

**Geography**

Advanced GCE **F764**

Geographical Skills

**Mark Scheme for June 2010**

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Section A				
Question		Expected Answer	Mark	Rationale/Additional Guidance
1	(a)	Study the 1:50 000 O.S. map extract of part of Pembrokeshire, which shows an area within which an A level geographical investigation is to be undertaken.		
	(i)	<p><b>State and justify, using map evidence, an appropriate geographical hypothesis for investigation within this area.</b></p> <p><b>Indicative content:</b>            Most geographical investigations can be carried out in the area shown such as:            Physical: beach transect, drift surveys, salt marsh – vegetation, woodland, river survey micro-climate, footpath erosion etc            Human: traffic surveys, land use (urban or rural), tourism, shopping &amp; service provision, industrial development, environmental quality etc</p> <p>Max 1 if no justification. Justification should look at why that location (using names or GRs) or area is suitable or appropriate for the testing of that hypothesis.</p> <p><b>Level 2:</b> Candidates clearly outline an appropriate hypothesis and offer a detailed justification of why the area is suitable for testing that hypothesis e.g. size, nature of the area, access, contrast. Clear reference made to O.S. map.  <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates outline an appropriate investigation but only offer a limited justification of why the area is suitable for testing that hypothesis e.g. because it has a beach. Little, if any, reference made to O.S. map.  <b>(0-3 marks)</b></p>	[5]	<p>No annotation required</p> <p><b>Inappropriate titles or locations e.g. stream measurement in the Daugleddau if well justified then max L1</b></p> <p>Candidates should word it as an appropriate hypothesis to be tested not just an investigation type e.g. Shopping.</p> <p>Max level 1 if no specific reference to the map.</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(ii)	<p><b>Describe and justify how you would collect the primary data needed for testing the hypothesis stated.</b></p> <p><b>Indicative content:</b>            There is a link between (i) and (ii) so the data collection strategy should be appropriate to the answer in (i) (if not then Max L1).            Answers may look at collection planning issues, sampling strategies, survey methods, equipment use etc.            Justification should cover why these aspects are needed to ensure an effective, accurate and rigorous investigation.            There may be some repetition of material used as a justification in (i).</p> <p><b>Level 3:</b> Candidates clearly describe a few aspects of data collection strategies in depth or a wide variety in less depth. Clear justification for using this/these strategy(s) well linked to the hypothesis outlined in (i). Strong use of appropriate terminology. <b>(8-10 marks)</b></p> <p><b>Level 2:</b> Candidates describe a few aspects of data collection strategies in depth or a wide variety in less depth. Some justification for using this/these strategy(s) with an attempt to link to the hypothesis outlined in (i). <b>(5-7 marks)</b></p> <p><b>Level 1:</b> Candidates describe a few aspects of data collection strategies with limited, if any, justification for using this/these strategy(s) with little, if any, link to the broad area of investigation outlined in (i). Simplistic description and weak terminology. <b>(0-4 marks)</b></p>	<b>[10]</b>	<p>No annotation required</p> <p>If the data collection is well described or justified, but based on inappropriate title or location then maximum mark could be given.</p> <p>If no reference to primary data then max L1.</p> <p>Description and justification both present and well linked.</p> <p>One element of description or justification is weaker – A weaker linkage is given between the data collection and the hypothesis.</p> <p>Link between hypothesis and data collection is not present and has either description or justification missing.</p>

Question		Expected Answer	Mark	Rationale/Additional Guidance
	(b)	<p><b>Explain <u>two</u> factors that need to be taken into account when selecting an appropriate map for use in a geographical investigation.</b></p> <p><b>Indicative content:</b> Clearly this is influenced by the nature of the investigation and the stage of the investigation (e.g. in the field v in the classroom or presentation of data v showing location) but also it depends on the size of area (scale of map), level of detail needed (e.g. GOAD map for individual shop type), nature of detail (e.g. land use map) importance of having the latest edition, need for an outline map (e.g. ward boundaries) to add on other data etc.</p> <p>Higher level responses will ensure there is some stress put on the map being appropriate – i.e. clearly linked to an investigation.</p> <p>This question is <b>not</b> restricted to selecting O.S. maps.</p> <p><b>Level 2:</b> Candidates clearly explain two factors in detail that need to be taken into account with clear cause-effect. Clear reference made to geographical investigation(s). <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates largely describe rather than explain two factors that need to be taken into account with little, if any, cause-effect. Limited reference made to geographical investigation(s). <b>(0-3 marks)</b></p>	[5]	<p>No annotation required</p> <p>Can accept use of GIS.</p> <p>One factor, well explained, could reach the top of L1</p>
		<b>Total</b>	<b>[20]</b>	

Question		Expected Answer	Mark	Rationale/Additional Guidance
2	(a)	Study Fig. 1, a diagram showing the types of vegetation found along a transect, included in a geographical report.		
	(i)	<p><b>Comment on the effectiveness of Fig. 1 for showing data collected along a transect.</b></p> <p><b>Indicative content:</b> Pie chart does show % data and is very visual but too crowded, range of vegetation results in too many colours (visually confusing), no idea of actual %, not linked to anything so not helpful in the investigation. Also, the 3D image makes it difficult to compare the smaller sectors, since perspective is involved.</p> <p><b>Clearly it is ineffective as it gives no idea of change with distance along the transect.</b></p> <p><b>Level 2:</b> Candidates clearly evaluate Fig. 1 giving either two detailed, or a range of less detailed, advantages and/or limitations well linked to the range and nature of the data. Clear reference made to Fig. 1 and that it is transect data. <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates give a limited evaluation of Fig. 1 with a limited range of advantages and/or limitations with little, if any, linkage to the data being for a transect or to Fig. 1. <b>(0-3 marks)</b></p>	[5]	<p>No annotation required</p> <p>This is the key statement – if no reference to the transect then can't get level 2 marks.</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(ii)	<p><b>Describe and justify a more appropriate way of presenting data along a transect.</b></p> <p><b>Indicative content:</b>            Alternatives include bar charts (including divided bars), kite diagram, map, transect section – the important aspect is that there is some visual linkage to distance or location along the transect. Descriptions may be aided with appropriate diagrams.</p> <p>Justification could also include ease of drawing, visual impact, ease of understanding, ability to do statistical analysis etc. Justification could be tied into a comparison with Fig. 1.</p> <p>There is no requirement for the sections to be balanced but if one aspect (description or justification) is missing then max level 1. If unbalanced between description and justification then max level 2. If balanced and detailed description and justification then level 3.</p> <p><b>Level 3:</b> Candidates give a detailed description of an appropriate alternative with a range of justification of its appropriateness including clear reference to distance/location along the transect. <b>(8-10 marks)</b></p> <p><b>Level 2:</b> Candidates give a sound description of an appropriate alternative with some justification for its selection and its appropriateness. Some reference made to distance/location along the transect. <b>(5-7 marks)</b></p> <p><b>Level 1:</b> Candidates give a limited or superficial description with little or no justification. No reference made to distance/location along the transect. <b>(0-4 marks)</b></p>	<b>[10]</b>	<p>No annotation required            If the candidate talks about a non vegetation transect then this approach is acceptable. If more than one way is described then credit the best.</p> <p>Accept use of GIS but should focus on changes along transect.</p> <p>If unworkable then Max L2            Unworkable options include where only one bar chart or histogram is suggested. A sequence of bar charts across the transect is appropriate.</p> <p>Credit should be given to workable diagrams as part of the description, and may indicate the top of a level.</p> <p>Clear link to concept of a transect</p> <p>Less clear on distance (but still mentioned) but clear on vegetation types/change</p> <p>No real idea of types of vegetation and that they change.</p>

Question		Expected Answer	Mark	Rationale/Additional Guidance
	(b)	<p><b>How might the results of an investigation be influenced by when the data was collected?</b></p> <p><b>Indicative content:</b>            'When' can refer to time of day, time of year, actual year etc. There is no requirement to link it to Fig. 1 but this could help suggest changes in vegetation with the seasons, change in tourist numbers, climatic changes etc. Time of day is vital when conducting traffic or shopping investigations etc. This question is testing their understanding that what they measure may be influenced by time and so in turn alter results and conclusions.</p> <p><b>Level 2:</b> Candidates give a detailed explanation of one or more impacts of time on the potential outcomes of an investigation. Clear cause-effect. Well linked to one or more investigations. <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates give a limited or superficial outline of the impact of time with little, if any, explanation or cause-effect. Little reference made to investigations or impact on the outcomes. <b>(0-3 marks)</b></p>	[5]	<p>No annotation required</p> <p>No need to relate it to Fig 1 but they can do.</p> <p>Simply looking at lack of time to collect robust data then L1</p>
		<b>Total</b>	<b>[20]</b>	

Question		Expected Answer	Mark	Rationale/Additional Guidance
3	(a)	Study Fig. 2, a questionnaire used in a shopping survey.		
	(i)	<p><b>Suggest <u>two</u> problems that may occur when using this questionnaire to obtain primary data.</b></p> <p><b>Indicative content:</b>            There is a requirement to refer to Fig. 2 and candidates may pick up a number of the obvious shortcomings directly from the questionnaire such as question style (closed), invasion of privacy, no category for 'don't know' etc. Problems could also be of a practical nature such as timing, how do you get people to respond, who to select, time spent, number of questions etc.</p> <p>If no reference to Fig. 2 then max level 1.</p> <p><b>Level 2:</b> Candidates suggest in detail two appropriate and realistic problems. Clear reference to using the questionnaire to obtain primary data. <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates suggest in limited or vague outline two problems. Little, if any, reference to using the questionnaire to obtain data. <b>(0-3 marks)</b></p>	[5]	<p>No annotation required            If more than two take best two.</p> <p>Purely generic points e.g. time it takes are acceptable but max L1. Specific reference to Fig. 2 is expected to gain L2 marks.</p> <p>One factor, well explained, could reach the top of L1</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(ii)	<p><b>Explain ways in which the questionnaire could be improved.</b></p> <p><b>Indicative content:</b></p> <p>There is a strong link here with part (i) and Fig. 2. There is a need to remove certain intrusive questions such as name, income, age etc. Other Qs need categories e.g. shopping frequency, others need a category of 'other' such as mode of travel. Items bought might be better than 'Which shops have/ will you visit today?' Other improvements might include new questions such as how long did it take you to get here? Some may focus on its layout, order of questions, need for an introduction and a 'thank you for your time' at the end.</p> <p>Depth of explanation (or justification) rather than a superficial list or description should distinguish higher level responses. If purely problems, then L1 max.</p> <p><b>Level 3:</b> Candidates clearly describe a range of appropriate improvements that can be used and explain in detail why these chosen improvements are more effective in obtaining useful information on people's shopping habits. Clear reference to Fig. 2. <b>(8-10 marks)</b></p> <p><b>Level 2:</b> Candidates describe a sound range of appropriate improvements that can be used and explain why these chosen improvements are more effective in obtaining useful information on people's shopping habits. Some reference made to Fig. 2. <b>(5-7 marks)</b></p> <p><b>Level 1:</b> Candidates describe a very limited range of appropriate improvements that can be used and explain in a limited way, if at all, why these chosen improvements are more effective in obtaining useful information on people's shopping habits. Little or no clear reference to Fig. 2. <b>(0-4 marks)</b></p>	<b>[10]</b>	<p>No annotation required</p> <p>Be wary of the same improvement repeated e.g. use of tick boxes</p> <p>One improvement in depth could reach top of L1.</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(b)	<p><b>Evaluate the usefulness of <u>one</u> statistical measurement of central tendency used to analyse data in a geographical investigation.</b></p> <p><b>Indicative content:</b> This could be a basic measure such as mean, mode, median, or more clearly related to tendency such as inter-quartile range, standard deviation etc. Some techniques could not be used e.g. Mann-Whitney, Spearman's etc</p> <p>Evaluation may be negative, and say why it is difficult or inappropriate, or positive. Higher level responses will look at both aspects. There should be clear linkage to its relative usefulness and the analysis of data i.e. taking the raw data further e.g. as preparation for other tests etc.</p> <p><b>Level 2:</b> Candidates give a clear evaluation of an appropriate statistical measurement with a balance of pros and cons and with clear relevance to central tendency and the analysis of collected data. <b>(4-5 marks)</b></p> <p><b>Level 1:</b> Candidates give a limited evaluation with a lack of balance and with limited relevance to central tendency or the analysis of collected data. <b>(0-3 marks)</b></p>	[5]	<p>No annotation required</p> <p>One only + no method needed.</p> <p>The entire answer must be read even if it starts off in error such as describing spearman's rank as a measure of central tendency.</p> <p>Credit the use of additional aspects connected with central tendency - The usefulness of the mean can be enhanced by the use of standard deviation. The usefulness of the median can be enhanced by the use of inter-quartile range.</p> <p>Clear statement of usefulness.</p>
	<b>Total</b>	<b>[20]</b>	

Section B			
Question	Expected Answer	Mark	Rationale/Additional Guidance
4	<p><b>Explain how and why you conducted a risk assessment for a geographical investigation. Justify the strategies you used to minimise these risks.</b></p> <p><b>Indicative content:</b> This draws on the candidates' understanding of a range of physical, economic, social and practical factors in an investigation and the extent to which they pose potential risks. 'How' should cover practical ways of conducting a risk assessment and 'why' will tend to focus on safety aspects but could also include the need to ensure data can be collected reliably etc. In all cases the risks should be appropriate to the named investigation and its location.</p> <p><b>If either how or why aspect missing then max L2.</b></p> <p>Justification needs to look at appropriate strategies to reduce these potential risks. There should be clear linkage between risk and strategy. Low level answers may focus typically on 'having a mobile phone in case of emergencies' type response. Candidates should justify their choice of strategies such as time, cost, the likelihood of the risks etc.</p> <p>If no titled investigation stated then max level 1. If little connection between their title and the explanation (i.e. largely generic) then max low level 2. Credit detailed evidence of an individual investigation.</p>	[20]	<p>Annotation of level mark only.</p> <p>Justification may be throughout.</p> <p>If more than one title or area of investigation is used, then credit the best part of response.</p> <p>Be wary of excessive description – unlikely to get beyond mid L2</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p><b>Level 3:</b> Candidates explain in detail how they conducted a risk assessment and clearly relate these risks to the methodology used to collect data to the investigation stated. Reference to a wide range of factors and their interaction and/or connection is expected at this level. Effective range of risk reduction strategies with clear justification for their selection and appropriateness. Answer is well structured with effective use of grammar and spelling. Geographical terminology is used accurately. <b>(16-20 marks)</b></p> <p><b>Level 2:</b> Candidates explain how they conducted a risk assessment and related some of these risks in a limited way to the methodology used to collect data to investigation stated. Some reference to the way factors interconnect. Limited range of risk reduction strategies with some justification for their selection. Answer may have poor structure with some inaccurate spelling and inaccurate use of geographical terminology. <b>(10-15 marks)</b></p> <p><b>Level 1:</b> Candidates offer limited explanation of how they conducted a risk assessment and offer little, if any, relationship to the methodology used to collect the data. Limited range of strategies offered with little, if any, justification for their selection. Communication is basic with little structure and inaccurate spelling. <b>(0-9 marks)</b></p>		<p>Must have clear how and why a risk assessment is conducted + strong justification of strategies. Excellent use of fieldwork exemplars would indicate a top level answer.</p> <p>Must have either how or why a risk assessment is conducted + some justification of strategies.</p> <p>Generic with no real how and weak (if any) justification. No reference to their investigation is Max L1.</p>
	<b>Total</b>	<b>[20]</b>	

Question	Expected Answer	Mark	Rationale/Additional Guidance
5	<p><b>Describe the conclusions you drew from a geographical investigation. To what extent did they support the geographical ideas, theories or concepts being investigated?</b></p> <p><b>Indicative content:</b> This is a challenging question as it asks two interconnected components. They need not be balanced in coverage but if one component is clearly missing then max level 1. Clearly these will vary with the nature of the investigation.</p> <p>Describing the conclusions is relatively straightforward and basic but evaluating the extent they supported/related to geographical ideas, theories, models, concepts etc is complex. The discriminating element is the evaluation of their soundness in terms of geography. The expectation is that this will require candidates to compare their conclusions with a geographical model, concept etc. Higher level candidates should be able to explain why they were or were not in line with what was expected geographically.</p> <p>If no titled investigation stated then max level 1. If little connection between their title and the evaluation (i.e. largely generic) then max low level 2. Credit detailed evidence of an individual investigation.</p>	[20]	<p>Annotation of level mark only.</p> <p>Be wary of candidates confusing results with conclusions.</p> <p>A candidate that provides you with a lot about the investigation without specific reference to the conclusion will gain some credit, but is unlikely to get beyond level 2.</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
	<p><b>Level 3:</b> Candidates describe in detail their conclusions. Detailed evaluation of the extent to which they support a clear geographical concept/model. Reference to a range of factors and their interaction and/or connection is expected at this level. Answer is well structured with effective use of grammar and spelling. Geographical terminology is used accurately. <b>(16-20 marks)</b></p> <p><b>Level 2:</b> Candidates describe some of their conclusions. Some evaluation of the extent to which they support a geographical concept/model. Some reference to a range of factors and their interaction and/or connection is expected at this level. Answer may have poor structure with some inaccurate spelling and inaccurate use of geographical terminology. <b>(10-15 marks)</b></p> <p><b>Level 1:</b> Candidates outline very limited conclusions. Little, if any, evaluation of the extent to which they support a geographical concept/model. Communication is basic with little structure and inaccurate spelling. <b>(0-9 marks)</b></p>		<p>Clear link to concept and evaluation of the level of support for it.</p> <p>Link not always clear or fully correct.</p> <p>Ignores (or confused by) geographical concept.</p>
	<b>Total</b>	<b>[20]</b>	

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