Examiners' Report

Principal Examiner Feedback

January 2024

Pearson Edexcel International Advanced Subsidiary Level in Geography (WGE02)
Paper 01: Geographical Investigations

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January 2024
Publications Code WGE02_01_2401_ER

Introduction

This report is about the January 2024 series for assessment of WGE02: Geographical Investigations. There were about 170 entries.

Most candidates completed all questions, but some wrote overlong answers for 1- or 2-mark questions. Some wrote answers for 3c and 3d which were about the wrong part of the route to enquiry, so few or no marks were scored for lengthy answers.
Overall, Q5 (Investigating Urban Problems, Planning and Regeneration) was more popular than Q4 (Investigating Crowded Coasts) for this series.

Reports on Individual Questions

1ai
Most candidates were able to identify the two landforms as a cliff and wave cut notch correctly. Headland and cave were acceptable alternatives.
Some candidates perhaps did not know the term 'landform' as they tried to describe the location on the coastline, for example foreshore or backshore.

1aii
The most commonly seen correct answer was an explanation of freeze-thaw weathering. Biological weathering, salt-crystallization and chemical weathering were also explained successfully.
To score 2 marks, candidate needed to explain a process and make a link to the effect it has on the coast, for example 'salt crystallization - salt water enters the cracks of the cliff and evaporates leaving salt crystals (1) which widen the cracks and bits of rock fall off. (1)'.

Answers that did not score marks included a description of weathering in general rather than focussing on **one** process, as asked for in the question. Many explained marine erosion processes such as hydraulic action or abrasion.

1b
The two 8 mark essays are designed to be broad and allow for candidates to examine the themes and bring their own interpretations. Questions are likely to link two themes from the specification, here physical processes and coastal management. As the command word was 'examine', candidates were required to assess the ways in which these two themes interact and specifically how decision making is affected by an understanding of the processes acting on a coastline.

Candidates wrote about a wide range of physical processes including the action of waves, marine processes of erosion and deposition, sub-aerial processes of weathering and mass movement. Less commonly seen but also relevant were meteorological processes and geological processes, and even tectonic movement.

The second theme of the question were the decisions about the management of coastlines, and here candidates could discuss the approaches used (most seen was hard engineering methods, followed by soft engineering methods) or else consider the ways and reasons

management decisions were made by those with economic or emotional involvement and responsibility.

The best answers were able to examine the ways knowledge and understanding of the coastal processes at a specific coast influenced the decisions made by stakeholders. Some also went on to explain that other factors were relevant to coastal decision making as well, such as the value of the land, geology, height above sea level and population density.

Many wrote about high energy coastlines where erosion dominates, and how management methods including sea walls and riprap were selected to protect a coastline where land was of high value. This was contrasted with places where constructive waves built up a beach, and where sand dune management or beach replenishment might be possible. Costs were compared, and some used cost-benefit analysis here effectively.

Some used the sediment cell concept to consider how management decisions made in one location have impacts further down drift, and a few exemplified this with named examples. Overall there was limited use of case study examples. This is one route to a higher mark, as this could provide the 'detailed and fully developed' material needed for high level 2 or level 3. Candidates should be encouraged to use examples to support their ideas as to how an understanding of physical processes affected decision making in these locations.

Another route to level 3 was to examine how far any of these ideas about processes help decision makers, as other factors need to be taken into consideration as well. Such as value of land, the economics involved in different management options and whether there was environmental protection on a stretch of coastline (such as a Ramsar or World Heritage Site).

2a
Most were able to score 2 marks here. 'Pollution' was judged to be too unspecific to be awarded a mark, but air pollution and noise pollution were acceptable.
Note that the command word for this question is 'identify' so a single word or a few words are sufficient, and a lengthy answer which repeats the question is a waste of time in the exam.

2b
Most were able to identify a problem that high levels of congestion cause people living in cities. Most wrote about air pollution causing respiratory diseases, with some going on to explain that particulate pollution contributes to asthma and there are links to higher rates of cardiovascular disease and some cancers.

Others wrote about increased journey times leading to stress, work problems or financial costs. Global warming as an extension was not usually relevant, as the question was in the context of a problem for people living in cities unless it was applied specifically to these locations.

2c

This ‘examine’ 8 mark question was also challenging for candidates. They were required to write about the *causes* of social and economic inequalities found in developing world cities. The better answers were able to identify factors that cause inequalities such as rapid population growth, rural-urban migration which may overwhelming housing and services, or the colonial history of many cities which has resulted in residential zoning. They then went on to explain how these contributed to specific social and economic inequalities such as the shortage of housing linked to high demand, and the informal economy as migrants might lack the skills needed for higher paid employment.

Many did not take this approach, and instead wrote in general about the problems developing world city residents experience. Indirectly they referred to relevant material about informal employment, exploitation and living in self-built houses of poor-quality materials without access to water and sewerage systems.

Discussion about gated communities was often helpful as candidates could compare the inequalities of life inside and outside these communities and explain the reasons these developments exist. Some were able to explain that higher incomes and access to institutions to borrow money, meant that residents were able to live in homes with the facilities needed to ensure they experienced positive social and economic outcomes. Whereas the majority were excluded, and therefore inequalities were created.

Many answers lacked a clear plan or coherence to the answer, and examiners were left to disentangle ideas. There were relatively few references to details about named developing world cities.

Answers about developed world cities might score a few marks where relevant ideas were discussed.

Question 3 is always the ‘familiar fieldwork’ section where candidates are asked to write about fieldwork they have carried out. Each sub-question is likely to be about a different section of the ‘geographical investigation process’ which is outlined in Appendix 8 of the specification.

As in previous series, some candidates ignored the specific wording of the question and therefore limited the marks they were likely to achieve.

On questions 3, 4 and 5 there are often two and three mark questions. Candidates need to be able to identify a reason or way for example, and then develop this idea for one or two further expansion marks up to a maximum of 2 or 3 marks. Some candidates struggled to gain full marks on these questions and candidates are encouraged to practise this activity in groups or in class, perhaps as part of a starter in a lesson.

Candidates are always asked to ‘state the title or question of your fieldwork investigation’. Most candidates were able to give a clear title, and some provided a location as well, which helps to set the context in the mind of the examiner.

3a

This question asked candidates to explain how they selected their title or question. Candidates did not find this question easy, with many scoring only 1 mark of the 3 available. For example, they stated they had found a useful secondary source but were unable to develop this by explaining what they learnt from it or how they used this to frame their question. This particular 3 mark question was not a 'one way' or 'one method' style, so more than one idea could be explored.

Another scored three marks by saying they learned from secondary data that regeneration had taken place in their local area (1) and that tourist numbers had risen (1) so they decided to investigate the impact this had on environmental quality (1).

Lower scoring answers tended misunderstand what the question was asking, and wrote about how they chose their location, or else stated that there was a particular issue with say tourism, or coastal erosion in their location that they wanted to investigate, which scored 1 mark unless it was explained.

3b

Most were able to score at least one mark for identifying a suitable quantitative data collection method, and most were also able to say something further about how they carried out the method or how it was used in the investigation. Relatively few scored the third mark. In common with other 3 mark questions, candidates need to practice a 'string' of three ideas to ensure they achieve all the marks available.

On this question, which asked how the method was used in the investigation, this could be achieved by explaining how a named method was used to collect primary data. A second mark could be gained through explaining what information was gained from the method. For example, contrasting the numbers of people or vehicles counted at different times of the day, and then a third mark in explaining how graphs were drawn to display the data. Some talked about calculating means or using the data for a statistical test, which scored marks.

3c

Most scored 3-4 marks here, with most being able to focus on the ways their data collection was designed. This is perhaps an area of the geographical investigation process with which candidates are more confident, with answers explaining about locations, and methods used, and discussing frequency and timing of data collection.

Weaker answers lacked the ability to focus on ways that 'accuracy' could be achieved. Useful ways to do this were to refer to the sources of secondary data, and using recent reports so it was up to date. Others talked about the type of sampling they used and said this made their data accurate, but they did not always explain the reasons they were able to come to this conclusion.

Some drifted into explaining the weaknesses of their data collection, which was not needed and some answers were repetitive.

The best answers showed a good understanding of what accuracy in data means, and ways in which bias and errors can be minimised. This could involve using GPS to ensure locations

are pinpointed, and using equipment or methods correctly and consistently, especially where several groups are involved.

3d

The 12 mark question in this series asked for an evaluation of the success of the techniques used to present and analyse results. A significant number of candidates did not do this, instead writing in general about all stages of the route to enquiry, or about how they collected the data. These candidates tended to score few marks, and in some cases none at all. Some still seem to have prepared answers for this question which are presented irrespective of the specific wording.

Being familiar with the key words from the route to enquiry (also called the geographical investigation process in the specification) is crucial. A large number of marks, 20% of the total for this paper, hinge on correctly judging what this question requires. In previous series, questions about presentation and analysis have not been well answered, and for some candidates this was the case again.

Some candidates split their answers into a paragraph on presentation and a paragraph on analysis. This could be a useful approach for those who find structure useful in their answers, though it could be a little repetitive. Remember that 'evaluate' is the command word, in other words, what are the strengths and weaknesses of the methods used, and which was the most or the least successful and why?

Most commonly discussed presentation methods were tables of data, bar graphs, pie charts and annotated photographs. Where these were discussed in terms of what they showed, and with a comment on whether it was useful, mid-range Level 2 marks tended to be achieved. The evaluation needed to go further for higher level 2 and level 3 marks. Comments about how and why these or other methods were successful, and their limitations were needed.

More sophisticated presentation and analysis methods included discussion about the use of GIS, or how simply placing pie charts, for example, on a map showed the distribution of data collected and allowed for fuller analysis of the patterns revealed.

Use of statistics whether means, modes and medians, or the use of Spearman's Rank for example, (where appropriate) allowed candidates to make meaningful suggestions about possible comparisons, links and patterns in their data.

Some usefully referred to secondary data and how this was used in their presentation and analysis. This was often judged to be successful by candidates, as base maps of income or deprivation could be overlaid electronically with data collected by the candidate, or the data was accurate as it came from a government source. Some added annotated photos to base maps to illustrate changes since the secondary data source obtained its information.

Another straightforward method that some evaluated effectively was the use of 'past' and 'present' photos to assess the impact of changes, whether on a beach or a place

experiencing a regeneration project, or in terms of numbers of people visiting a site for example.

Remember that an 'evaluate' question needs judgements and some sort of conclusion or summary. Very few candidates included this in the January 2024 series.

Questions 4 and 5 are parallel, and candidates can choose to answer about coasts or urban themes.

Q4ai and 5ai

Here candidates needed to write about one problem with the question used in the fieldwork scenario. Most candidates managed to score at least one mark here, by saying that the question could be interpreted in different ways (1) which might mean that the data collected was unreliable (1). Others said that the question could be interpreted as too personal or even offensive (1) so people might refuse to answer or lie, leading to incomplete results (1).

Some candidates interpreted the question as 'why was this question asked?' so did not score a mark.

Q4aii and 5aii

This question required candidates to reflect on decisions they will have been part of making in planning their own field work. Some were confidently able to explain that a large sample size makes the data more valid or more accurate. As it is more representative of the whole population and went on to explain that the effect of any anomalies on the mean would be reduced, or they could be more easily identified. Others commented that a wider range of views could be obtained which might help understand different perspectives.

Most achieved 2 marks here out of the three available. Answers that spent time writing that a bigger sample meant that more places could be visited, or more data collected or more people interviewed were repeating the question, as they needed to focus on the advantage this brought to the investigation.

4bi and 5bi

Most were able to score 1 mark here. Either the modal class or the number in the modal class was acceptable and awarded the mark.

4bii and 5bii

Almost all candidates were able to work out the missing number here. Some did not attempt the maths questions, and missed out on a mark. Candidates are encouraged to spend a moment checking these questions as sometimes what is required is a relatively simple calculation.

4biii and 5biii

Candidates were also confident in answering these questions, as they were able to suggest a problem that might have been experienced in collecting the data. Different approaches were taken and scored the two marks available. Candidates could comment on either of the data

sets given. Some explained that the descriptors were not clear or specific enough on the level of damage to the mangroves (coasts) or building quality (urban). Others said that the heights or numbers of floors might be hard to measure accurately, or that the number of sites might be difficult to visit in the time available. Others took more of a risk assessment route, commenting on tides and risks of getting wet or being bitten by mosquitoes, or in getting lost in a city trying to find the 26 hotels. Any of these were acceptable.

4c and 5c

The final question required candidates to consider how GIS could be used to analyse results from the data. Most candidates scored at least 1 mark here of the three available, though a number were unable to write coherently about GIS and wrote a general answer about results being analysed without specifics.

Successful answers were achieved when candidates wrote about using the placemark tool to add data to specific buildings/mangroves, with colour coding to show spatial representation of results, which would enable trends and patterns to be identified. Others explained how layers could be added to show the human damage (or building quality) in different areas, or how photos could be added to illustrate their findings.

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