



Pearson
Edexcel

Examiners' Report

Principal Examiner Feedback

Pearson Edexcel GCSE

In Geography A (1GA0)

Paper 01: The Physical Environment

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Introduction

This was the third series of the Pearson Edexcel GCSE (9-1) Geography A specification. This Examiner's Report is intended to provide an insight into performance on Paper 1 – The Physical Environment component – in particular, analysing the majority of questions in terms of what went well and where common mistakes and underperformance were evident. It should be noted, however, that the entry for this series was very small and the candidates may not have been representative of a 'normal' cohort.

The structure of the paper remains the same and is outlined below; please note that this (and future) question papers are based upon Issue 3 of the specification.

This paper consists of three 30-mark sections. Of the 94 marks, up to 4 marks are awarded for spelling, punctuation, grammar and use of specialist terminology. The exam includes multiple-choice questions, short open, open response, calculations and 8-mark extended writing questions. The command words which are used in this paper are defined on page 43 of the specification. Each of the questions is mapped to one or more of the Assessment Objectives (AOs).

In Section A (the changing landscapes of the UK), candidates are required to answer all the questions in Question 1. They are also required to have studied two optional sub-topics from a choice of coastal landscapes and processes, river landscapes and processes and glacial upland landscapes and processes. Candidates are required to answer two questions from Questions 2, 3 and 4. In Section B (weather hazards and climate change), candidates are required to answer all the questions. Section C (ecosystems, biodiversity and management), has a mark tariff of 34, including 4 marks for spelling, punctuation, grammar and use of specialist terminology. In this section, candidates are required to answer all the questions.

In general, the assessment of application and interpretation (AO3) and the addressing of the 'evaluate' command word once again seem to have proven challenging for a significant proportion of candidates.

Question 1 (a) (i)

Most candidates were able to state an example of a sedimentary rock although a small proportion of candidates gave examples of igneous rocks (eg granite) or metamorphic rocks (eg slate). While most candidates who gave the correct answer listed one of the rock types from the specification, other correct examples of sedimentary rocks were given which were also awarded a mark.

Question 1 (b)

This question required candidates to interpret the relief of the landscape within the highlighted square using OS map skills. Candidates could achieve two marks either by making two separate points about the relief (eg 'There are hills (1) and a valley (1)') or by making a descriptive point which was then developed (eg 'The relief of the area is steep (1) which is shown by the contours being close together (1)'). It was noticeable that few candidates actually referenced contours directly and those that did often referred to the 'lines showing height' or similar. It should also be noted that the ability to recognise physical and human geography features on 1: 25000 and 1: 50000 OS maps is one of the integrated skills listed below the subject content on page 8 of the specification.

Question 1 (c)

This question required candidates to show understanding of the term 'landscape'. This question is linked to specification point 1.2b and teachers should ensure that their students are familiar with the key geographical terms, such as landscape, which are listed in the specification. While some candidates who were awarded 2 marks focused on the impact of forestry on the look of the landscape, others focused on its impact on physical process which would then affect the landscape – either approach was acceptable as long as there was a link to the way in which forestry affects the landscape.

Question 2 (b)

Most candidates were able to state a type of weathering process with a range of processes given including some, such as carbonation, which are not on the specification. These were awarded a mark as long as they were a valid weathering process.

Question 2 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a disadvantage of using groynes to protect the coast and then to develop their answer through explanation. This question was answered well by most candidates although their answers did take contrasting approaches. While some candidates focused on physical processes (eg the role of a groyne in interfering with the process of longshore drift), other candidates focused on human activity (eg reducing tourism due to the groynes looking unsightly). Some candidates were only awarded 1 mark because they wrote 2 or 3 separate disadvantages but did not develop any of these points to achieve the second mark.

Question 2 (d)

The command word in this 8 mark question was 'examine' which required candidates to break something down into its individual components/processes, say how they individually contribute to the question's theme/topic and how the components and processes interrelate.

While the mark scheme identifies the indicative content for this question, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' level to the response and then decide where, within the level, the response falls. The level descriptors are the same for all 'examine' questions within this paper (Q02d, Q03d and Q04d), and also across all the papers in both GCSE geography specifications. It is therefore important that centres and candidates become familiar with them and how they are applied.

In the case of these questions, the assessment objectives (AOs) which are being examined are AO3 (4 marks) and AO4 (4 marks). To secure the AO4 marks, candidates are required to use geographical skills to extract information from the figure in the resource booklet which will help them answer the question.

In the case of Q02 (d) the AO4 elements could have included details on the pattern of bays and headlands and its relationship to the pattern of geology; the width and depth of the bays; the protrusion of the headlands and the direction of the prevailing wind. Candidates could have used map skills (eg using the scale to calculate distance or using the compass to measure direction) to support their description of these elements. The key to securing the AO4 marks is to make sure that evidence is included from the resources which are in front of the candidate. They need to write about what they can see and infer from the resource, rather than simply writing about what they have learnt in class.

In relation to the AO3 marks, the candidates were required to explain the role of geology and physical processes in the formation of the coastal landforms which they had described. Most candidates who had described some features of the coast were able to explain their formation to at least some extent. While they were usually able to refer to the role of 'erosion', these answers would have been improved still further by developing the sequence of physical process and by linking their explanation to specific erosional processes.

Question 3 (b)

Most candidates were able to state a type of erosion process with a range of examples being given. A small number of candidates stated weathering or mass movement processes which were not awarded a mark.

Question 3 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a way that heavy rainfall can cause flooding in river landscapes and then to develop their answer through explanation. Candidates generally struggled with this question more than the equivalent item in Q02. The answers given by some candidates were quite poorly expressed with a lack of key vocabulary such as 'channel' and 'banks'. Some answers, however, did show a good understanding of key geomorphological processes including the impact of heavy rainfall on the infiltration capacity of soil and increased surface runoff.

Question 3 (d)

In Q03(d) most candidates focused on the textboxes below the map. While these did provide useful information to help answer the question, the tendency for some candidates was to simply copy the text and not develop it any further or to link it to evidence from the map. While some credit was given for selecting relevant information, these answers were often very limited. The map provided plenty of opportunities to show geographical skills. These could have included measuring the width or length of the washlands; providing the direction of flow of the stream and river; locating the key areas protected by the flood defences using compass direction and measuring distance.

In relation to the AO3 marks, the candidates were required to explain the advantages and disadvantages of the flood defences shown on the map. While some candidates were able to explain how washlands and flood plain zoning work, it was often the case that answers simply stated that washlands protect buildings without an explanation of how this defence mechanism actually works – and how this links to their advantages and disadvantages. Adding details such as these would have been useful development points for the information selected from the textboxes.

Question 4 (b)

The number of candidates answering Question 4 overall was very small and therefore only a few responses were seen. It was pleasing to see, however, that almost all of these were able to state a correct mass movement process. As with the equivalent item on Question 2, some candidates stated processes which are not on the specification but were awarded a mark because their answers were correct (eg soil creep).

Question 4 (c)

This 'explain' question had 2 marks available. Candidates were required to identify a way that glaciers transport material and then to develop their answer through explanation. As mentioned above, only a very small number of these responses were seen. It was clear from these responses, however, that candidates did not have much or any knowledge of the location of the material within or on the ice or details of the processes involved.

Question 4 (d)

This question also provided candidates with information in textboxes as well as a GIS image. The ability to use GIS to investigate the impact of human intervention on glaciated upland landscapes is one of the integrated skills (16) linked to this section of the specification. As with Q03d, some candidates simply copied the information from the textboxes and did not develop it further. While credit was given for this where it was sorted into advantages and disadvantages, many of these answers did not really go much beyond copying and did not develop this information in way which added much to their answers. As mentioned above, only a very small number of answers to Q04 were seen overall. Within these answers few candidates actually made much use of the GIS image although some did improve their answer by referring to elements such as the evidence of footpath erosion; the location of main roads and the direction that the footpaths and roads follow.

In relation to the AO3 marks, candidates were required to explain the advantages and disadvantages of human activities in the glaciated upland landscape shown in the figure. As mentioned above, some candidates did not go far beyond copying the information from the textboxes although others were able to make connections between the information they gathered from the figure, using their geographical skills, and the development of their points.

Question 5 (a) (ii)

In this question, candidates were asked to calculate the range of temperatures shown on a line graph. This question required mathematical workings to be shown and 1 mark was given for the correct answer. Many candidates gave the correct answer which was pleasing to see. In the case of candidates who used the correct method to calculate the range (highest figure - lowest figure) but had misread the graph, 1 mark was given for the correct workings but the second mark for the correct answer was not awarded (as long as the highest and lowest temperatures used by the candidate were within the range shown on the graph).

Question 5 (b)

In this question, candidates were required to state one piece of evidence for natural climate change. It should be noted that some candidates gave 'temperature rise' or 'global warming' as their answer. These were not awarded a mark as they do not refer to the evidence for the change. Where they had written 'written records of temperature rise' this was given a mark.

Question 5 (c)

This 3 mark 'explain' question required candidates to identify one negative effect that climate change is having on the environment. They were then required to develop their answer to explain this effect through two linked points. While many candidates were able to identify a relevant effect, some candidates focused on the effects on people rather than the environment. This question was linked to specification point 2.3b which requires centres to teach candidates about the effects of climate change on the environment and on people. Some candidates also listed two or three effects but did not develop any of these points and were therefore awarded only 1 mark. The use of connectives such as 'which means that...' and 'therefore...' are useful in connecting the initial effect to its development through explanation.

Question 6 (a) (ii)

This 2 mark 'explain' question required candidates to identify one way in which ocean currents redistribute heat energy across the earth. They were then required to develop their answer through a further linked point. Most candidates gained at least one mark on this question, identifying that ocean currents transport warm water. To secure the second mark, a development point in terms of moving towards areas with colder water was required.

Question 6b (i)

This 4 mark 'explain' question required candidates to identify one way in which humans can cause drought. They were then required to develop their answer through three further linked points. As stated in the mark scheme, in the context of this specification drought refers to an event of prolonged shortage in water supply. The causes of drought, as listed in specification point 2.7b, are linked to meteorological, hydrological and human causes. It should be noted that there are links between each of these causes with human activity, for instance, impacting on meteorological factors. As with the other explanation questions on this paper, the use of connectives such as 'this means that...' and 'which leads to...' will help candidates to develop their 'chain of explanation'. There were some examples of well thought out answers which clearly made these links and were awarded full marks.

Question 6 (b) (ii)

This 2 mark 'explain' question required candidates to identify one way in which the government of a country can respond to drought. They were then required to develop their answer through a further linked point. Some candidates provided answers which were too generalised such as 'governments give water'. This sort of response required candidates to be more specific such as 'governments provide emergency water supplies' or 'governments provide bottled water'.

Question 6 (c) (i)

In this question, candidates were required to calculate the number of major hurricanes affecting the USA in 2016. To do this, they needed to subtract the number of minor hurricanes from the total number of hurricanes. This question only had a 1 mark tariff and candidates were not required to show their working.

Question 6c (ii)

Although some candidates were able to state one condition of the ocean required for a hurricane to form, many provided answers which were not specific enough to gain a mark. For example, many responses stated 'warm water' but did not refer to the actual temperature required which is fundamental to the formation of hurricanes.

Question 6 (c) (iii)

Q06 (c) (iii) directed the candidates to information contained within a resource. The command word in this question was 'suggest'. As this was a four-mark question, there were two marks available for each developed impact; with one mark for identifying an impact from the resource (AO3), and a further mark for development through explanation of this impact (AO2). The impacts needed to be evident from the figure. In cases where candidates identified 3 or 4 impacts which were evident from the resource but did not develop any of these, a maximum of 2 marks was awarded (1 mark for each impact).

Question 6 (d)

The command word of this 8 mark question was 'evaluate'. This is used for extended writing questions in which candidates must appraise things and come to a definitive conclusion.

While the mark scheme identifies the indicative content, this is not an exhaustive list and candidates were awarded marks for relevant understanding, interpretation and skills which were not listed. Ultimately, when deciding on the final mark, examiners use the level descriptors to allocate a 'best fit' to the response and then decide where the response falls within the level. The level descriptors are the same for all 'evaluate' questions within this paper and across all the papers in both GCSE Geography specifications.

In the case of 'evaluate' questions, the assessment objectives which are being examined are AO2 (4 marks) and AO3 (4 marks). To secure the AO2 marks, in the context of this question, candidates were required to describe and explain the impacts of hurricanes in developed and emerging or developing countries. There was no requirement for candidates to focus on a particular location but some answers made good use of the named countries which they were

required to study (see specification point 2.8b). In some other cases, however, while there was a good range of located knowledge this was largely descriptive with only limited explanation and little or no attempt to explain or appraise the differences in impacts.

In relation to the AO3 marks, the command word 'evaluate' requires candidates to write a balanced argument which addresses the question. It also requires candidates to write a logical answer where the argument presented makes sense and is supported by the evidence presented. Finally, while not explicitly requiring a final concluding paragraph, the command word 'evaluate' does require candidates to ultimately provide a substantiated judgement/conclusion. There were some good answers which reached level 3 where candidates had a final, concluding paragraph but had also made evaluative comments through their responses (usually at the end of each paragraph).

Question 7 (a) (i)

Q07a (i) was answered poorly. The term 'biosphere' is listed in specification point 3.2 and it is important that candidates are familiar with all the geographical terms found in this document. This is to ensure that they are able to answer questions like this one successfully but also to help develop their geographical knowledge and understanding more broadly. Terms such as 'biosphere' may also be used in higher tariff questions with different command words and candidates need to be able to recall their definitions in order to understand how to answer these questions as well. While some candidates had some idea that the term 'biosphere' was linked to living organisms they were usually unable to provide an accurate definition.

Question 7 (a) (ii)

In this question, candidates were required to calculate the percentage of the total land area shown in the figure which is covered by tropical rainforests. There were two marks available for this question and candidates were required to show their working. If the candidate gave the correct answer but did not show their working a maximum of 1 mark was awarded. One mark was also awarded if the candidate gave an incorrect answer but showed correct working. This was the case, for example, where the candidate had gone through the right steps in their calculation but had calculated the wrong answer because they had misread the question (eg calculating a percentage for temperate grassland rather than temperate forest).

Question 7b (i)

In this question, candidates were required to plot the figures for Scotland and Wales. The majority of candidates achieved both marks although a small number did not plot the data accurately. For example, several candidates plotted the figure for Scotland on the 20 000 line. Candidates also lost marks where they did not use a ruler to draw the top of their bars which not plotted with sufficient accuracy. As can be seen in the example in the mark scheme, candidates were not required to shade the bars in order to be awarded 2 marks.

Question 7 (b) (ii)

Most candidates were awarded 1 mark for this question as they showed accurate knowledge recall. Where a candidate had written 'deciduous woodland' or similar this was awarded a mark as they had included 'woodland' in their answer.

Question 7 (c) (i)

Q07 (c) (i) directed the candidates to information contained within a resource. The command word in this question was 'suggest'. They were required to use the resource to identify a reason why this area of tropical rainforest was under threat for one mark (AO3). A further two marks were then available for development through explanation of this reason (AO2). Almost all candidates were able to gain at least one mark by identifying that the area shown in the figure was being deforested. Most candidates were then able to gain a further development mark by explaining why the clearance of the forest might be taking place (eg for farming or mining) with a some achieving a third mark by making a further link (eg farming is being developed to grow more food).

Question 7 (c) (ii)

In this question, candidates were required to calculate the percentage decrease in forest cover in the tropical rainforest in Brazil between 2000 and 2015. It was a 2 mark question with 1 mark being awarded for the correct answer and a second mark for showing working. Some candidates lost a mark because they did not follow the instruction to give the answer to one decimal place. In terms of the working shown, most candidates who were awarded 2 marks gave the working as shown in the mark scheme. However, a small number of candidates adopted an equally valid approach as shown below:

$3321065 \div 3505932 = 0.947$
$1.00 - 0.947 = 0.053$
$0.053 \times 100 = 5.3\%$

Question 7 (c) (iii)

This was the second four mark 'suggest' question on the paper. As with Q06 (c) (iii), it directed the candidates to information contained within a resource. In this case there was both a photograph and information in a textbox and candidates could use both of these resources to help answer the question. As this was a four-mark question, there were two marks available for each way that they explained; with one mark for identifying the way from the resource

(AO3), and a further mark for development through explanation of this impact (AO2). The way needed to be evident from the figure rather than simply what the candidate had learnt during their studies. In cases where candidates identified 3 or 4 impacts which were evident from the resource but did not develop any of these, a maximum of 2 marks was awarded (1 mark for each impact). It should be noted that with all these 'suggest' questions candidates are directed clearly to use evidence from the figure.

Question 7 (d) (i)

As with the Q07 (c) (iii), candidates were again required to interpret the resource (AO3) in order to answer this question. Having identified the adaptation they were then required to develop each of their points through explanation (AO2). Most candidates were able to identify two adaptations and secure at least 2 marks. The development of the initial point was generally done better on this question than on the other 'suggest' questions on the paper with candidates able to explain how the feature they had identified was an adaptation to the environment.

Question 7d (ii)

This 3 mark 'explain' question required candidates to identify one way in which climate change may be a threat to deciduous woodlands ecosystems. They were then required to develop their answer through two further linked points. Simply stating that 'climate change is...' was insufficient to gain a mark and candidates needed to be more specific about the nature of climate change (eg 'rising temperatures' or 'lower rainfall').

Question 7 (e)

As in the previous series, the final question on the paper proved challenging for many candidates. This is, in part, due to the use of the command word 'evaluate' but also the fact that this final question will always involve linking at least two parts of the topic C content. In this case, it linked topics 3.1a and 3.1b. The proportion of candidates not answering this question was lower than in previous series although there were still some candidates who did not attempt it.

In relation to the question itself, for the AO2 marks candidates were expected to identify and explain a range of factors affecting the distribution of the different large-scale ecosystems. It was expected that candidates would start by explaining the role of climate in this distribution before moving on to other factors, such as altitude and human impact. However, a significant proportion of candidates ignored the role of climate as such, focusing instead on climate change linked to human impact. While this is a relevant factor, and helps to explain the changing distribution over time, candidates focusing on this factor tended not to provide clear links to the distribution. Many of these answers were centred on the idea that climate change

is 'destroying' ecosystems and did not really engage with their impact on the latitudinal distribution.

While some of the answers which were seen did include 3 or 4 factors with some effective explanation, others simply focused on 1 or 2 factors. These answers often lacked development and resulted in an unbalanced answer which was rooted in the top of level 1 or low level 2. To reach a higher level, they needed to consider a wider range of factors and to actually explain how the factors affect the distribution.

In relation to the AO3 marks, the command word 'evaluate' required candidates to write a balanced argument which addressed the question. It also required candidates to write a logical answer where the argument presented makes sense and is supported by the evidence presented. Finally, the command word 'evaluate' required candidates to come to a definitive conclusion. In the context of this question it could have involved identifying whether candidates believed that climate was the most important factor or not (and why they believed this to be the case). While it was likely that the concluding judgement would come at the end of the response, evaluative judgements made elsewhere in the response (eg at the end of each paragraph) were credited.

This question also had 4 marks allocated for the assessment of spelling, punctuation, grammar and use of specialist terminology. Obviously, candidates were not awarded any of these marks if they did not answer the question or if their response did not achieve any marks for the 8 mark part. The use of paragraphs was one element which contributed to this mark and should be encouraged as it helps to structure candidates' responses.

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- Ensure that you are familiar with the command words used in this specification. For example, the difference between what is expected for 'examine' and 'evaluate'.
- The extended writing responses often require candidates to include knowledge from the case studies and located examples listed in the specification. It is important that candidates use this information to answer the question which has been set rather than to simply write out everything they have learnt about a place. The material which they have learnt should be used to support their explanation and argument.
- When answering the 8 mark 'evaluate' questions, ensure that candidates understand that they are required to measure the value of something and, ultimately, provide a substantiated judgement/ conclusion.
- In questions where there is reference to a resource, it is important that evidence from the resource is used to answer the question, as these are targeting AO3. There will be specific AO3 or AO4 marks available for the interpretation of these resources. Making clear reference to the resource in their responses (eg 'Figure 2a shows that. . ') may help ensure that the candidate does use this evidence.
- When plotting graphs it is important that this is done accurately. Candidates should use a ruler when, for example, completing a bar chart rather than drawing freehand.
- In questions where they are asked to develop a single reason, it is important to ensure that the appropriate number of links in the explanatory chain are developed. The number of marks should be used as a guide to this.
- Centres should spend time reviewing the specimen and live papers to ensure that they are familiar with the key vocabulary which is being used in the questions - both in terms of key geographical terms (eg biosphere) and words which provide the 'slant' to the question (eg adaptation, formation, factor).
- It is important that centres incorporate the teaching of the 'integrated skills' into their delivery. These can be found below the subject content in each section of the specification.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<http://www.edexcel.com/iwantto/Pages/grade-boundaries.aspx>

