

Geography A

General Certificate of Secondary Education

Unit **A671/01**: Extreme Environments (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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1. Annotations


Annotation	Meaning
	Correct response (use only to credit in point marked questions).
	Incorrect response (use only to indicate incorrect in point marked questions).
	Information omitted.
	Unclear.
	Irrelevant.
	Development.
	Two statements are linked.
	To indicate the full extent of a statement which is credited.
	Benefit of doubt given.
	Level one.
	Level two.
	Level three.
	Highlighting an issue eg irrelevant paragraph. Use in conjunction with another stamp eg  or 

All answers and pages with a response must have at least one annotation to show that they have been seen.

Question			Answer	Marks	Guidance	
					Content	Levels of response
1	(a)	(i)	Sahara. Atacama.	2	2 @ 1 mark.	
		(ii)	Tropic of Cancer. Western.	2	2 @ 1 mark.	
	(b)		<ul style="list-style-type: none"> • dry/little rain/<u>annual precipitation</u> of 250mm (or 10 inches) or less (accept single figure below 250)/arid/drought; • high temperatures/hot/up to 50C; • low temperatures <u>at night</u>/down to zero/cold at night/below freezing; • long sunshine hours/cloudless skies/sunny/lots of sunshine; • high pressure; • high wind/windy/sandstorms; etc. 	3	3 @ 1 mark. NB: Response must refer to climate. Ignore units for temperature and precipitation. For temperature assume degrees C but accept degrees F if stated and appropriate figures provided. The following ideas need further development for credit (use  annotation): <ul style="list-style-type: none"> • less rainfall • no water • they have 250mm • storms • more sunshine • higher temperatures The following ideas = 0 marks: <ul style="list-style-type: none"> • temperatures up to 75C (ie too high) • warm • tropical • tropical climate 	


Question		Answer	Marks	Guidance	
				Content	Levels of response
	(c) (i)	Tanami desert.	1	1 mark.	
	(ii)	33%.	1	1 mark.	
	(d) (i)	<p>Ideas such as:</p> <ul style="list-style-type: none"> • (High temperatures/heat/sun) sweating/may cause heat exhaustion/sunburn/<u>they get</u> too hot (in their motor cycle gear)/makes concentration difficult; • (There are no roads or track will be sand) sand will slow them down/sink into sand/uneven ground to ride on/rock surface knock rider off bike; • (There may be sandstorms or sandy or dusty) sand gets into eyes/limits vision; • (They will need lots of water/there are no water supplies) need to take plenty of water or water supplies/could become dehydrated; • (Cold at night) would need to take extra layers of clothes/sleeping bag; • (River crosses road or track) crossing Finke river may be difficult; • they would have to cool their bikes/bikes may overheat; etc. 	3	<p>3 @ 1 mark. NB: No max on each line.</p> <p>Answers must relate to challenges to riders – not just simple descriptive points about environment – as previously credited in 1(b).</p> <p>The following ideas need further development for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> • bumpy • sandy • warm • tired • rocks • rough terrain <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> • remote • snakes • dangerous animals • mountains • getting lost • difficult to find your way • no doctors 	

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(ii)	<p>Ideas such as:</p> <ul style="list-style-type: none"> websites/internet; video/DVD; map; atlas; tourist guide/guide book; race guide/leaflet produced by race organisers; etc. <p>Reasoning such as:</p> <ul style="list-style-type: none"> it may help them find a place to watch the race; to help them decide what clothing to wear; as it contains details of what the temperatures may be like; so they know where they can stay over night; so they know what equipment to take; so they know how much water/food to take; to know what to be prepared for; etc. 	2	<p>1 mark for correctly stating resource and one for a valid explanation.</p> <p>The following ideas need further development for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> leaflet book Fig 3 <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> binoculars or any equipment needed <p>The following ideas for reasoning would need further development for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> useful for research on environment <p>NB: If a candidate gives a resource that requires further development (eg a leaflet) they can still gain the second mark for reasoning provided it is relevant to the idea of the resource provided. However, if a resource is provided that = 0 eg a thermometer then the reasoning should also = 0.</p>	

Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(a)	(i)	<p>Any example of a desert plant or animal such as:</p> <ul style="list-style-type: none"> • Cactus; • Aloe; • Joshua tree; • Yucca; • Creosote bush; • Camel • Fennec Fox etc. 	1	<p>1 mark.</p> <p>The following ideas need to be more specific for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> • trees • grass 	
		(ii)	<p>Ideas such as:</p> <p>seeds/plants remain dormant during long dry spells (1) and grow quickly after rain/have a short growth cycle (1);</p> <p>narrow/spiky leaves (1) reduce rates of water loss (1)/protects them from animals (1);</p> <p>long roots/wide spreading roots (1) search for water/reach underground water (1);</p> <p>some plants/cacti have fleshy stems/have wide bodies (1) to use during long periods of drought/to store water (1);</p> <p>some plants have white/light upper surfaces (1) to reflect heat/sunlight (1);</p> <p>camels have wide feet (1) so they don't sink into the sand (1);</p>	4	<p>4 @ 1 mark OR 2 @ 2 marks OR 2 @ 1 mark + 1 @ 2 mark.</p> <p>NB: Candidates can gain credit for two or more different plants and/or animals.</p> <p>The list provided is not exhaustive accept points relevant to any relevant plant or animal.</p> <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> • webbed feet • store water in hump <p>The following ideas = 0 marks unless they are explained:</p> <ul style="list-style-type: none"> • Xerophytes • Ephemerals 	

Question			Answer	Marks	Guidance	
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			<p>camels have a large hump (1) to store fat/so it can go for a long time without food/water (1)</p> <p>camels have thick skin on knees (1) so that when they kneel down skin doesn't burn/cut (1)</p> <p>long legs (1) to keep body further from ground/ to prevent body getting too hot (1)</p> <p>double row of eyelashes/long eyelashes (1) to keep sand out of eyes (1)</p> <p>camels can drink large quantities of water in a short time (1) so they can survive for many days before drinking again (1) etc.</p>			

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(b)		6	<p>NB: Candidates can still get L3 without a diagram.</p> <p>Remember to check for a diagram.</p> <p>May credit diagram and text. The diagram may help a candidate gain Level 3 marks but is not essential.</p>	<p>Level 3 (5–6 marks) Demonstrates good knowledge and understanding of the formation of sand dunes which may include a labelled diagram. Comprehensive references to physical processes/dune formation explained using linked ideas and process names (winds pick up/carry particles of sand; sand dunes are formed by deposition by wind; grains of sand initially accumulate around an obstacle; process repeats over time as sand dune gets bigger). Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p>Level 2 (3–4 marks) Demonstrates sound knowledge and understanding of the formation of sand dunes. Physical processes/dune formation explained using linked ideas or process names (eg sand dunes are formed by deposition by wind; grains of sand initially accumulate around an obstacle). Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p>


Question			Answer	Marks	Guidance	
					Content	Levels of response
						<p>Level 1 (1–2 marks) Demonstrates limited knowledge and understanding of the formation of sand dunes. Physical processes/dune formation briefly described by using simple statements (eg sand dunes are formed by wind). Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.</p> <p>0 marks No evidence submitted or response does not address the question.</p>
			Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 21.	3		


Question			Answer	Marks	Guidance	
					Content	Levels of response
3	(a)	(i)	<p>Named polar or mountain area such as:</p> <p>Polar: Antarctica; Svalbard; Alaska etc.</p> <p>Mountain: Himalayas; Andes; Alps; Altiplano; Machu Picchu; Everest; Snowdon; Ben Nevis; Scafell Pike etc.</p>	1	<p>1 mark.</p> <p>Area named must fit with type of extreme environment circled.</p> <p>Named area can be at any scale.</p> <p>Must circle and name area for 1 mark.</p> <p>If the area named doesn't match area circled = 0.</p> <p>With the exception of Antarctica, if a country or continent is named for a mountain/polar area = 0.</p> <p>Arctic/North pole/South pole = 0.</p> <p>Candidates may use UK examples for mountain areas.</p>	

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(ii)	Any two valid points describing location of named area: E.g. Svalbard: Northern Europe; Norway; east of Greenland; North of the Arctic Circle/in the Arctic; 80N Near the North Pole; etc. E.g. Andes On Western side of South America Runs length of South America Peru/Bolivia/Chile; etc.	2	<p>2 @ 1 mark.</p> <p>Location must fit with the extreme environment named in 3(a)(i). Candidates can use UK examples. NB: If 0 is awarded for 3(a)(i) as candidate has not circled the correct area, the candidate can still get marks here for description if appropriate area has been named.</p> <p>If 0 is awarded for 3 (a)(i) for an unacceptable example then award 0 in 3(a)(ii).</p> <p>Reference to right/left/below/left = 0.</p> <p>Accept continents with a direction eg Western side of South America (1 mark).</p> <p>Appropriate country name is acceptable for a mark. A part of a country (eg Northern Sweden) would be worth 2 marks.</p>	


Question		Answer	Marks	Guidance	
				Content	Levels of response
	(b) (i)	<p>Ideas such as:</p> <ul style="list-style-type: none"> • low temperatures/cold; • high precipitation/wet; • large amount of snow; • strong winds; • many months with temperatures below zero; etc. <p>Credit development for appropriate climatic statistics.</p> <p>NB: The above list is generic and not exhaustive. For chosen area, credit statements which are correct, even though they may not be in the list above – they even may appear contradictory to what is in the list (eg if chosen Antarctica could be described as arid – it's precipitation in some parts is well below 250mm).</p>	3	<p>3 @ 1 mark or development. Statistics can be used as development.</p> <p>Credit generic ideas linked with type of area if no valid name in 3(a)(i).</p> <p>Points made must fit with location chosen though many ideas are universal to these types of extreme environment eg: Low temperature; Strong winds; Snow; etc.</p> <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> • glaciers • ice sheets • thin air • lack of oxygen • reasons 	

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(ii)		6	<p>NB: To achieve top of level the type of resource and name of it is required eg the film touching the void.</p> <p>NB: To achieve top of level the type of resource and name of it is required eg the film touching the void.</p> <p>NB: To achieve top of level the type of resource and name of it is required eg the film touching the void.</p>	<p>Level 3 (5–6 marks) Candidate states a valid resource which depicts a polar or mountain environment and describes using developed statements about how it helped him/her to understand about the environment and gives details of what they found out. Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p>Level 2 (3–4 marks) Candidate states a valid resource which depicts a polar or mountain environment and describes using simple statements about how it helped him/her to understand about the environment or gives details of what they found out. Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated clearly.</p> <p>Level 1 (1–2 marks) Candidate states a valid example of a resource which depicts a polar or mountain environment. Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinders communication.</p>

Question			Answer	Marks	Guidance	
					Content	Levels of response
						0 marks No evidence submitted or response does not address the question.
			Spelling, punctuation and grammar (SPaG) are assessed using the separate marking grid on page 21.	3		

Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)	(i)	<p>Ideas appropriate to named area such as:</p> <ul style="list-style-type: none"> • tourism/visit named tourist area eg Machu Picchu; • mining/oil extraction/or examples; • mountain climbing; • expeditions; • (scientific) research; • conservation of plants/animals; • hunting; • fishing; • home to indigenous tribes or example; • hiking; • HEP/wind farms; • skiing/wintersports; • extreme sport or example; • sheep grazing/hill farming; • worship/sacred place; • used by long distance runners to train; • collect plants for medicine use; • to practice survival; • art/photography/film making/documentary; etc. 	3	<p>3 @ 1 mark.</p> <p>Points must fit with location chosen.</p> <p>NB: If the candidate has not circled 'Polar or Mountain' mark as generic ideas.</p> <p>The following ideas need further development for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> • sport • farming • live there • people visit 	

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(ii)	<p>Ideas appropriate to area chosen. <u>Credit 2 marks</u> for clear identification of difficulty and suggestion of how people overcome it.</p> <p>Eg Polar: It is impossible to grow food/farm the land so food obtained by hunting = 2; It is very cold so furs are used to keep warm = 2; Thin air so climbers take an oxygen tank = 2; etc.</p> <p><u>Credit 1 mark</u> for identification of difficulty without a clear suggestion of how people overcome it <u>OR</u> if a suggestion for overcoming the difficulty is clearly made but the difficulty is only implied rather than being clearly stated.</p>	4	<p>2 + 2 marks.</p> <p>Candidates can refer to indigenous people or tourists/expeditions etc.</p> <p>Points must fit with chosen location.</p> <p>NB: Mark as generic ideas up to full marks if area is not circled eg (isolation/lack of work/cold temperatures).</p> <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> • climate • weather • injury • moving around 	

Question		Answer	Marks	Guidance	
				Content	Levels of response
	(b) (i)	<p>Credit any change as appropriate to area chosen. One mark for simple description with a further mark for development.</p> <p>Eg Himalayas: Growth of tourism (1) trekking up the mountains (1).</p> <p>Eg Antarctica: Ice is melting (1) as a result of global warming (1).</p> <p>Migration out of area(1).</p> <p>Any physical process eg glaciation/volcanic activity.</p>	2	<p>1 + 1 mark.</p> <p>Candidates can refer to any change, which could be natural or caused by people.</p> <p>Points must fit with chosen location.</p> <p>The following ideas = 0 marks:</p> <ul style="list-style-type: none"> mountains melting greenhouse effect <p>The following ideas need further development for credit</p> <p>(use  annotation):</p> <ul style="list-style-type: none"> temperature/climate change 	
	(ii)	<p>Credit any effects as appropriate to area and change described in 4(b)(i). One mark for simple explanation with a further mark for development.</p> <p>Eg Himalayas growth of tourism: Trekking erode the paths (1) which destroys vegetation (1).</p> <p>Eg Antarctica ice is melting: Sea levels rise (1) flooding areas of coastal lowland (1).</p>	4	<p>2 + 2 marks.</p> <p>Candidates can refer to any impacts, which could be on people and/or the natural environment.</p> <p>Points must fit with chosen location.</p> <p>Do not double credit with 4(b)(i).</p>	

APPENDIX 1

Spelling, punctuation and grammar (SPaG) assessment grid

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

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

Education and Learning

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

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OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

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