevant detail only if first three marks achieved. If first three marks achieved then credit fourth mark for additional relevant detail	[4]	Full marks available for detailed written explanation without diagram or detailed annotated diagram or diagram with explanation Max 2 marks for volcanic hotspot

Question		Expected Answers	Marks	Rationale
(d)	Study Fig. 9 , a poster showing Japanese tips for dealing with volcanic disasters. Explain how each tip could help keep people safe.	1 mark for basic explanation of each tip Content Guide <i>Tip 1: people are aware of location of dangers beforehand/where it is safe to go</i> <i>Tip 2: emergency services can respond quickly</i> <i>Tip 3: people helped to safer places</i> <i>Tip 4: people know what to do because they are organised</i>	[4]	4 x 1 No credit for copying of statement(s) from Fig. 9
(e)	Explain why people live near to active volcanoes.	1 mark per relevant idea, additional marks for explanation Full marks for developments of one idea. Content Guide: <i>Credit valid ideas such as:</i> <i>Not aware that the volcano is active, too poor to move away, friends family live there, long time since last recorded eruption, feel safe due to monitoring/warning systems, feel safe due to emergency services/drills and information, farmers take advantage of fertile volcanic soils, employment/business linked to tourism associated with volcano, minerals, geothermal energy</i>	[4]	No credit for cheap land/houses near volcano
(f)	An example of an LEDC place which has experienced a tectonic hazard event (such as an earthquake or volcanic eruption) <ul style="list-style-type: none"> Name your chosen LEDC place. State the type of tectonic hazard. Describe, with detail, the effects of the tectonic hazard on your chosen LEDC place. 	Case study will be marked using 3 levels 0 marks No response given or response does not address the requirements of the question. Level 1 (1-3 marks) Demonstrates limited knowledge and understanding Names a valid example and place and gives one basic idea		Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3. LEDC place can be settlement, region or country.

	Question	Expected Answers	Marks	Rationale
	<ul style="list-style-type: none"> Describe, with detail, the methods to reduce the effects of the tectonic hazard. 	<p>Names a tectonic hazard and LEDC place and Gives a basic description of one effect or one method</p> <p>Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p> <p>Level 2 (4-6 marks) Demonstrates sound knowledge and understanding</p> <p>Names a valid example and place, gives one basic idea in each section, with one section developed with detail</p> <p>Names a tectonic hazard and LEDC place and Gives a basic description of one effect and one method with either effects or methods developed with detail</p> <p>Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly</p> <p>Level 3 (4-6 marks) Demonstrates sound knowledge and understanding Names a valid example and place, with both sections developed with detail, including place specific detail</p> <p>Names a tectonic hazard and LEDC place with both effects and methods developed with detail</p>		<p>Example must be an earthquake or volcanic eruption</p> <p>(credit tsunami if linked to earthquake)</p> <p>L1 (1 mark) if only gives a valid LEDC place</p> <p>If no valid named LEDC place: Max L1 (1/2 marks) if valid ideas for effects or methods</p> <p>If no valid named LEDC place: Max L2 (4/5 marks) if valid ideas for both effects and methods</p> <p>L3 (7 marks) if both sections are developed but without any credible place-specific detail</p>

	Question	Expected Answers	Marks	Rationale
		<p>with some place specific detail Written work is legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> <p>Content Guide <i>Tectonic hazard must be an earthquake or volcanic eruption</i> <i>Effects could include loss of life/injury, loss of homes/destruction of other property/infrastructure. Credit descriptions of the physical impact of the hazard, eg ground shaking, lava flows, pyroclastic flows, lahars</i> Effects could also include the problems after the event such as homelessness, shortages of food and water, lack of health care, spread of fires, disease. Credit for coverage of rescue/relief operations</p> <p><i>Methods to reduce the impact must be linked to chosen hazard and could include</i> <i>Monitoring of gases, magma, ground movements for volcanoes with early warning/evacuation systems</i> <i>channels/earth barriers to divert lava flows</i> <i>Earthquake safer buildings eg wooden frames, awareness and drills</i> <i>Monitoring of unusual animal behaviour for warning signs is credible for LEDCs</i></p> <p><i>Credible place detail could include accurate number data for effects such as casualties, costs of damage and/or names of settlements/regions affected within the named LEDC</i></p> <p>Accept additional location information for place detail.</p>		

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