

Geography A

General Certificate of Secondary Education **A671/01**

Extreme Environments (Foundation Tier)

Mark Scheme for June 2010

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Question		Expected Answer	Mark	Additional Guidance
1	(a)	Study Fig. 1. Complete the sentences to describe the location of the Mojave Desert.	[3]	3 @ 1 mark
	(b)	Study Fig. 2.		
	(i)	State the average temperature in the Mojave Desert in August.	[1]	1 mark
	(ii)	Suggest how temperatures in the day are likely to differ from temperatures at night in the Mojave Desert in August.	[1]	1 mark NB 1. Comparison needed either directly or by implication (eg temperature drops at night) 2. No mark for colder/hotter unless it is clear which refers to day/night. 3. Statistics are acceptable as an alternative to hotter/colder.
	(iii)	Estimate the average annual precipitation in the Mojave Desert.	[1]	1 mark NB Candidate can indicate answer either by circling or underlining.
	(c)	The climate in a desert is hot and dry. Choose <u>three</u> of the following statements to help explain why. You should write the letters of the statements in the correct boxes on the diagram below.	[3]	3 @ 1 mark NB 1. One mark to be awarded for any 2 correct labels chosen but incorrectly placed. 2. Two marks to be awarded for 3 correct labels incorrectly placed. 3. Accept letter or words.

Question		Expected Answer	Mark	Additional Guidance
(d)	Study Photographs A and B in the separate Insert which were taken in hot desert areas.			
	(i) Using <u>only</u> evidence in the photographs, describe the vegetation shown.	<p>Features should be evident from photographic evidence. Ideas such as:</p> <ul style="list-style-type: none"> scattered/sparse/some areas without vegetation/not a lot of (large) plants shrubs/bushes cacti low/short plants plants with narrow leaves/spikes/spines/thorns thick/waxy/leathery/shiny skin etc 	[3]	<p>3 @ 1 mark NB The following answers = 0 green/brown/grey grass long roots survives with no water only grows when it rains dead trees no leaves no plants/vegetation</p> <p>The following answers need to be qualified for credit. small tough leaves</p>
	(ii) Explain how the natural vegetation of hot deserts can survive the hot, dry climate. You should complete the sentences by using arrows to match the correct beginnings and endings.	<p>One mark for each sentence correctly linked as follows:</p> <p>Many plants remain dormant.....as they cannot grow during long dry spells;</p> <p>Deep roots search for water.....as there is not much near the surface;</p> <p>Some plants store water..... to use during long period of drought</p>	[3]	<p>3 @ 1 mark</p>
		Total	[15]	

Question	Expected Answers	Mark	Additional Guidance
<p>2</p> <p>(a) The photographs show areas of hot desert being used by different groups of people. Identify the users of the desert shown in each photograph. Fill in the table below with each of the letters C, D and E.</p>	<p>Indigenous nomadic tribes = D Adventure tourists = E Multi-national companies = C</p>	<p>[2]</p>	<p>All 3 correct = 2 marks 1 or 2 correct = 1 mark</p>

Question	Expected Answers	Mark	Additional Guidance
(b) Using Photographs C, D and E and your own knowledge, describe how hot deserts are used by different groups of people.	<p>Levels marking</p> <p>0 marks Response does not address the question.</p> <p>Level 1 (1 – 2 marks) Demonstrates limited knowledge and understanding of the issue. One or more uses of deserts given with little or no development. Uses are identified/described in basic terms. (eg tribes live there, tourism, drilling/mining for oil/minerals, refining oil/factory, grazing herds of animals, solar energy, people live there, growing crops near oases/rivers etc) Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.</p> <p>Level 2 (3 – 4 marks) Demonstrates sound knowledge and understanding of the issue. One or two uses of deserts given with development. Uses are described clearly. (eg for tourists to drive 4x4 vehicles across the dunes, extraction of oil for export market, refining oil using local crude oil, nomadic herding of camels/goats for subsistence purposes, alternative energy resources such as solar energy, growing crops near oases/rivers where they can be irrigated). Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (5 – 6 marks) Demonstrates thorough knowledge and understanding of the issue. At least three uses of deserts given with development. Uses are described clearly. Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p>	[6]	<p>Level 1 1 mark for 1 x L1 (simple statement) 2 marks for 2 or more L1 (simple statements)</p> <p>Level 2 3 marks for 1 x L2 (developed statement) 4 marks for 2 x L2 (developed statements)</p> <p>Level 3 5 marks for 3 x L2 (developed statements) 6 marks for an answer which goes beyond 3 x L2 statements (eg by adding place specific materials, or material from own knowledge, or using geographical terminology etc)</p> <p>NB The following responses are not to be credited even at L1: Indigenous nomadic tribes Adventure tourists Multi-national companies (see previous question) Business/invest money/companies Search for food Agriculture/growing crops Power stations</p>

Question	Expected Answers	Mark	Additional Guidance
(c)	<p>Give <u>two</u> reasons why hot deserts are challenging environments for people who live and work there.</p>	<p>[2]</p>	<p>2 @ 1 mark</p> <p>The following answers = 0 big no shops/entertainments/houses no jobs</p> <p>The following answers need to be qualified for credit extreme temperature winds lack of shelter lack of vegetation</p>
	Total	[10]	

Question	Expected Answers	Mark	Additional Guidance
3 (a)	<p>Mark with an arrow and name the polar or mountain environment which you have studied on the world map below.</p>	[2]	<p>2 @ 1 mark</p> <p>NB Example can be at any scale</p> <ol style="list-style-type: none"> No need for arrow – location can be marked in any way which is obvious (eg dot/cross/shading). Do not credit North Pole or South Pole as examples. Do not give any credit for an arrow without a label.
(b)	<p>Describe how your chosen environment is extreme using the following headings: Climate / Landscape / Accessibility</p>	[5]	<p>5 @ 1 or development</p> <p>NB</p> <ol style="list-style-type: none"> Statements must be in the correct sections for credit. Statements must fit with correct environment for credit reference to deserts = 0 Reserve 1 mark for each of the 3 sections <p>The following answers = 0</p> <p>There is nothing there</p> <p>It is sparse</p> <p>There are mountains</p> <p>High up</p>

Question	Expected Answers	Mark	Additional Guidance
(c) Name and describe one physical feature which occurs in your chosen extreme environment. You may draw a labelled diagram to help you.	<p>One mark (reserved) for name of landform/physical feature</p> <p>(eg mountain peak, corrie, arête, scree, ridge, nunatak, glacier, fold mountain, volcano etc)</p> <p>Four additional marks for description which could be written text or labelling of diagram.</p> <p>Steeply sloping mountain peak, hollow in the mountain side, narrow/knife edged ridge, rocky ridge/mountain/peak not covered with ice or snow within/at the edge of an ice field or glacier, slow-moving river of ice formed from compacted layers of snow etc</p>	[5]	<p>5 @ 1 or development</p> <p>Examples given are not exhaustive – be prepared to credit any example of landform which is found in the type of extreme environment chosen by candidate</p> <p>Mountain = 0</p> <p>NB</p> <p>1. The name of the feature/landform can be written anywhere – it does not have to be on the top line.</p> <p>2. Do not double credit written text and labelling of diagram.</p> <p>Examples given are just for illustration – clearly the description needs to link with the feature chosen.</p>
	Total	[12]	

Question		Expected Answers	Mark	Additional Guidance
4	(a)	Study Fig. 3.		
	(i)	What is the predicted average temperature in 2010?	[1]	1 mark
	(ii)	Describe how the average temperatures at the earth's surface have changed between 1860 and 2010.	[2]	2 @ 1 mark NB As question asks for change both numbers are required for mark to be awarded (or the 1.1°C change figure)

Question		Expected Answers	Mark	Additional Guidance
	(iii)	<p>Suggest the likely impacts of the predicted changes in average temperatures on the natural environment of the polar or mountain area you have studied.</p>	[6]	<p>Level 1 1 mark for 1 x L1 (simple statement) 2 marks for 2 or more L1 (simple statements)</p> <p>Level 2 3 marks for 1 x L2 (developed statement) 4 marks for 2 x L2 (developed statements)</p> <p>Level 3 5 marks for 3 x L2 (developed statements) 6 marks for an answer which goes beyond 3 x L2 statements (eg by adding place specific materials, or material from own knowledge, or using geographical terminology etc)</p> <p>NB</p> <ol style="list-style-type: none"> 1. This answer needs to focus on the natural environment not people. 2. It should focus on impacts in the polar or mountain area studied, not global effects. 3. The following responses are not to be credited even at L1: mountains/poles are warmer pollution (needs to be qualified)
		<p>Levels marking</p> <p>0 marks Response does not address the question.</p> <p>Level 1 (1 – 2 marks) Demonstrates limited knowledge and understanding of the issue. One or more impacts given with little or no development. Impacts are described in basic terms. (eg ice melts, creatures are killed, habitats are destroyed etc). Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.</p> <p>Level 2 (3 – 4 marks) Demonstrates sound knowledge and understanding of the issue. One or two impacts given with development. Impacts are described clearly. (eg sea levels rise locally as ice caps melts, polar bears are threatened with extinction as their habitats are destroyed when the ice melts etc). Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 3 (5 – 6 marks) Demonstrates thorough knowledge and understanding of the issue. At least three impacts given with development. Impacts are described clearly. Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p>		

Question	Expected Answers	Mark	Additional Guidance
(b) Climate change is one change which may affect extreme environments. Describe <u>one other</u> change which might occur in the polar or mountain area which you have studied. Explain how this change is likely to affect the people and/or the environment.	<p>One mark (reserved) for a description of an appropriate change which might occur in the extreme environment chosen by the candidate eg a skiing resort is built in the mountains, cruises visit polar regions</p> <p>Three further marks for points which explain how the stated change is likely to affect the people and/or environment</p> <p>eg:</p> <ul style="list-style-type: none"> • (skiing resort) • natural vegetation is chopped down • so destroying habitats • visual impact • of ugly chair lifts • increase in traffic • makes it more dangerous for local residents • more work for local residents etc. 	[4]	<p>4 @ 1 or development</p> <p>Examples given are not exhaustive – be prepared to credit any likely change in the type of extreme environment chosen by candidate</p> <p>Examples given are just for illustration and illustrate the impacts of the one example of a change in an extreme environment – clearly the description needs to link with the change chosen.</p> <p>NB</p> <p>1. Without an indication of what the change is it will be difficult to award marks for effects.</p>
	Total	[13]	

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