



GCE

Geography

Unit **F764**: Geographical Skills

Advanced GCE

Mark Scheme for June 2018

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

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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Annotation	Meaning of annotation
	Omission mark. Further development needed, missing point or link between points.
	Level one.
	Level two.
	Level three.
	Unclear, inaccurate, dubious validity.
	Irrelevant, a significant amount of material that does not answer the question
	No example(s) used or provided.
	Rubric Error (place at start of Question not being counted).
	Highlighting an issue eg irrelevant paragraph. Use in conjunction with another stamp eg  or 
	Point has been seen and noted.

Examiners **must** include annotations on each response in Section A questions unless it receives full marks.

In Section B, each page of writing **must** have some annotation.

Question		Answer/Indicative Content	Marks	Guidance	
				Content	Levels of response
1	(a)	<p>Study Fig. 1, which shows trip (desire) lines for visits to banks in three local service centres.</p>			
	(i)	<p>Comment on the effectiveness of the use of this technique in delimiting the area served by the centres in Fig. 1.</p> <p>Effectiveness may be seen as the effectiveness of the technique or the effectiveness in showing service areas.</p> <p>Comments could include:</p> <ul style="list-style-type: none"> • uses straight line distance rather than time or route distance • only one type of service used • high order service used • doesn't create a clear boundary • easy to draw • limited sample size • lack of scale, direction, title 	5	Max 4 if do not give both positive & negative	<p>Level 2 (4–5 marks) Candidates comment in detail on either positive and/or negative features of the effectiveness of the method. Clear reference to Fig. 1.</p> <p>Level 1 (0–3 marks) Candidates offer a limited or unbalanced commentary of the effectiveness. Limited, if any, reference made to Fig. 1.</p>
	(ii)	<p>Describe and justify the use of an alternative technique for delimiting the area served by a centre.</p> <p>The usual alternative to delimiting service areas is the use of existing service areas such as shop delivery areas, bus services, newspaper advertising areas etc. These are then plotted and a core service area identified and a weaker boundary beyond.</p>	10	Needs to be clearly linked to 'the area served by a centre' to get into L3.	<p>Level 3 (8–10 marks) Candidates offer a detailed description and justification of an alternative method. Answer is well structured with accurate grammar and spelling. Good use of appropriate geographical terminology.</p> <p>Level 2 (5–7 marks) Candidates offer a description and some justification of an alternative method. Answer has sound structure but may have some errors in grammar</p>

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		<p>This is more effective as it implies overlapping service areas at the outer edges.</p> <p>Other responses may look at other types of movements into centres e.g. visit to dentist or even consider theoretical approaches such as Reilly's break point concept. Flow lines would be inappropriate.</p> <p>Justification could focus on the practicalities of using the technique or on the effectiveness of the end product – the service area. Either approach may be contrasted with the use of trip lines.</p>		Purely a description of presentation method is probably a L1 response.	<p>and spelling. Some use of appropriate geographical terminology.</p> <p>Level 1 (0–4 marks) Candidates offer a limited description and little, if any, justification of an alternative method. Answer has little structure and has some errors in grammar and spelling. Little use of geographical terminology.</p>
	(b)	<p>Evaluate the use of transects as part of the sampling design in an investigation.</p> <p>Linear transect – where samples are taken in a line along or across something.</p> <p>Typically they are used in sand dune investigations or land use surveys along a street.</p> <p>Evaluation should look at both the advantages and disadvantages of such sampling.</p>	5	<p>Clear focus on transect line as a method of sampling. At least one positive and one negative comment. Max 4 without positive & negative.</p> <p>No clear reference to linear nature of transects – max L1</p>	<p>Level 2 (4–5 marks) Candidates give a clear and detailed outline of both advantages and disadvantages of the sampling method.</p> <p>Level 1 (0–3 marks) Candidates give a limited or vague outline of advantages and disadvantages or offer generic sampling answers.</p>

Question		Answer/Indicative Content	Marks	Guidance	
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		<p>Advantages include easy, quick, fair coverage.</p> <p>Disadvantages include easy to miss something, interval is crucial, may have implications form validity of statistical inferences.</p>			
2	(a)	<p>Study Fig. 2, an A level student’s conclusion for an investigation of urban land use patterns.</p> <p>Suggest <u>two</u> ways in which this conclusion could be made more effective.</p> <p>A number of ways are possible:</p> <ul style="list-style-type: none"> • clearer reference back to the original title/hypothesis • need to substantiate conclusions with brief reference to findings • mention what the main reason for it not matching Burgess • role of river/history stated • add an evaluation and/or improvements • make it clearer what the pattern of land use actually looked like • greater length or detail • reference to limitations would be inappropriate 	5	<p>If only one way considered then max top L1.</p> <p>L1 type response might be ‘make it longer’.</p>	<p>Level 2 (4–5 marks) Candidates offer two detailed and appropriate ways which would make the conclusion more effective. Clear reference made to Fig. 2.</p> <p>Level 1 (0–3 marks) Candidates give limited or inaccurate ways which would make the conclusion more effective. Limited reference made to Fig. 2.</p>

Question		Answer/Indicative Content	Marks	Guidance	
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	(b)	<p>Evaluate the use of GIS in geographical investigations.</p> <p>GIS is widely interpreted in its meaning and usage. The key element (and indicator possibly of a high level response) is the ability to tie data to an exact location. Most would see this as digital but there are alternative interpretations.</p> <p>Its use in investigations include:</p> <ul style="list-style-type: none"> • in initial planning to identify location/risk etc • data collection – primary & secondary • representing data – layering • analytical tools <p>Evaluation is key: Advantages include:</p> <ul style="list-style-type: none"> • handles large volumes of data • gives precise locations • gives precise measurements • fast • can change scale • can overlay patterns • can produce 3D images <p>Disadvantages include:</p> <ul style="list-style-type: none"> • cost • technical – need training in its use • can go wrong especially in the field 	10	<p>Higher level responses should go beyond its use in one stage – probably representing data.</p> <p>L3 probably distinguished from L2 on range and depth of evaluation. Max.6 if not giving both advantage & disadvantage.</p> <p>Purely a description of one or more GIS uses is probably a L1 response.</p>	<p>Level 3 (8–10 marks) Candidates clearly outline a range of advantages and disadvantages of using GIS. Answer is well structured with accurate grammar and spelling. Good use of appropriate geographical terminology.</p> <p>Level 2 (5–7 marks) Candidates outline some of the advantages and disadvantages of using GIS. Answer has sound structure but may have some errors in grammar and spelling. Some use of appropriate geographical terminology.</p> <p>Level 1 (0–4 marks) Candidates offer limited or unbalanced advantages and disadvantages of using GIS. Answer has little structure and has some errors in grammar and spelling. Little use of geographical terminology.</p>

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	(c)	<p>Outline <u>two</u> factors which are important when selecting the scale of a map to be used in an investigation.</p> <p>The stress is on selecting the scale of a map for an investigation – not selecting a type of map although many weaker answers may go down that route.</p> <p>Factors could include:</p> <ul style="list-style-type: none"> • area size being investigated • amount of detail that needs to be shown • its use as a base map for presenting data • availability/date etc • the need to measure distance of a certain length <p>This question is essentially finding out if they appreciate that different scale maps show different things.</p>	5	<p>Clear link between factor and selection of scale of a map.</p> <p>Largely descriptive of the factor. Little if any focus on scale.</p> <p>If one factor is outlined well then max top L1.</p>	<p>Level 2 (4–5 marks) Candidates comment in detail why those two factors are important when selecting the scale of a map for an investigation.</p> <p>Level 1 (0–3 marks) Candidates give a limited or superficial description of two factors with little, if any, linkage to scale of a map.</p>
3	(a)	<p>Study Fig. 3, a chart drawn by an A Level student to show sediment found in an investigation.</p> <p>Comment on the usefulness of Fig. 3 for analysing this data.</p> <p>The stress is on the usefulness in the analysis of sediment size data.</p>	5	<p>Level 2 clearly link it to analysis of data. i.e. it can be useful in further analysis as ... Max.4 if not giving both useful and not useful.</p> <p>Largely descriptive of what the diagram shows.</p>	<p>Level 2 (4–5 marks) Candidates give detailed comments on the usefulness of the graph in analysing stone sizes including what is and is not useful. Clear reference to Fig. 3.</p> <p>Level 1 (0–3 marks) Candidates give vague or limited comments on the effectiveness of the graph in analysing stone sizes.</p>

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		<p>There are flaws in the chart e.g. suspect mean, no real scale/size, classification of values is not known. Does it really analyse the data? Can't tell mode or median from the chart.</p> <p>But it does give a good visual impression of skewed data.</p>			Limited reference to Fig. 3.
	(b)	<p>Compare the use of <u>two</u> measures of dispersion in the analysis of geographical data.</p> <p>Measures of dispersion could include: range, interquartile range, standard deviation but not transects/quadrats. Others may suggest comparing two graphs or charts as in Fig. 3.</p> <p>Range is quick and easy but includes all values extreme or not.</p> <p>Interquartile looks at middle half so ignores extreme values.</p> <p>Standard deviation is more statistically robust and indicates dispersion from the mean such that 68% of values occur within one SD and 95% within 2 SD.</p>	10	<p>L3 probably distinguished from L2 on range and depth of the comparison.</p> <p>Needs to be clearly linked to the analysis of data to get to top L3.</p> <p>A good description of the characteristics of the two measures but no comparison of its use could get to the middle of L2</p> <p>No appreciation of its characteristics. Max L1 if only one measure</p>	<p>Level 3 (8–10 marks) Candidates clearly compare two measures of dispersion in the analysis of data. Answer is well structured with accurate grammar and spelling. Good use of appropriate geographical terminology.</p> <p>Level 2 (5–7 marks) Candidates compare two measures of dispersion in the analysis of data. Answer has sound structure but may have some errors in grammar and spelling. Some use of appropriate geographical terminology.</p> <p>Level 1 (0–4 marks) Candidates offer limited comparison of two measures of dispersion in the analysis of data. Much will be descriptive. Answer has little structure and has some errors in grammar and spelling. Little use of geographical terminology.</p>

Question		Answer/Indicative Content	Marks	Guidance	
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	(c)	<p>Outline advantages of using isopleths/isolines to show spatial patterns of data.</p> <p>Advantages may include:</p> <ul style="list-style-type: none"> • visual impact • interpolation of intermediate values • ease of construction • variation (or not) in interval used <p>Some may look at extensions such as colouring in areas between isopleths.</p>	5	<p>The stress is on their use to show spatial data so advantages should focus on that at the higher level.</p> <p>One advantage done well can reach top of L1.</p>	<p>Level 2 (4–5 marks) Candidates outline the advantages of isopleths with clear focus on showing spatial patterns of data.</p> <p>Level 1 (0–3 marks) Candidates offer limited advantages. Much will be vague or largely descriptive with limited focus on showing spatial patterns.</p>
4		<p>‘Timing is an important factor when carrying out an investigation’. To what extent did your investigation support this view?</p> <p>This requires an evaluation of the relative importance of time compared to either its role in the investigation or compared to other aspects of carrying out an investigation.</p> <p>Timing can include time of day/week/year, time available to carry out the investigation or the timing of various elements of the investigation.</p> <p>Many will agree with this statement but this view must be fully supported with evidence from their investigation. Many will disagree but then equally evidence to the contrary is expected from their</p>	20	<p>Clear evaluation of ‘the most important limitation’. At this level more than one interpretation of ‘timing’ can be expected.</p> <p>Lower level responses will probably outline their problems with timing</p>	<p>Level 3 (16–20 marks) Candidates evaluate in detail the extent to which timing was the most important limitation in their investigation. Answer is well structured with accurate grammar and spelling. Good use of appropriate geographical terminology.</p> <p>Level 2 (10–15 marks) Candidates evaluate the extent to which timing was an important limitation in their investigation. Answer has sound structure but may have some errors in grammar and spelling. Some use of appropriate geographical terminology.</p> <p>Level 1 (0–9 marks) Candidates offer limited, if any,</p>

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		investigation.		rather than evaluate its importance in terms of their investigation. Those that simply describe their investigations remain in L1.	evaluation of the extent to which timing was a limitation in their investigation. No real cause and effect and much is descriptive. Answer has little structure and has some errors in grammar and spelling. Little use of geographical terminology. If no titled investigation stated then max level 1.
5		<p>Describe the findings of your data analysis and evaluate their contribution to the conclusion of your investigation.</p> <p>Clearly this depends upon the nature of their investigation but the focus is on analysis not presentation.</p> <p>Description may cover the actual outcomes and/or the analytical methods used to produce them. There is no requirement for formulae to be given or calculations performed.</p> <p>Evaluation should ideally be focused on the outcomes of the analysis i.e. what is the significance of the results especially in terms of the focus of the investigation and their contribution to the conclusion.</p> <p>Also acceptable is an evaluation of the analytical methods used which could</p>	20	<p>Clear reference to outcomes (in terms of figures) and conclusion can be expected at this level. Balance between both aspects of the question.</p> <p>L3 probably distinguished from L2 on range and depth of evaluation of contribution to the conclusion. The two aspects of the question may be unbalanced at this level.</p> <p>Those that simply describe their investigations and/or analytical methods remain in L1.</p>	<p>Level 3 (16–20 marks) Candidates describe and evaluate in detail the outcomes of their data analysis used in their named investigation and how this contributed to the conclusion. Answer is well structured with accurate grammar and spelling. Good use of appropriate geographical terminology.</p> <p>Level 2 (10–15 marks) Candidates describe and evaluate the outcomes of their data analysis used in their named investigation. Answer has sound structure but may have some errors in grammar and spelling. Some use of appropriate geographical terminology.</p> <p>Level 1 (0–9 marks) Candidates offer limited description and little, if any, evaluation of the outcomes of their data analysis used</p>

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			include: ease of calculation, role of anomalies, type of data that could be used, accuracy, time taken etc.		Max L1 if focus is entirely on measuring/recording of data.	<p>in their named investigation. Much is descriptive of how the technique is carried out. Answer has little structure and has some errors in grammar and spelling. Little use of geographical terminology.</p> <p>If no titled investigation stated then max level 1.</p>

