



2014 Geography

Advanced Higher

Finalised Marking Instructions

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Part One: General Marking Principles for: Geography Advanced Higher

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 specific Marking Instructions for each question.

- (a)** Marks for each candidate response must always be assigned in line with these general marking principles and the specific Marking Instructions for the relevant question. 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/Principal Assessor.
- (b)** Marking should always be positive ie, marks should be awarded for what is correct and not deducted for errors or omissions.

GENERAL MARKING ADVICE: Geography Advanced Higher

The marking schemes are written to assist in determining the “minimal acceptable answer” rather than listing every possible correct and incorrect answer. The following notes are offered to support Markers in making judgements on candidates’ evidence, and apply to marking both end of unit assessments and course assessments.

Part Two: Marking Instructions for each Question

Section A

Question		Expected Answer(s)	Max Mark	Additional Guidance
1	a	<p>There is no correct answer but candidates must choose a site for a new building; it should be accessible without too much construction for access. The plot must be drawn accurately to scale.</p> <p>2 + 2 marks</p>	4	

Question			Expected Answer(s)	Max Mark	Additional Guidance
1	b	i + ii	<p>Marks are not awarded for the locations alone. Accurate description and appropriate explanation are required. Cliffs are significant and important features, and occur in varying heights and forms (eg 45+ m. at 2571; 70+ m. at 2272). This area has some of the most spectacular cliff scenery in this part of Britain. There is a general contrast in ruggedness between the northern and southern (lee) sides of Flamborough Head. Caves are named in several areas eg 2372; 2272. There are significant contrasts in headlands and adjacent small bays eg North Landing and Thornwick Bay at 2372; contrasting with South Landing at 2369. The till overlay above the solid rock that forms the steep faces of the high cliffs mean that the cliffs tops are vegetated and the top parts have slumped producing much more gentle slopes, eg west of Bempton Cliffs to Speeton Sands. Cattlemere Hole and Cough Hole may be identified as blowholes or arches. There are a variety of beaches in the area; extensive at Bridlington in front of low (till) cliffs, with groynes an indication of natural long shore drift removing material from the beach and contributing to coastal erosion. Lower, more gently sloping cliffs south of Filey at Speeton and Reighton Sands (related to dip of underlying geology) have more extensive beaches. There are examples of shore platforms on the extract. Appropriate human examples should be given credit.</p>	12	

Question		Expected Answer(s)	Max Mark	Additional Guidance
1	c	<p>Both description and explanation required, so a list is no use. Examples could include the viewpoint at Flamborough Head with P and PC to enjoy the cliffs safely; visit the RSPB Reserve at Bempton to see the seabirds on the cliff ledges - layers/strata given in text so should be able to work out that they are suitable for nesting - also in photo. Story Board trails mentioned in text of Q so could do short cliff walk. Dane's Dyke South Landing for Nature Reserve, P, PC and Picnic Site 2169; the beaches at Bridlington, Speeton or Reighton or any other acceptable examples, which are described and explained.</p> <p>Up to 3 marks for examples outwith the map area that are described <u>and</u> explained (eg Flamingo Land, N. York Moors National Park.)</p>	<p>14</p> <p>(30)</p>	

Question		Expected Answer(s)	Max Mark	Additional Guidance
2	a	<p>Farming – glacial till generally fertile; field sizes suggest grazing on higher parts and cereals/grazing on lower lying + smaller fields beside villages for vegetables, horses. Camp/caravan/holiday camps – within reach of sea but generally a bit further back to avoid danger of erosion. Masts for reception on higher land. Woodland as shelter for farms/fields. Woodland recreation eg 1467 with fish ponds, slopes for horse riding. Roads avoid steep slopes and cliff tops for the most part. Roads are fairly straight because of the gentle landscape inland. Rail route generally avoids steep cliffs too. Villages like Bempton and Flamborough avoid wind swept/erosion prone cliff edge. Evidence that much earlier villages also located similarly. RSPB site at Bempton Cliffs because ledges provide breeding sites and easy access to the sea for fish. Long distance footpath takes advantage of the cliff tops.</p>	14	

Question		Expected Answer(s)	Max Mark	Additional Guidance
2	b	<p>Identify the two original areas and 'new' railway station. The development of the TH near the station suggests a move of CBD type land uses. Link of two areas in linear development along the A1038. Rail would have brought the first tourists so development along the coast in fairly typical 19th C way. Also evidence of grid iron pattern of 19th C residential streets. More recent developments towards the edges of B with many housing areas added to the N and NW as well as to SW of town. Development of industries on flatter land eg maltings (link to farming) works in 1766, hospital in 1667. Railway seems to being used as an edge to development to keep Sewerby village and Hall separate. Could include beach protection/groynes re development/importance of tourism. Modern hospital and large school on outskirts near 170670. Other school, leisure centre and library are examples. Other tourist related eg museum, model village, caravan site, long distance footpath.</p>	16	
			(30)	

Section B

Question		Expected Answer(s)	Max Mark	Additional Guidance																																																																
3	a	5																																																																		
		<p>July rainfall totals in Cambridge from 2001 to 2011</p> <table border="1"> <thead> <tr> <th>Year</th> <th>x</th> <th>\bar{x} to 2 decimal place</th> <th>x - \bar{x} to 2 decimal place</th> <th>$(x - \bar{x})^2$ to 2 decimal place</th> </tr> </thead> <tbody> <tr><td>2001</td><td>55.1</td><td>54.45</td><td>0.65</td><td>0.42</td></tr> <tr><td>2002</td><td>94.6</td><td>54.45</td><td>40.15</td><td>1612.02</td></tr> <tr><td>2003</td><td>66.8</td><td>54.45</td><td>12.35</td><td>152.52</td></tr> <tr><td>2004</td><td>59.3</td><td>54.45</td><td>4.85</td><td>23.52</td></tr> <tr><td>2005</td><td>43.7</td><td>54.45</td><td>-10.75</td><td>115.56</td></tr> <tr><td>2006</td><td>45.1</td><td>54.45</td><td>-9.35</td><td>87.42</td></tr> <tr><td>2007</td><td>62.1</td><td>54.45</td><td>7.65</td><td>58.52</td></tr> <tr><td>2008</td><td>52.1</td><td>54.45</td><td>-2.35</td><td>5.52</td></tr> <tr><td>2009</td><td>71.0</td><td>54.45</td><td>16.55</td><td>273.90</td></tr> <tr><td>2010</td><td>10.8</td><td>54.45</td><td>-43.65</td><td>1905.32</td></tr> <tr><td>2011</td><td>38.4</td><td>54.45</td><td>-16.05</td><td>257.60</td></tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>$\sum (x - \bar{x})^2$ 4492.32</td> </tr> </tbody> </table> <p>Mean $x = 599/11 = 54.45$</p> <p>Standard deviation (σ) = $\sqrt{\frac{\sum (x - \bar{x})^2}{n}}$</p> $= \sqrt{\frac{4492.32}{11}}$ $= \sqrt{408.39}$ $= 20.21$ <p>Standard deviation from the mean is 20.21mm</p>				Year	x	\bar{x} to 2 decimal place	x - \bar{x} to 2 decimal place	$(x - \bar{x})^2$ to 2 decimal place	2001	55.1	54.45	0.65	0.42	2002	94.6	54.45	40.15	1612.02	2003	66.8	54.45	12.35	152.52	2004	59.3	54.45	4.85	23.52	2005	43.7	54.45	-10.75	115.56	2006	45.1	54.45	-9.35	87.42	2007	62.1	54.45	7.65	58.52	2008	52.1	54.45	-2.35	5.52	2009	71.0	54.45	16.55	273.90	2010	10.8	54.45	-43.65	1905.32	2011	38.4	54.45	-16.05	257.60			
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3	b	The result shows that the July rainfall in Cambridge varies by 20.21mm from the mean.	2																																																																	
3	c	Rainfall is expected to lie between $\bar{x} \pm$ one standard deviation 54.45 ± 20.21 So 68.2% of the rainfall will lie between 34.24mm and 74.66mm	2																																																																	

Question		Expected Answer(s)	Max Mark	Additional Guidance
4	a	<ul style="list-style-type: none"> • Many settlements found along coast – harbours and ports for trade and ferry links eg Bergen • Mainly on west coast and south west where land is flatter and lower lying • Mainly in the south east, close to Oslo • Few in the north where temperatures will be cooler and distance from main built-up areas is greater • Few in central areas where land is higher and less productive 	5	
4	b	<ul style="list-style-type: none"> • Clearly depicts spatial variation/distribution of settlements in value or magnitude • Able to identify largest settlements by population • Can look for patterns and reasons for settlement locations • Ease of interpretation • Need for accuracy when calculating symbol size – other graphs may be more straightforward to draw • Some settlements may be 'lost' due to clustering 	5	
4	c	<ul style="list-style-type: none"> • Only 2% of land is built-up which links to the very low population density • 3% of land is agricultural land - a consequence of low population, lack of productive land and difficult climate in northern parts of Norway • Over 1/3 of land is forest - landscape and climate more suited to production of forestry • Much of Norway is upland and not suitable for development 	4	

Question		Expected Answer(s)	Max Mark	Additional Guidance
4	d	<ul style="list-style-type: none"> • Finnmark has less built-up land and so has fewer roads • Finnmark has a higher percentage of people living in urban areas (73-77%) compared with Hedmark where 55-65% live in urban areas. Fewer people living in remote locations so less need for roads • Hedmark has no coastline – in Finnmark boats may be used for transportation in and around more isolated communities (Gulf Stream keeps harbours ice free all year) • Hedmark borders the more populated area of Sweden – roads improve accessibility between the two countries • Hedmark has a bigger population (192,791) than Finnmark (73,787) • The colder climate and 2 months of darkness in winter in Finnmark may explain the lack of roads – link to population numbers • Norway invested in road network in Hedmark for 1994 Winter Olympics at Lillehammer • Important skiing destination – roads required to access the resorts • Give credit for understanding proportional use 	6	
			(20)	

Section C

Question			Expected Answer(s)	Max Mark	Additional Guidance
5	a		Will depend on technique chosen. Answer should show go beyond simple list or points.		
5	a	i	Land use mapping – decide on appropriate classification eg RICEPOTS and visit site with base map. Record land use using key (pencil abbreviations rather than applying colour in field). Ensure that newer builds are added to base map. May want to take photographs or field sketch some land uses. Could use Google maps but student would still need to visit site.	4	
5	a	ii	Noise pollution – use a decibel meter and record noise at different times of the day and week to get an accurate measurement of noise. Sound readings should be taken at regular intervals along transect eg every 20 metres. Be aware of additional noise such as road or building works which may affect results and note this down in fieldwork notebook.		
5	a	iii	Environmental quality – produce appropriate EQ survey with a range of criteria. Select areas along the transect to carry out EQS (may also want to ask for other people to complete to avoid subjectivity). Take photographs to back up EQS.		
5	a	iv	Land value – collect valuation figures from estate agents (Internet, newspaper, shop premises). This will generally give value of residential properties. Find value for commercial properties. Contact Local Council to find out Council Tax banding.		

Question			Expected Answer(s)	Max Mark	Additional Guidance
5	a		(cont)		
5	a	v	Building height – on a base map record the number of storeys of each building along transect. Take photographs to show variations in height		
5	a	vi	Traffic flow – choose appropriate areas along transect to carry out traffic surveys. On recording sheet tally the different number of vehicles that pass by in both directions over a 10 minute period. Do this several times – different days and times of the week to get an accurate representation. Could also record speed of traffic at set points along the transect (speed = distance ÷ time) and on a base map mark on traffic restrictions.		

Question		Expected Answer(s)	Max Mark	Additional Guidance
5	b	<p>As above – will depend on technique and answer should go beyond simple list or points. Different methodologies should be described for each field work techniques chosen.</p> <p>Land use mapping – produce a coloured version of map with an appropriate key. Compare land uses with position along transect to see for example if residential is found further away from CBD. Calculate the percentage of different land uses along transect and show on an appropriate graph eg divided bar graph or pie chart. Annotate photographs and/or field sketches and they could be added to the land use map.</p> <p>Noise pollution – plot noise levels using a line graph to see if there is a change along the transect. Use a Spearman’s Rank to test whether noise levels decrease with distance from the CBD. Produce a choropleth map of transect to show variations in noise levels.</p> <p>Environmental quality – complete a bipolar analysis and/or draw a radar graph to allow comparisons to be made along transect. Annotate photographs to compare differences along the transect.</p> <p>Land value – colour code base map to indicate changing land values. Produce a choropleth map to show variations in land value. Use a Spearman’s Rank test to test whether land value decreases with distance from the CBD.</p> <p>Building height – colour code base map to show variations in height. Produce a 3D diagram to show building height</p> <p>Traffic flow – draw bar graph or pie chart to show vehicle numbers. Draw flow map to show traffic volume along transect. Calculate speed and show results on a line graph</p>	4	

Question			Expected Answer(s)	Max Mark	Additional Guidance
5	c		Common problems may arise such as the weather and human error. Will need to offer up an explanation for the full 2 marks. Accept other relevant problems that could occur.	2 (10)	

[END OF MARKING INSTRUCTIONS]