Eduqas GCSE Geography Component 1 – additional sample questions

The following questions were used in Eduqas CPD meetings (Autumn 2017) to help explain how GCSE Geography question papers are designed. Each item targets a single assessment objective. The AO weightings for these items do not match those used in the SAMs exactly but the emphasis is similar. They are suitable for use in schools teaching Eduqas Geography A and Geography B.

1. (a) Study the photograph below.

   The coastline at Llantwit Major, South Wales

   (i) What is the landform at A? Tick (✓) one choice below.  
   
<table>
<thead>
<tr>
<th>Tick (✓) one</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint</td>
</tr>
<tr>
<td>Arch</td>
</tr>
<tr>
<td>Cave</td>
</tr>
</tbody>
</table>
   
   [1] (AO1)

   (ii) Describe the process of abrasion.  
   
   [3] (AO1)

   (iii) Explain why geology affects the rate of coastal erosion.  
   
   [6] (AO2)
b) In December 2015, parts of Penrith and Carlisle were flooded. Study the map below.

Map 1 - The River Eden, Cumbria

Circle the correct answers in this description of the course of the River Eden. [3] (AO4)
The River Eden flows towards the north / north northwest / south southeast. The source of the River Eden is 20 / 30 / 40 km south-east of Penrith. The mouth of the river is in the Lake District / Carlisle / the Solway Firth.

c) Study the graph below.

River level in the River Eden in Carlisle, Cumbria (July 2015 – June 2016)

(i) Compare the river levels between 1 Jul 2015 and 1 Nov 2015 with the river levels between 1 Nov 2015 and 1 Feb 2016. [6] (AO4)

(ii) Describe the causes of one flood you have studied. [4] (AO1)
(d) Study the map and fact file below. The map shows rainfall totals (mm) for a 48 hour period during December 2015 over Cumbria.

### Fact file
- Penrith has an average of 215mm of rain for the whole month of December.
- Carlisle suffered severe floods in January 2005 and December 2015.
- Over 2,000 homes were damaged in the 2015 flood.
- Flood defences in Carlisle were improved between 2005 and 2015. They should protect Carlisle from the sort of severe flood that occurs, on average, every 100 years.

### Map 2 - Rainfall over Cumbria over two days (December 2015)

(i) Calculate the median value for the rainfall figures on Map 2. Show your working in the space below.  

(ii) To what extent is it impossible to prevent floods in Carlisle?

Use evidence from the graph, fact box and Map 2.
MARK SCHEME for additional Component 1 question (Nov 2017)

Instructions for examiners of GCSE Geography when applying the marking scheme

1 Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks.

Marks must not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

GCSE Geography marking schemes are presented in a common format as shown below:

This box contains the sub-question

The columns to the right indicate the assessment objective(s) targeted by the question and its mark tariff.

3 (a) (i) Describe the location of the island of Lefkada.

<table>
<thead>
<tr>
<th>AO1</th>
<th>AO2.1</th>
<th>AO2.2</th>
<th>AO3</th>
<th>AO4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

Credit two simple statements based on map evidence.
Credit accurate use of compass points max 1
Credit accurate use of scale line max 1

In western Greece (1) In Ionian Sea (1) north of Cephalonia (1) 275km (+/-10) from Athens (1) 280km (+/-10) from Thessaloniki (1)

This box contains the rationale i.e. it explains the principles that must be applied when marking each sub-question. The examiner must apply this rationale when applying the marking scheme to the response.

This box contains the candidates' expected responses for point-based marking. For some sub-questions, those with a closed question, this box will indicate the only response that is acceptable. For more open ended sub-questions this box will illustrate a number of likely responses that are credit worthy. It may be that this list will be extended at the examiner's conference after actual scripts have been read. For banded mark schemes this box contains indicative content. For further details see below under Banded mark schemes Stage 2.
2 Tick marking

Low tariff questions should be marked using a points-based system. Each credit worthy response should be ticked in red pen (or using the equivalent online tool. The number of ticks must equal the mark awarded for the sub-question.

The mark scheme should be applied precisely using the expected responses (indicative content) in the mark scheme as a guide to the responses that are acceptable.

**Do not use crosses** to indicate answers that are incorrect.

If the candidate has not attempted the question then the examiner should strike through the available dotted lines with a diagonal line.

3 Banded mark schemes

Banded mark schemes are divided so that each band has a relevant descriptor. The descriptor for the band provides a description of the performance level for that band. Each band contains marks. Examiners should first read and annotate a learner’s answer to pick out the evidence that is being assessed in that question.

**Do not use ticks** on the candidate’s response.

Once the annotation is complete, the mark scheme can be applied. This is done as a two stage process, as shown below:

**Stage 1 – Deciding on the band**

When deciding on a band, the answer should be viewed holistically. Beginning at the lowest band, examiners should look at the learner’s answer and check whether it matches the descriptor for that band. Examiners should look at the descriptor for that band and see if it matches the qualities shown in the learner’s answer. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a ‘best fit’ approach should be adopted to decide on the band and then the learner’s response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

**Stage 2 – Deciding on the mark**

Once the band has been decided, examiners can then assign a mark. During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark
Examiners should mark the examples and compare their marks with those of the Principal Examiner. When marking, examiners can use these examples to decide whether a learner’s response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

4 Indicative content

Expected responses (indicative content) are provided for point marked and banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited.

In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band.
1. (a) (i) What is the landform at A? Tick (√) **one** choice below.

<table>
<thead>
<tr>
<th>Credit this response only.</th>
<th>Cave (1)</th>
<th>AO1</th>
<th>AO2</th>
<th>AO3</th>
<th>AO4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

1. (a) (ii) Describe the process of abrasion.

Credit each valid statement or the accurate elaboration of any statement to a maximum of three marks.

<table>
<thead>
<tr>
<th>Sediment/pebbles/sand carried in the water (1)</th>
<th>erode / scour / wear away the coastline (1) when they are thrown forward / moved by waves (1)</th>
<th>AO1</th>
<th>AO2</th>
<th>AO3</th>
<th>AO4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>
1. (a) (iii) Explain why geology affects the rate of coastal erosion.

Responses will explain the reasons for different rates of erosion on the coastline. Students may develop some or all of the following reasons – band 3 is dependent on elaboration and responses that directly deal with rate. There is no credit for 1.1 so place examples are not required.

Differential rates of erosion occur because some rock types are more resistant to erosion (harder) than others.

Unconsolidated rocks erode rapidly because their parts are not bonded together strongly. They are often relatively young rocks so have not undergone much compression. Igneous and metamorphic rocks tend to be more resistant to erosion because their parts are welded together so water cannot take advantage of any lines of weakness within the rock.

Rocks that have a lot of cracks/fissures are more susceptible to erosion than massive, unfractured rocks. This is because fractured rocks are susceptible to erosion by hydraulic action when air and water are forced into the cracks. They are also susceptible to chemical solution because they have a much greater exposed surface area.

(b) Describe the course of the River Eden.

Credit each of these responses only.

- north northwest (1)
- 30 (1)
- the Solway Firth (1)
(c) (i) Compare the river levels between 1 Jul 2015 and 1 Nov 2015 with the river levels between 1 Nov 2015 and 1 Feb 2016.

Use a banded mark scheme. Work upwards from the lowest band.

<table>
<thead>
<tr>
<th>Band</th>
<th>Mark</th>
<th>Band descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5-6</td>
<td>Elaborated statements use graph evidence accurately to make direct comparisons between the two periods. Meaning is unambiguous. The response has clear purpose, is fluent and logically structured.</td>
</tr>
<tr>
<td>2</td>
<td>3-4</td>
<td>Valid statements use graph evidence to make comparisons between the two periods. Meaning is clear. The response has purpose, is organised and well structured.</td>
</tr>
<tr>
<td>1</td>
<td>1-2</td>
<td>Valid statements use some graph evidence. Meaning is clear. Statements are linked by a basic structure.</td>
</tr>
</tbody>
</table>

Between 1 Jul 2015 and 1 Nov 2015 the river level is usually below 1 metre whereas between 1 Nov 2015 and 1 Feb 2016 the river level is much higher and always above 1 metre. In the first period the level has a range between about 0.2m and 2m whereas in the second period the range is much greater, being between 1m and 7m. In both periods the river changes level rapidly with steep rising limbs and steep falling limbs. In the first period there are three small peaks whereas in the second period the river rises rapidly above 3.5m a total of seven times. Overall, the river levels vary little during the first period but in the second period the river levels fluctuate dramatically.

(c) (ii) Describe the causes of one flood you have studied.

Credit each valid statement with one mark or each valid elaboration with one mark.
Allow a response that focuses entirely on either physical or human causes.
Credit causes only. The location of the flood is not required. Do not credit the name of the place / date of the event.

Details will depend on the event that is described.
Heavy rainfall (1) quantified (1) over a quantified length of time (1).
Snowmelt (1) over frozen ground (1) which is impermeable (1).
Catchment area was deforested (1) which reduced interception (1) and increased run-off (1).
Catchment was largely urban (1) which reduced infiltration (1) because ground is impermeable (1) and storm drains could not cope / blocked (1).

(d) (i) Calculate the median value for the rainfall figures on Map 2.

Credit the correct answer for one mark.
Credit the two step calculation with one mark for each correct step. Credit correct method of working even if the final answer is incorrect.

Answer: 143 (1)
Working: 
\[
98 + 188 = 286/2 = 143
\]
(d) (ii) To what extent is it impossible to prevent floods in Carlisle?

<table>
<thead>
<tr>
<th>Band</th>
<th>Mark</th>
<th>Descriptor</th>
</tr>
</thead>
</table>
| 4    | 7-8  | Exceptional application of knowledge and understanding:  
|      |      | - Comprehensive chains of reasoning provide sophisticated analysis  
|      |      | - Balanced and coherent appraisal draws together wider geographical understanding to justify decision(s). |
| 3    | 5-6  | Thorough application of knowledge and understanding:  
|      |      | - Chains of reasoning provide elaborated analysis  
|      |      | - Balanced appraisal draws together wider geographical understanding to support decision(s). |
| 2    | 3-4  | Valid application of knowledge and understanding:  
|      |      | - Some connections provide valid but limited analysis  
|      |      | - Limited appraisal uses wider geographical understanding to support decision(s). |
| 1    | 1-2  | Some basic application of knowledge and understanding:  
|      |      | - Basic levels of meaning ascribed to the information/issue  
|      |      | - Limited and weak appraisal uses some wider geographical understanding to support decision(s). |
| 0    |      | Award zero marks if the answer is incorrect or wholly irrelevant. |

Use the descriptors below, working upwards from the lowest band.

Responses must apply their knowledge and understanding to analyse the resources and reach a judgement. Better responses should make direct reference to evidence in the map or graph and fact file.

Responses are likely to present an argument that it is impossible to prevent the most severe flood events. The counter-argument may be that (a) such events are very infrequent and (b) that flood defences in Carlisle are capable of preventing most floods.

A valid response would be to argue that management of the upper drainage basin (applying understanding of soft engineering) is a more effective and sustainable way of preventing future floods than hard engineering in Carlisle.

Evidence from the resources includes:

- Rainfall in Carlisle was relatively low compared to in the Lake District, proving that drainage basin management is required.
- The rainfall totals in the Lake District were exceptional – many places had more rainfall in two days than they usually get in the whole month. Flooding from this exceptional type of event is difficult to prevent as the cost of building very high flood embankments (that are rarely needed) is too high.
- The hydrograph shows that peak discharge rose several times during winter 2015-16 to levels of 6-7 metres and the rising limbs were very steep so run-off from the drainage basin is rapid suggesting that the rocks are impermeable and unable to store flood water.