

**Geography A**

General Certificate of Secondary Education

Unit **A671/02**: Extreme Environments (Foundation Tier)

**Mark Scheme for June 2011**

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Section A				
Question		Expected Answer	Mark	Rationale/Additional Guidance
1	(a)	<p><b>Which <u>two</u> of the following statements best describe an extreme environment? Underline the statements which you choose.</b></p> <p>An area where it is difficult for people to survive. An area with a harsh climate and landscape.</p> <p>2 @ 1 mark.</p>	[2]	<p>If candidates circle 3 with 2 correct = 1 mark. If circle 4 with 2 correct = 0 marks.</p> <p>Accept underlining/circling/ticking of statements as long as candidates have indicated their chosen statements.</p>
	(b)	<p><b>Some environments in the UK may be considered extreme. Study Fig. 1A below and Fig. 1B in the separate Insert.</b></p>		
	(i)	<p><b>Mingulay became uninhabited in 1912. Suggest <u>two</u> reasons why people found it difficult to live on Mingulay.</b></p> <p>Ideas such as: Difficult to get there/hard to get to/remote/isolated; Steep slopes/hilly/mountainous/highland; Infertile/poor/thin soils; Storms/windy; Long winters; Cold weather; Wet/heavy rain/always raining; Difficult to grow food/lack of food/hard to import food/supplies; Difficult to make a living/earn money/no jobs; etc.</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers = 0 marks.</b> Jagged/high cliffs Lack of water No electricity No civilisation</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation): Extreme/harsh conditions/landscape Extreme climate/weather Difficult to survive It is an (small) island There is only one landing place</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p>(ii) Give <u>two</u> ways in which Mingulay is used by people today.</p> <p>Ideas such as:            Grazing sheep/animals;            bird watching;            rock/cliff climbing;            conservation;            tourism/expeditions/exploration;            etc.</p> <p>2 @ 1 mark.</p>	[2]	<p>The following answers = 0 marks.            Living/settlement            Owned by National Trust</p> <p>The following answers need further development for credit</p> <p>(use  annotation):            Sport (must state type)</p>


Question	Expected Answer	Mark	Rationale/Additional Guidance
(c)	<p><b>Study Fig. 1C.</b></p> <p><b>You will have studied an area of hot desert. Compare the climate of the hot desert area which you have studied with the climate of Mingulay. In your answer use data from Fig. 1C and your own knowledge.</b></p> <p>Levels marking.</p> <p><b>0 marks</b> No evidence submitted or response does not address the question.</p> <p><b>Level 1 [1-2 marks]</b> Demonstrates knowledge of desert climate or Mingulay's climate and/or the ability to analyse Fig. 1C. (eg deserts are dry/hot, Mingulay has storms/strong winds). Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinder communication.</p>	[6]	No comparison or data needed.

Question	Expected Answer	Mark	Rationale/Additional Guidance
(c)	<p><b>Level 2 [3 – 4 marks]</b>            Demonstrates knowledge of desert climate and Mingulay’s climate and the ability to analyse Fig. 1C. (eg deserts are dryer/hotter, Mingulay has more storms/stronger winds).            Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 3 [5 – 6 marks]</b>            Demonstrates knowledge of desert climate and Mingulay’s climate and the ability to analyse Fig. 1C and incorporates relevant statistics about precipitation and temperature (eg deserts are drier than Mingulay with a total over 1000 mm of rain per year deserts are hotter than Mingulay, as temperatures can reach 40C, more than that of Mingulay etc).            Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p>		<p>Comparison between desert and Mingulay is required. Accept ‘er’ words or two separate sentences.            Award 3 marks if only compare one element of climate i.e. temperature. 4 marks if compare temperature and precipitation.</p> <p>Must add relevant data to Level two response. Award 5 marks for bottom L3 if only statistic for one area is provided or if only one element of climate is compared (i.e. temperature or precipitation). To gain 6 marks candidates need to provide a statistic for both temperature and precipitation.            Tolerance for statistics from graph is +/-2 for temperature and +/- 10 mm for monthly figures or a range between 1000-1500 if annual.</p>
	<b>Total</b>	<b>[12]</b>	





Question		Expected Answer	Mark	Rationale/Additional Guidance
2	(a)	<p><b>Complete the sentences to describe the location of areas of hot deserts. Choose your answers from the list below.</b></p> <p>Tropics.....western.</p> <p>2 @ 1 mark.</p>	[2]	
	(b)	<p><b>Study Fig. 2, a poem written about a hot desert. Give <u>two</u> pieces of evidence from the poem which suggest that a hot desert environment is extreme.</b></p> <p>Evidence such as:  Wasteland;  The desert's 'curses';  'we are lost';  fire/blisters on faces/skin falls victim/roasted/sun God shows ire....;  'where is the well?'/no oasis/thirst;  Nights of ice/frost;  Hearses;  etc.</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers = 0 marks.</b>  Star maps fail</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  Camels/camels plod along</p> <p>Candidates only need to <b>give evidence</b> from the poem so do not accept interpretation.</p>
	(c)	<p><b>Study Photographs A and B in the separate Insert.</b></p>		
	(i)	<p><b>Identify the landforms shown in Photographs A and B.</b></p> <p>A = wadi  B = rock pedestal.</p> <p>2 @ 1 mark.</p>	[2]	


Question	Expected Answer	Mark	Rationale/Additional Guidance
(ii)	<p><b>Describe <u>two</u> features of the landform shown in Photograph A.</b></p> <p>Ideas such as:  steep/cliff;  high sides;  wide floor;  bare/jagged rock;  floor has pebbles/stones/rocks/debris from a dried up river;  small stream/small river/small area of water;  dried up river bed;  scree; etc.</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers = 0 marks.</b>  Any reference to vegetation  Valley  Oasis  Mountain</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  High/hilly  Some/dirty water/river (candidates must refer to small amount)  Large rocks/rocky/rock (must include an adjective)  Debris  River bed  Jagged</p>
(iii)	<p><b>The landform in Photograph A was created by running water. Explain why there are landforms such as this in some hot deserts.</b></p> <p>Ideas such as:  there are occasional heavy rain storms;  there is so much rain that it cannot soak into soil;  surface run off occurs/flash floods;  and forms fast flowing rivers;  causing river/fluvial erosion;  hydraulic action/abrasion/attrition (accept term or description of process);  it was wetter in the past/a river used to run through the area;  etc.</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers = 0 marks.</b>  Rainy season  Corrosion  The river dried up  Lots of rain</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  Baked by the sun  Forms rivers/streams</p>




Question	Expected Answer	Mark	Rationale/Additional Guidance
(iv)	<p><b>Fully label the diagram below to show how the landform in Photograph B was formed.</b></p> <p>Look for 3 ideas in labelling of diagram:  wind blowing;  carrying sand particles/suspension of sand particles/saltation/traction;  erosion of base of rock by sand/abrasion; (arrow/label must point to base)  exfoliation; (accept names of processes or description)  frost shattering; (accept names of processes or description)  soft rock at bottom, hard rock at top;</p> <p>3 @ 1 mark.</p>	[3]	<p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  Deflation  Weathering</p> <p><b>NB</b> candidates will need to add a label to the correct position to show where relevant processes are occurring.</p>
	<b>Total</b>	<b>[13]</b>	
	<b>Section A Total</b>	<b>[25]</b>	


Section B					
Question		Expected Answer		Mark	Rationale/Additional Guidance
3	(a)		<b>Study Figs 3A and 3B in the separate Insert. These show paintings of extreme environments.</b>		
		(i)	<b>Which painting, Fig. 3A or Fig. 3B, shows the type of extreme environment which you have studied?</b>  Correct link between area studied and photograph:  Fig. 3A = polar Fig. 3B = mountain  1 mark.	[1]	

Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p>(ii) Describe <u>two</u> features of the extreme environment which the painting shows.</p> <p>Ideas such as:  <b>Fig. 3A:</b>            Covered with ice/snow/frozen sea/cold;            Polar bears/seals;            Hunters/inuit/eskimo;            Use of traditional weapon/spear;            Sledge/huskies;            etc.</p> <p><b>Fig. 3B:</b>            High/tall;            Steep/cliff;            Bare rock/jagged rock/rocky;            Ice/snow/cold/glacier;            Arete            Pyramidal peak (accept name or description);            Nunatak (accept name or description);</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers = 0 marks.</b>            Dark            Icebergs            Nunatak            Mountain            There are no houses (no credit for any negative statements i.e. reference to features that are not there).</p> <p><b>The following answers need further development for credit</b></p> <p> (use  annotation):            Extreme weather/dangerous weather            Barren            Wild/dangerous animals            Dog(s)            Slippery</p> <p><b>The following answers = 0 marks.</b>            Landslides/rockfall</p> <p><b>The following answers need further development for credit</b></p> <p> (use  annotation):            Extreme weather</p> <p><b>NB</b> Credit description even if 3(a)(i) is incorrect but the description matches the painting chosen.</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(b)	<p><b>Some films are set in polar or mountain environments. Suggest advantages of your chosen extreme environment for film making.</b></p> <p>Ideas such as:  polar/mountain areas can be beautiful/scenic/spectacular settings for films/amazing views/awe and wonder/wilderness;  interesting/adventurous/exciting settings/films can be made about adventurous activities e.g. extreme sports;  with lots of danger/hard to survive for characters in films/scope for making disaster movies;  Anxiety/suspense/fear;  Audience can be informed/documentaries can be made about nature/scenery/conservation/wildlife etc;  No-one around to interfere with film makers;  Don't have to use artificial snow/scenery/can film in natural environment;  Doesn't get dark for a long time;(polar)  Clear light for filming;</p> <p>etc.</p> <p>3 @ 1 mark.</p>	[3]	<p><b>The following answers = 0 marks.</b>  There is lots of space  It is a challenge to make the film  Nice  It is cold/high</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  Unusual/different  Polar bears/skiing etc</p> <p><b>NB</b> No credit for examples of names of films or what films can be made about i.e. polar bears/skiing (emphasis must be placed on the film being made for educational purposes/adventure etc).</p>


Question	Expected Answer	Mark	Rationale/Additional Guidance
(c)	<p><b>Name an area of polar or mountain environment you have studied. What would be your feelings about staying there? Explain your views using specific information about the area.</b></p> <p>Levels marking.</p> <p><b>0 marks</b> No evidence submitted or response does not address the question.</p> <p><b>Level 1 [1 – 2 marks]</b> Candidate expresses feelings about staying in chosen environment. (I would be scared to stay there. I would enjoy staying there). Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinder communication.</p> <p><b>Level 2 [3 - 4 marks]</b> Candidate expresses (or implies) feelings about staying in chosen environment and explains using simple statements. (I would be scared to stay there because of the danger from polar bears. I would enjoy staying there because I would see the beautiful scenery). Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 3 [5 – 6 marks]</b> Candidate expresses (or implies) feelings about staying in chosen environment and explains using developed statements.  (I would be scared to stay there because of the danger from polar bears which are roaming wild in the area. I would enjoy staying there because I would see the beautiful scenery such as nunataks and ice bergs). Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated very clearly.</p>	[6]	<p><b>NB</b> Accept positives and negatives. All that is required is a summary level at the end of the response as this question should be marked holistically.</p> <p>If no named example is provided then MAX Level 2, 3 marks.</p>
	<b>Total</b>	<b>[12]</b>	

Question		Expected Answer	Mark	Rationale/Additional Guidance
4	(a)	<b>Study Fig. 4.</b>		
	(i)	<p><b>Polar and mountain areas are challenging for people. Identify <u>two</u> challenges faced by people in this expedition.</b></p> <p>Ideas such as:  rain/sleet;  deep/wet/soft snow/up to their knees in snow/sinking into snow;  hard to cross streams/streams slow them down;  avalanche/rockfalls;  Changeable/unpredictable weather;  Glacier/crevasses;  etc.</p> <p>2 @ 1 mark.</p>	[2]	<p><b>The following answers need further development for credit</b></p> <p>(use  annotation):</p> <p>Difficult terrain  Harsh weather  Snow  Sheer drops  Streams  Blow up boat</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p>(ii) <b>Suggest <u>four</u> items that were needed on this expedition. For each item explain why it was needed.</b></p> <p>Ideas such as:            Warm clothing/gloves/coat/socks/hat to avoid chill/frostbite/to aid survival in sub-zero temperatures;            Waterproof jacket/trousers to keep clothing dry;            Many layers to trap air to increase insulation;            Sun glasses to prevent eye damage;            Walking boots/snow shoes for rough terrain/to protect feet/to keep feet dry/warm;            Dried food light to carry/relatively easy to cook;            Energy food to provide body with energy to cope with physical challenge;            Gun/knife/spear/weapon for protection from animals;            GPS/compass for accurate location/tracking;            Radio/satellite phone to keep in contact in case of emergency;            Map to locate features/follow route;            Tent to provide shelter at night;            Sleeping bag to keep them warm at night;            Climbing equipment/rope/ice axe so they can get up steep slopes;            First aid kit in case anyone has an accident;            Stove/kettle or other cooking equipment to heat food and make hot drinks;            Oxygen for use at higher altitudes;            Sledge to carry supplies;            etc.</p> <p>(NB 1 mark overall for 3 or more valid items without explanation).</p> <p>4 @ 1 mark.</p>	[4]	<p><b>The following answers = 0 marks.</b>            Water            Mobile phone            Boat/blow up boat</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):            Food</p> <p><b>NB</b> Credit awarded for correctly identified item with a reason.            If items are taken from same line of mark scheme, e.g. clothes, extra credit can be given if reasoning is different.</p>

Question		Expected Answer	Mark	Rationale/Additional Guidance
	(b) (i)	<p><b>For a named polar or mountain area which you have studied describe <u>three</u> different ways in which it is used by people.</b></p> <p>Ideas appropriate to named area such as:            adventure tourism;            Skiing/snowboarding;            Mountain biking;            Hang gliding;            Trekking;            Mountain/rock climbing;            Site seeing;            Work as tour guides;            Expeditions/exploration;            To see the wildlife or examples;            conservation of plants/animals/conservation site/National Park;            mining for raw materials or examples;            scientific research into climate change/vegetation etc;            Archaeological interest;            hunting by indigenous people            settlements in valleys/on a plateau;            making terraces for agriculture/grazing goats;            HEP;            Water storage/reservoirs/spring/bottled water;            Film/documentary making;            Painting the scenery;            Pilgrimage/worship;            Forestry;            etc.</p> <p>3 @ 1 mark.</p>	[3]	<p><b>NB</b> Credit 1 mark for the following list (3 needed):</p> <p>Tourism            Living/settlement            Agriculture            Research            Scientists            Employment            Reporting</p>



Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p>(ii) <b>Explain how the use of this area may damage its natural environment.</b></p> <p>Ideas appropriate to named area such as:  litter/rubbish disposal;  loss of habitat;  loss of food supply;  species frightened by people/frighten away the animals;  animals die/harmed;  atmosphere polluted by transport fumes;  deforestation;  Footpath erosion;  Overgrazing from animals;  Soil erosion;  Overcultivation;  Atmospheric pollution;  Water pollution;  Noise pollution;  Visual pollution;  etc.</p> <p>4 @ 1 mark or 2 + 2 (credit development).</p>	[4]	<p><b>The following answers = 0 marks.</b>  Global warming  Carbon Dioxide build up etc  Any reference to buildings/history/people</p> <p><b>The following answers need further development for credit</b></p> <p>(use  annotation):  Wear away the land/ground/people walk on it  Pollution  Damage/change landscape</p>
	<b>Total</b>	<b>[13]</b>	
	<b>Section B Total</b>	<b>[25]</b>	
	<b>Paper Total</b>	<b>[50]</b>	

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