

# **Geography Specification B (Avery Hill)**

General Certificate of Secondary Education **1987/03**

Paper 3 (Foundation Tier)

## **Mark Scheme for June 2010**

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This paper examines an ecosystem in Portugal and the present and possible future uses of that ecosystem.

	<b>Marks</b>
Part A Investigates the geography of an area of Portugal and present uses of the cork oak forest ecosystem in that area.	<b>27</b>
Part B Explores features of the cork oak forest ecosystem and the pressures it is under.	<b>10</b>
Part C Asks you to decide how the area of cork oak forests should be developed in the future.	<b>23</b>
	<b>Total marks <u>60</u></b>

Question		Expected Answers	Mks	Rationale
<b>Part A</b> This part investigates the geography of an area of Portugal and present uses of the cork oak forest ecosystem in that area.				
<b>(a)</b>	Study Map 1 on page 2 of the separate Resource Booklet. It shows the distribution of the cork oak ecosystem.			
	<b>(i)</b> <b>Complete</b> the following passage by <b>circling</b> the correct answers.	Mediterranean Sea Sicily west	<b>[3]</b>	3 x 1 Credit correct responses however identified
	<b>(ii)</b> <b>Describe</b> the location of the Alentejo cork oak forests.	Examples:  In Portugal (1) In the south/southern half of Portugal (1+1 if linked) west of Spain (1) inland/east of Atlantic Ocean (1) near/on (Atlantic) coast (1) South/East/South-east of Lisbon (1) between 38-40 N and 7-10 W (1)	<b>[2]</b>	Credit two statements of location that effectively locate the forests.  Do not accept 'south of Portugal' as a statement. Do not credit references to Alentejo. Do not credit distance references.  2 x 1
<b>(b)</b>	Study Graph 1 on page 3 of the separate Resource Booklet. It shows the climate of the Alentejo region.			
	<b>(i)</b> What is meant by the term 'climate'?	<i>average/ /over 30 years/long period/usual/expected).</i>  <i>of weather/rainfall and temperature/atmosphere.</i>  Examples:  Expected weather = (2) Average weather = 2 Rainfall and temperature over a long period = 2	<b>[2]</b>	Credit 2 simple statements. There must be an element of from each <i>italicised</i> line in the exemplars for credit – so it is either 0 or 2 marks.  Do not credit reference to single elements of weather, e.g. rainfall or temperature on their own, nor to single year references.  2 x 1

	(ii)	<b>Complete</b> the passage below by writing the correct answers in the spaces provided.	August 30(°c) mild	<b>[3]</b>	Credit one mark for each correctly inserted word.  3 x 1
	(iii)	<b>Suggest one</b> advantage and <b>one</b> disadvantage of the Alentejo climate for farmers.	Examples:  <b>Advantage:</b> long growing period (1) few/no frosts (1) no extreme temperatures (1) temperatures high all year (1) double cropping (1) enough rain: for crops/in winter to last whole year/for grass/grazing (1) some rain in all months/throughout year (1)  <b>Disadvantage:</b> very dry <i>in summer</i> (1) crops dry out/crops die <i>in summer</i> (1) dry period is hottest (1) need for irrigation (1)	<b>[2]</b>	Credit one simple statement of each.  Do not accept vague references to good and bad, e.g. bad for crops, a good temperature, good rainfall: all = (0).  'Enough rain' must be qualified for credit.  Do not accept disadvantages of heat or lack of rain if not season/month specific.  2 x 1

Question			Expected Answers	Mks	Rationale
(c)	(i)	<b>Complete</b> the following heads and tails by drawing lines to link ways in which trees are adapted with reasons why they adapted. One has been done for you.	<div> <div>Way adapted</div> <div>Reason</div> <div> <p>Deep and extensive root system</p> <p>Able to retain water</p> <p>Small, waxy leaves</p> <p>Unpleasant tasting bark</p> </div> <div> <p>so has enough water for dry season</p> <p>so loses little water through transpiration</p> <p>so stops animals taking moisture from it</p> <p>so able to reach more water</p> </div> </div>	[3]	Credit one mark for each pair correctly linked.  3 x 1
	(ii)	<b>Choose one</b> other way in which the cork oak has adapted to its climate. <b>Explain</b> how this adaptation helps it survive.	<p>Examples:</p> <p><b>Deciduous</b> trees: lose leaves in winter (1) reduces transpiration/water loss (1)</p> <p><b>Leaves intercept 26% of rainwater:</b> drips water slowly to ground (1) evens out infiltration (1)</p> <p><b>Thick bark:</b> protects tree from fire (1) reduces risk of death (1) insulates tree (1) so low water loss (1)</p> <p><b>Grows slowly:</b> requires few nutrients (1) so can survive periods of low rainfall/nutrient release (1)</p> <p><b>15 metres high:</b> so able to capture light (1) for photosynthesis/to grow (1)</p>	[2]	<p>No credit for the 'way'. Both marks are for the explanation.</p> <p>Credit <b>one</b> simple statement and its elaboration.</p> <p>Do not credit reference to any of the adaptations listed in question (c)(i).</p> <p>Must be 'climate' reference.</p> <p><b>Leaves intercept 26% of rainwater:</b> do not credit reference to ability of leaves to absorb water.</p> <p><b>Thick bark:</b> Do not credit unqualified 'protects tree' or 'protect from animals' references.</p> <p>2 x 1</p>

(d)	The table below shows Portugal's income from cork oak in value rank order. <b>Complete</b> the table by filling in the gaps.		<table><tr><td>Cork oak use</td><td>% of total</td></tr><tr><td><i>Floor and wall coverings</i></td><td>19-21 6-8</td></tr></table>	Cork oak use	% of total	<i>Floor and wall coverings</i>	19-21 6-8	[3]	3 x 1
Cork oak use	% of total								
<i>Floor and wall coverings</i>	19-21 6-8								
(e)	(i)	<b>Complete</b> the graph using the information below:	Credit mark for an accurately completed <b>plot</b> irrespective of whether or not the line is completed or the shape of a completed line.	[1]					
	(ii)	<b>Describe</b> changes in the graph between 2002 and 2006. <b>Use figures</b> in your answer.	Examples:  Fallen/decline/dropped/negative correlation/depleted (1)  From 21 <sup>1</sup> / <sub>2</sub> (21-22) to 15 <sup>1</sup> / <sub>2</sub> (15 -16) billion corks (1) by a quarter (1)  In 2002 they sold 6 (5 <sup>1</sup> / <sub>2</sub> - 6 <sup>1</sup> / <sub>2</sub> ) billion (1) more (1) corks. Or the reverse.	[2]	Credit one mark for any correct statement of change between the two years and the second for supportive use of <u>figures</u> .  Where raw figures are quoted, they must include both start and end figures and be a difference of between 5 <sup>1</sup> / <sub>2</sub> and 6 <sup>1</sup> / <sub>2</sub> billion corks.  Where figures are quoted, 'billion' or 'b' is required.  2 x 1				

Question			Expected Answers	Mks	Rationale
	(iii)	<b>Suggest and explain</b> one effect of these changes on people.	<p>Examples:</p> <p>lost job (1) less money/stress/migrate (1).</p> <p>less money (1) can't afford mortgage/rent (1)</p> <p>less work available/less money coming in (1) so jobs lost/unemployment (1)</p> <p>less wealthy area/country (1) so fewer services provided (1) negative multiplier (1)</p> <p>not enough corks for customers/wine/olive oil producers (1) so must seek alternative materials (1) people must pay more (1)</p>	[2]	<p>Do not credit explanations as to why cork sales have declined</p> <p>Credit one simple statement of effect and its elaboration.</p> <p>These may relate simply to job losses and the elaboration of its effects on cork farmers or to a social/financial implication for the area and its elaboration or to effects on people beyond the immediate area and its elaboration.</p> <p>1 + 1</p>
	(iv)	<b>Suggest and explain</b> one effect of these changes on the natural environment.	<p>Examples:</p> <p>Cork oaks abandoned (1) more natural ecosystem (1). Animal habitats less disturbed (1) breeding rates increase (1).</p> <p>Cork oaks removed (1) animal habitat removed (1)</p> <p>Plastic bottle tops can't be recycled (1) so environmentally unfriendly (1)</p>	[2]	<p>Credit one simple statement of effect and its elaboration. These may be either positive or negative effects.</p> <p>They may refer to the effects of less cork production or to the effect of using alternative materials.</p> <p>Do not credit any reference to an increase in cork oaks.</p> <p>1 + 1</p>
			<b>Total</b>	<b>[27]</b>	



Question			Expected Answers	Mks	Rationale
<b>Part B</b> This part explores features of the cork oak forest ecosystem and the pressures it is under.					
(a)	(i)	What is meant by the term 'ecosystem'? <b>Tick</b> the correct description in the table below.	A group of plants and animals and the environment in which they live	[1]	Credit correct response however identified  Do not credit if more than one tick.
	(ii)	<b>Complete</b> the food web <b>by drawing arrows</b> to show that: roe deer eat heather, eagles eat mice.	Credit one mark for each correctly drawn line with its arrow head pointing towards the consumer	[2]	2 x 1  Do not credit line if arrow head is missing.
	(iii)	<b>Fill in the gaps</b> below to show one food chain in <b>this</b> cork oak food web.	Example:  Working upwards: Grass, rabbits, eagles. (Cork) oaks, mice, eagles. Grasses, rabbits, eagles Heather, deer, lynx	[3]	Credit any food chain involving producer, primary consumer, secondary consumer in the correct sequence. No credit if the order is reversed. 3 x 1
	(iv)	<b>Describe</b> what might happen to the food web if the <b>cork oaks</b> were removed.	Example:  Mice lose a major source of food (1) they decline in numbers/move away (1)  This reduces food for eagles/(spadefoot) toads (1) causing them to die/move away (1)  The food web is destroyed (1)	[4]	For full marks we are looking for a continuum in which the knock on effects of removing a producer is developed.  The continuum commences following the removal of cork oaks.  It may be complete, resulting in a final statement of the food web being destroyed, or incomplete, falling short of the 'overall destruction' statement.  Credit a maximum of two marks if the candidate does not refer to <u>named</u> plants/animals from this specific web.  4 x 1
			<b>Total</b>	<b>[10]</b>	

Question			Expected Answers	Mks	Rationale
<b>Part C</b> This part asks you to decide how the area of cork oak forests should be developed in the future.					
(a)	(i)	A build up of carbon dioxide in the atmosphere is causing climate change. Give <b>two</b> effects of climate change.	<p>Examples:</p> <p>ice cap melting (1) rising sea levels (1) flooding of coastal areas (1)</p> <p>new areas of low rainfall/drought (1) crops fail in some areas (1) famine (1)</p> <p>increased river flooding (1)</p> <p>changed animal/plant distributions (1)</p> <p>more violent weather (1) increase hurricane occurrence (1)</p>	[2]	<p>Do not credit reference to 'global warming' or general 'patterns of weather change'.</p> <p>Credit two simple effects through which any part of the world may be affected.</p> <p>Specific areas need not be identified.</p> <p>We are only crediting simple effects but:</p> <p>credit a second effect even if it is written as an elaboration of another valid effect, e.g. new areas of low rainfall (1) means that crops fail (1) or ice cap melting (1) means flooding of coastal areas (1)</p> <p>Both effects may be written in a single 'effect' space.</p> <p>2 x 1</p>
	(ii)	<b>Complete</b> the passage below using information from the table.	<p><b>Global environment:</b> store much carbon dioxide (1)</p> <p><b>Farmer:</b> little risk from soil erosion/little risk of fire (1)</p>	[2]	<p>Do not credit responses unless they are taken directly from the table.</p> <p>1 + 1</p>

	(iii)	What evidence in the table supports growing <b>eucalyptus</b> as a more sustainable use of the land than growing <b>cork oak</b> ? <b>Explain</b> your choice.	Credit the choices of:  <i>greater risk of fire</i> (1) examples: clears disease (1) returns nutrients to soil (as ash) (1)  <i>very fast growing</i> (1) examples: provides fast/ready supply for industry' (1) available quicker/ faster return for farmers / more money (1)	[2]	Credit reference to either of the <i>italicised</i> features irrespective of the quality of the following explanation.  Do not credit reference to any other factor.  1 + 1
(b)		Study the advert on page 7 of the Resource Booklet. It promotes eco-tourism in the Alentejo region.			
	(i)	Give <b>one</b> physical and <b>one</b> human attraction of the Alentejo region for <b>this</b> type of holiday.	Examples:  <b>Physical:</b> olive groves / meadows / forests / scenery: coastal, beautiful / wild life /  <b>Human:</b> farm life / share their lives (specific or general)/ ) local food (specific or general) walking / small group.	[2]	Credit one statement of attraction for each of physical and human.  The statements may be derived directly or indirectly from the advert.  Credit 'peace/quiet' as either physical or human but not both.  Do not credit unqualified goat, lamb, fish. Must have 'food/eat' reference.  If list, credit first response.  1 + 1

	(ii)	<p><b>Suggest and explain</b> how the growth of this type of holiday may help to protect the plants and animals living there.</p>	<p>Examples:</p> <p>Visitors numbers may be controlled (1) protecting from footpath erosion etc (1)</p> <p>May restrict access according to season/farmers control activities (1) guard against fire (1) protect species during breeding times (1)</p> <p>These kind of holiday makers respect the environment more(1), There will be less litter (1) animals are not harmed (1).</p> <p>They won't be noisy (1) important in the breeding season (1).</p> <p>Stay in farm so no new buildings are required (1) protects area from harmful development (1).</p> <p>No vehicles (1). so no air pollution (1) so plants/animals unaffected (1)</p> <p>Keeps cork growers in business (1) cork oak forests encourage wildlife/support biodiversity (1)</p>	<p><b>[4]</b></p>	<p>Credit any simple points up to a maximum of three.</p> <p>There must be some form of valid elaboration to attract full marks.</p> <p>However, extended elaboration of one simple point will attract all four marks.</p> <p>Reference to pollution must be qualified by type or source.</p> <p>'More money' needs qualification for credit.</p> <p>2(1+1) or (1+1+1+1) or 2x1+(1+1)or 3x1+(1) = [4]</p>
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Question		Expected Answers	Mks	Rationale
(c)	<p>You are asked to advise the government of Portugal as to how it should develop its areas of cork oak forest in the future.</p> <p>There are three options:</p> <ol style="list-style-type: none"> <li>1. Give grants to cork oak farmers and promote the use of cork;</li> <li>2. Promote eucalyptus growing on present cork oak land, for paper production;</li> <li>3. Promote the growth of eco-tourism.</li> </ol> <p>Use information in the FACTFILE on page 8 of the separate Resource Booklet to <b>complete the matrix</b> on page 10 to help you organise your ideas. Some of the matrix has been completed for you. You should spend about <b>15 minutes</b> completing the matrix.</p> <p><b>Use the information</b> in the completed matrix on page 10 to help you write a letter to the government of Portugal.</p>	<p>This section is marked using a levels of response mark scheme.</p> <p>We are rewarding candidates for the quality of their answers as opposed to merely crediting the number of responses they make. There is no correct choice. Marks are awarded for the statements made in relation to the choice made.</p> <p>Candidate responses in the letter and matrix should be marked together. As the degree of integration for a level three response falls outside that possible to demonstrate in the matrix alone, marks in the highest level may, therefore, only be awarded to candidates who have completed the letter.</p> <p>Levels marking should be applied working upwards from the lowest to the highest level. The mark scheme comprises a number of hurdles that must be jumped in order to access marks within a level.</p> <p>Level 1: The candidate's response contains little specific detail about the area. There is no elaboration beyond that provided directly by the sources. <b>(1-2)</b></p> <p>Level 2: The candidate's response contains some specific detail about the area and option(s). There is elaboration of ideas beyond that provided by the sources. <b>(3-8)</b></p> <p>Level 3: The candidate presents prose that considers the options in detail. At least one rejected option is discussed. The candidate may reach the top of this level by discussion of the second rejected option, consideration of the longer and shorter term or the inclusion of relevant case study material. <b>(9-11)</b></p>	<b>[11]</b>	

Question		Expected Answers	Mks	Rationale
	<p>You may also use information from other parts of the paper and ideas of your own.</p> <p>You are to advise the government as to <b>which one</b> of the three options they should support and <b>explain</b> why it is better than the other two options.</p> <p>To the Government of Portugal.</p> <p>I am writing to advise you to:</p> <ol style="list-style-type: none"> <li>1. Give grants to cork oak farmers and promote the use of cork;</li> <li>2. Promote eucalyptus growing on present cork oak land, for paper production;</li> <li>3. Promote the growth of eco –tourism.</li> </ol> <p><b>Underline</b> your chosen option.</p>	<p><b>Marking Procedures</b></p> <ul style="list-style-type: none"> <li>• Mark the letter/report first by indicating in the text where a contribution to a particular level has been made.</li> <li>• As you are marking the letter, use the highlighter tool to highlight the first Level 2 (hence elaborated) reference to:             <ul style="list-style-type: none"> <li>- chosen option</li> <li>- the point where one other option is discussed.</li> </ul> </li> <li>• Continue to mark up L2 response using the annotation bar.</li> <li>• Similarly annotate the point at which L3 is reached and subsequent statements that allow the candidate to rise within this level.</li> </ul> <p><u>To access Level 3:</u></p> <p>The candidate must address at least the chosen option and one other option, each with elaboration beyond that relating directly to the Factfile or other resources, to access Level 3.</p> <p><u>Rising within Level 3:</u></p> <p>The quality of argument will determine how high within the level a response rises. Other factors that might encourage a rise in the level may include elaborated exploration of a third element, a consideration of both long and short-term impacts or meaningful use of imported parallel case study information.</p> <ul style="list-style-type: none"> <li>• Put the level attained next to the bracketed mark [11]</li> <li>• Retain the mark awarded in your mind.</li> <li>• If the candidate has scored fewer than 8 marks on the letter you must now go back and mark the matrix.</li> <li>• On the matrix apply a levels mark (L1 or L2) in the text</li> </ul>		

Question		Expected Answers	Mks	Rationale
		<p>wherever you judge a statement at that level has been written. Do not accept a statement as L1 unless the 'development' S or R is correct.</p> <ul style="list-style-type: none"> <li>Put the overall level attained on the matrix at the bottom of the matrix.</li> <li>If the <u>mark</u> awarded for the matrix is higher than already gained for the letter, use this new mark</li> <li>Now judge the prose (or if no prose, the matrix), for quality of written communication. Show its level underneath the level for geographical content. Do not award above Level 1 for QWC if the prose part of the question has not been completed.</li> </ul> <p><b>Level 1:</b> The standard of written communication may fall below that required to gain credit.</p> <p><b>Level 2:</b> Information is communicated by brief statements. There is some accuracy of spelling, punctuation and grammar.</p> <p><b>Level 3:</b> Communication is more articulate. There is some accuracy in spelling, punctuation and grammar. Some geographical terms are used with proficiency.</p> <ul style="list-style-type: none"> <li>If there is a discrepancy between the two marks, make a one mark adjustment for each level difference. Thus, if the geographical content is at Level 1 and the quality of written communication at Level 3 increase by 2 marks. Or if the geographical content is at Level 3 but the quality of written communications at Level 2 decrease by 1 mark.</li> <li>Enter the final mark into Scoris.</li> </ul> <p>Remember that you should apply no ticks when marking this section.</p>		

Question		Expected Answers	Mks	Rationale
		Finally, ensure that you have made a mark (possibly using the upturned 'v' from the annotation bar) on each page of the booklet that the candidate has not used. It is important that you do this as it is possible to miss candidate responses without conducting such a check.		
		<b>Total</b>	<b>[23]</b>	



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