



National  
Qualifications  
2017

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# 2017 Geography

## Advanced Higher

### Finalised Marking Instructions

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## General marking principles for Advanced Higher Geography

*This information is provided to help you understand the general principles you must apply when marking candidate responses to questions in this paper. These principles must be read in conjunction with the detailed marking instructions, which identify the key features required in candidate responses.*

- (a) Marks for each candidate response must always be assigned in line with these general marking principles and the detailed marking instructions for this assessment.
- (b) Marking should always be positive, ie marks should be awarded for what is correct and not deducted for errors or omissions.
- (c) If a specific candidate response does not seem to be covered by either the principles or detailed marking instructions, and you are uncertain how to assess it, you must seek guidance from your Team Leader.
- (d) Use the full range of marks available for each question.
- (e) The detailed marking instructions are not an exhaustive list. Other relevant points should be credited.
- (f) For credit to be given, points must relate to the question asked.

### Marking principles for each question type

There are a range of types of question which could be asked within this question paper. For each, the following provides an overview of marking principles, and an example for each.

#### Explain ...

Questions which ask candidates to explain or suggest reasons for the cause or impact of something, or require them to refer to causal connections and relationships: candidates must do more than describe to gain credit here.

Where candidates are provided with sources, they should make use of these and refer to them within their answer for full marks.

**Where candidates provide a purely descriptive answer or one where development is limited, no more than half of the total marks should be awarded for the question.**

#### Analyse ...

Analysis involves identifying parts, the relationship between them, and their relationships with the whole. It can also involve drawing out and relating implications.

An analysis mark should be awarded where a candidate uses their knowledge and understanding/a source, to identify relevant components (eg of an idea, theory, argument, etc) and clearly show at least one of the following:

- links between different components
- links between component(s) and the whole
- links between component(s) and related concepts
- similarities and contradictions
- consistency and inconsistency
- different views/interpretations
- possible consequences/implications
- the relative importance of components
- understanding of underlying order or structure.

Where candidates are asked to analyse they should identify parts of a topic or issue and refer to the interrelationships between, or impacts of, various factors, eg in a question requiring candidates to analyse the different impacts of flooding on land use, the response should consider the effects of the immediate area and also, where appropriate, other areas. Analysis should be supported by evidence where relevant.

**Evaluate ...**

Where candidates are asked to evaluate, they should be making a judgement of the success, failure, or impact of something based on criteria. Candidates would be expected to briefly describe the technique/methodology being evaluated before offering an evidenced conclusion.

**Discuss/comment on ...**

These questions are looking for candidates to explore ideas about a project, or the impact of a change. Candidates will be expected to consider different views on an issue/argument. There should be a range of impacts or ideas within the answer.

**Draw to scale ...**

Draw to scale involves drawing a shape/route to the correct size using the given scale of the map.

Detailed marking instructions for each question.

Question			General marking principles for this type of question	Max mark	Specific marking instructions for this question
1.	(a)	(i)	<p>Since the area is unlikely to be perfectly square, candidate should be awarded <b>1 mark</b> for a site of approximate size (It is at the markers' discretion).</p> <p><b>2 marks</b> awarded for an appropriate site.</p>	<b>3</b>	<p>An area with some woodland and varied relief should be included in the choice of site. Local access is important, but a road which runs through the chosen site would be inappropriate.</p> <p>There is a range of suitable locations.</p>
		(ii)	<p>Candidates should explain the reasons for their choice of site. They should make detailed reference to the OS map and there is the opportunity to make use of the atlas.</p> <p>Candidates can gain full marks with a fully annotated overlay.</p>	<b>4</b>	<p>eg area in vicinity of 2143</p> <p>The area has good accessibility - A5 and A539-with a minor road leading from the A542 to the proposed site (1). The site could be well signposted along the routes and will attract people from a wider area (use of Atlas) (1). The site has an area of woodland rising to approximately 200m above sea level. This would be an appropriate place for the Treetop Adventure with the slope adding to the potential for an exhilarating experience (1). The whole site is fairly undulating which could be incorporated into the design of the assault course (1). The aspect is mainly southerly which would make the experience more pleasant for visitors (1). The site is away from the town centre and due to the undulating terrain may not be visible to the residents (1).</p> <p><i>Or any other valid point. For example a stream that could be incorporated appropriately for nature trails, assault course etc.</i></p>

Question		General marking principles for this type of question	Max mark	Specific marking instructions for this question
	(b)	<p>Credit should be given for the explanation of sustainable design and layout.</p> <p>Maximum <b>3 marks</b> for a list.</p>	<b>5</b>	<p>Answer to some extent will depend on the site chosen, but possible explanations could include:  Wind turbines to provide renewable energy, which will utilise high/exposed site (1). Solar panels which could take advantage of a southerly aspect (1). Buildings/structures could be constructed using locally resourced timber/quarried materials...reduce transport costs/local employment opportunities (1). Buildings to be 'in-keeping' with traditional design of the rural area eg single storey/timber built (1). Vegetation could be planted to screen buildings to reduce visual impact of Park in this rural area (1). Recycling facilities could be incorporated around the Park to reduce waste and to encourage responsible use of the Park and the surrounding environment (1). Locally produced (organic) food could be used in the café and sold in the shop to reduce carbon footprint of transportation and to promote local agriculture (1).</p> <p><i>Or any other valid explanatory point.</i></p>
	(c)	<p>Only credit <b>negative</b> impacts.</p>	<b>4</b>	<p>Answer will depend on site chosen. For area in vicinity of 2143 roads may become congested in the summer (1). The minor road leading to the site is fairly steep and in one access section has a gradient steeper than 1 in 5. It is likely to be single track and so potentially a problem for buses (1). Local people who use the roads may find this frustrating and there is the potential for accidents (1). Llangollen already has a number of tourist attractions and so is likely to be a 'honeypot'. Increased visitor numbers will exacerbate the problem as visitors to the Adventure Park may stop off on route resulting in parking problems and increased noise and litter (2). Some tourist related services may argue that the Adventure Park would take custom away eg food outlets in Llangollen may lose custom as people will eat at the Adventure Park (1).</p> <p><i>Or any other valid point.</i></p>

Question	General marking principles for this type of question	Max mark	Specific marking instructions for this question
(d)	<p>Should make detailed use of the map extract and atlas to get full marks.</p> <p>Marks awarded for explanation.</p>	4	<p>The area is fairly hilly rising to over 500m in places. It is ideal terrain for walking/rambling and there are plenty of footpaths that can be followed and three national trails (1). The footpaths and trails are on a variety of terrains that would be appropriate for a range of experience/ages (1). There is the opportunity for water-based activities such as fishing at 2645 and 204448 and boat trips along the River Dee/Afon Dyfrdwy (1). Areas of woodland such as Trevor Hall Wood 2542 have footpaths and could also be used for mountain biking (1). For people more interested in historical sites there are a number of places to visit such as the abbey at 206442 and fort at 242428. The three museums suggest that this area may be historically important (1). The preserved railway may interest steam train enthusiasts as well as a potential daytrip for families (1). The canal may be popular with cyclists who could use the traffic free cycle route on the banks of the canal to tour the area (1). The A5 and 539 go north to connect with the M56/M6 and south to the M54. Liverpool is approximately 70km away or just over an hour by car and Manchester and Birmingham are approximately 110 and 130 km away. The distances could be covered as a daytrip and so there is potentially a very large customer base (2). The A5 connects to Snowdonia National Park which is approximately 70km away and so this area would be a good base for travelling from (1). Annual precipitation is about 1000mm which is less than Snowdonia which has over 2000mm and therefore people may prefer to stay in this area (1).</p> <p><i>Or any other valid explanatory point.</i></p>

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
2	(a)	(i)	<p>Candidates should consider both advantages and disadvantages.</p> <p><b>Maximum 3 marks</b> for either.</p> <p><b>Maximum 2 marks</b> for list.</p>	4	<p>Possible advantages might include: Questionnaires generate information about people's opinions/attitudinal information that is not available from any other source (1). Information that is up to date (1). Information that can generate descriptive and explanatory data (1). Most efficient and effective tool for collecting population-based information (1).</p> <p>Possible disadvantages might include: Poorly designed/ambiguous questions can generate irrelevant information (1). People not telling the truth (1). The questionnaire sample could be biased due to the sample size and/or sampling procedure (1).</p> <p><i>Or any other valid point.</i></p>
		(ii)	<p>Response must relate to the <b>preparation</b> of the questionnaire.</p>	2	<p>Possible considerations might include: The number of questions to ensure that sufficient information is gathered and that it is relevant to the purpose/aims of the questionnaire (1). The types of questions to be asked - whether open or closed- to generate appropriate information for processing/presenting (1). How the questionnaire is to be administered to ensure a high response rate that can be efficiently managed (1).</p> <p><i>Or any other valid point eg sample size, sampling methodology.</i></p>

Question		General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(b)	<p>Candidates could consider graphical, cartographical and/or statistical techniques.</p> <p>2 techniques should be considered and they should relate to the purpose of the questionnaire.</p> <p><b>Maximum of 3 marks for 1 technique.</b></p>	4	<p>Possible techniques might include: Chi - squared could be used to process any categorical data that has been gathered (1) eg age/environmental quality scoring (1) and the test result could be used to determine the significance of the data gathered (1).</p> <p>Tabular presentation to summarise data collected (1), which will help with the analysis of the characteristics of the data gathered (1). For example, trends could be identifiable (1).</p> <p><i>Or any other appropriate technique that is relevant to the purpose of the questionnaire. For example, bi-polar analysis.</i></p>

Question			General marking principle for this type of question	Max mark	Specific marking instructions for this question
3	(a)	(i)	Candidates should make a judgement based on the positive and negatives of using standard deviation on river flow data.	4	<p>Standard deviation is one of the most important descriptive statistics as it gives a more accurate figure than the range or interquartile range as it takes into account all figures (1) and it is not affected by extreme values (1). It measures the spread of the data from the mean while the range measures the two extreme values in the data set (1). The standard deviation also shows the extent of the differences/variances from the mean (1). Using the statistic to compare discharge allows us to see how the spread of the data around the mean has changed and it allows us to make a judgement on how river flow has changed in 46 years (1).</p> <p><i>Or any other valid explanatory point.</i></p>
		(ii)	Candidates should use the standard deviation results and data set to analyse the river discharge data in 1967/68 and 2013/14.	6	<p>The mean value for 1967/68 is larger than the mean value for 2013/14 indicating a lower annual discharge of the river in 2013/14 (1). This could indicate that the river discharge has dropped from 1967/68 to 2013/14 (1). The standard deviation in 1967/68 is larger than in 2013/14 showing a greater spread from the mean (1). 68.2% of the data would be expected to lie between 1SD either side of the mean ie: 465.77 cumecs and 2013.73 cumecs in 1967/68 and in 2013/14 the range was between 310.62 cumecs and 1365.72 cumecs (1). These figures reveal that there has been a drop in the discharge of the River Niger between 1967/68 and 2013/14 and also greater variability in the discharge of the river in 1967/68(1). Looking at the discharge data the biggest changes can be seen from December to May ie: February 1967 the discharge was 2151 cumecs whereas in 2013 it was 712 cumecs (1).</p> <p><i>Or any other valid analytical point.</i></p>
	(b)	(i)	<p>Technique should be appropriate.</p> <p>For full marks the irrigated area, the usage &amp; the dam location should be referred to.</p>	4	<p>A likely technique would be the use of proportional symbols for presenting on the map (1). Symbols could be placed correctly to show both location and size (1). The graphs could distinguish irrigated areas from HEP production, using different colours (1). The size of the symbols should allow for comparisons to be made without obscuring other essential information.</p> <p><i>Or any other appropriate technique that is relevant to the data.</i></p>

Question		General marking principle for this type of question	Max mark	Specific marking instructions for this question
	(ii)	<p>Candidates should use Figures 1 - 3 and also the atlas to show how different factors could influence river discharge.</p> <p>For full marks appropriate &amp; explicit reference to the Atlas should be included.</p>	6	<p>The precipitation graph shows that from 1967 the average precipitation level in the region has, on the whole, been below average, and especially so during the mid-80's. With less precipitation this would have an impact on the river levels (1). The impact of less precipitation may also influence how water is used for farming. Agriculture in the region is (intensive) arable and includes the cultivation of groundnuts, millet, sorghum and cotton, (students may be able to identify this from the atlas), so there is a need for water in this region (1). Figure 3 also shows that there are irrigation areas ranging from 3000 km<sup>2</sup> (Sotuba) to 70 000 km<sup>2</sup> (Markala) and if there is less total annual precipitation then water taken from the River Niger system will also lead to a drop in the river flow (1). Students may also see from the atlas that this region has a higher population density than some other regions of western Africa so population pressure will also have an impact on food production (1). Figures 2 and 3 also shows there are number of dams which have been built in the region which will have an impact on the discharge of the river Niger as water will be held in storage rather than in the river (1). The construction of the dams is likely to be a result of population growth and the increase in the need for irrigation (1). Production of HEP will also influence the discharge of the river as water will be controlled by the HEP companies thus influencing the flow of the river Niger (1). Climate change could be responsible for a decrease in rainfall and changes to rainfall patterns which could influence river discharge (1).</p> <p><i>Or any other valid analytical point.</i></p>

[END OF MARKING INSTRUCTIONS]