Examiners' Report
Principal Examiner Feedback

January 2022

Pearson Edexcel International Advanced Level
In Geography (WGE01)
Unit 1: Global Challenges

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Introduction

This is the January 2022 series for assessment of WGE01: Global Challenges. There were 169 entries for this unit.

Most candidates managed to answer all questions on the examination paper, however, there were more blank unanswered questions than in previous series. As might be expected, given the current global situation, there was variation in the quality of answers. However, some candidates had been prepared exceptionally for this exam series.

Global Challenges contains a choice of World at Risk or Going Global longer essay questions. More candidates opted to answer the Going Global option in this exam series.

Centres may wish to consider some general points going forward:

- Compulsory Topic 1 World at Risk does contain detailed physical process content that demands an understanding of the global distribution of hydrometeorological hazards– this was often lacking in responses to question **5a**.
- When tackling a 'describe the relationship' question, candidates are expected to refer to the relationship between the two lines shown on the figure.
- Many questions use the command word 'assess', this is defined in the Specification on page 77. This requires higher-order thinking skills that involve candidates looking at several sides of an argument or question, weighing up issues, considering which factors / explanations are the most important and making supported judgements. Failure to demonstrate these cognitive skills limits available credit.
- Mark schemes refer to 'evidence': this can come in the form of examples, case studies, data, facts, detailed reference to places, concepts, and geographical theory.

Reports on Individual Questions

Question 1ai
This question asked candidates to correctly identify which was the main direction of the tropical cyclone tracks shown over North America. The vast majority of candidates correctly identified that they were moving from South East to North West.

Question 1aii
Candidates were asked to describe the distribution of tropical cyclones tracks shown in Figure 1. Most candidates gained credit for identifying that they were located between the tropics, with the second mark gained for

identifying that the cyclone tracks formed over oceans. Some candidates lost marks by stating they were over the equator which is incorrect.

Question 1aiii
Candidates were asked to explain one reason for the distribution of tropical cyclone tracks shown in Figure 1. Most candidates secured at least one mark by explaining that they needed warm ocean temperatures to form. However, many then failed to explain why the presence of warm water led to the formation of cyclones. The best candidates could explain that warm water led to increased convection allowing storms to gain energy.

Question 1b
This question asked candidates to explain how the ENSO cycles contribute to drought risk. Overall, this question was not answered well by candidates as they lacked the explicit knowledge of the ENSO cycles. The best candidates were able to set the cycles into context i.e., through geographical locations to explain how El Nino brought droughts to Australia due to the trade winds weakening and the changing air pressure resulting in cool ocean water upwelling off the coast of Australia.

Question 1c
There was variability in terms of quality of response for this question. The best responses were able to articulate clear reasons why community preparedness for tectonic hazards is better in some places than others. These candidates could exemplify through this named example to show the contrast. The weakest responses tended to be generic, providing basic ideas e.g., populations are poor so can't prepare. These answers tended to remain within level 1.

Question 2ai
For this question candidates were asked to define the term 'greenhouse gas'. This was answered well with many candidates gaining credit. Candidates who simply stated examples of greenhouse gases failed to be awarded a mark as they had not focused on the command word of define.

Question 2aii
Candidates overall performed well, with candidates able to describe the trends in China's methane emissions successfully. Candidates' ability to describe trends had improved compared to previous series, with the majority able to identify the plateau followed by an increase from 1990-2018. A small number of students either described the trends of carbon dioxide not methane or described the methane emissions as a comparison to the carbon dioxide trends which was not what the question had asked.

Question 2aiii
Candidates were asked to suggest one reason why China's carbon dioxide emissions per increased had increased. There was no expectation that students would have studied China's emission however, they should have been able to apply their knowledge of the growth of China's economy to this question. Most candidates were able to gain one mark for successfully suggested a reason for the change i.e., industrialisation or the rise of the middle class were popular choices. Fewer candidates, however, gained the second mark for the linked extension mark. It is important that candidates extend their original suggestion and not just state another reason to gain the second mark.

Question 2b
This question required candidates to explain how ice albedo feedback and ocean carbon sinks could lead to a climate change tipping point. Overall, this question was not answered well by the majority of candidates. The weaker responses lacked explicit knowledge of these two feedback mechanisms and as such candidates attempted to describe how climate change could be measured for example. The best responses had clear understanding of how a lower albedo resulting in greater amounts of surface heating, creating a positive feedback mechanism thus further increasing the rate of melting.

Question 2c
Most candidates were able to discuss why there are different attitudes to the threat of global warming. At the lower end, these explanations were superficial and tended to lump groups and organisations into 'people' with simple explanations such as they might not be affected, or they can afford to move. At the top end, candidates had a clear understanding of why different groups, such as Shell, would have a different attitude to the threat of global warming when compared to people living in low-lying islands such as the Maldives. These candidates also used explicit examples to provide evidence for the contrasting viewpoints.

Question 3ai
This question asked candidates to identify which year the highest number of Chinese provinces opened Free trade Zones. This question was answered well, with most candidates selecting the correct answer of 2016.

Question 3aii
Candidates were asked to suggest one reason for the distribution of Free Trade Zones opening in 2015. Most candidates gained credit for correctly identifying that they had been opened along the coast thereby allowing for increased trade via container shipping/shipping routes. This would give the candidate the full two marks. Some candidates described the distribution of all the Free Trade Zones rather than providing a reason for the distribution and therefore did not gain marks.

Question 3aiii
In this question candidates were asked to continue to demonstrate their knowledge of China and the impacts of the global shift. Most candidates scored well on this question by focusing on increased factories resulting in air or water pollution. The weakest candidates however struggled to expand upon this idea to create a linked explanation as is required by questions which ask them to focus on only one impact. The best responses led from the initial idea and extended it by explaining the impact this had on the surrounding ecosystems for example.

Question 3b
This question was answered well by candidates with explanations tending to focus on greater choice or cheaper prices. Similarly with question **Q3aiii** weaker candidates struggled to extend from their original idea instead listing two further ways that consumers had benefited. The best responses explained that the cheaper prices had been brought about through outsourcing of production to Asian markets, resulting in cheaper labour for the companies and therefore these reductions were passed onto the consumers. A small minority focused the impact of globalisation on developed countries e.g., deindustrialisation which could not gain credit due to the positive focus on the question.

Question 3c
Candidates performed well on this question and were able to discuss a range of positives for people living in Asia. The weaker candidates, however, tended to list these resulting in a generic response, whilst the stronger candidates were able to exemplify their explanations with explicit facts and figures of the benefits that had been gained by people living in China for example.

Question 4ai
On the whole candidates scored well in this question, with candidates correctly identifying that Africa was the world region projected to experience the greatest increase in population by 2100. A small minority incorrectly identified it as Asia.

Question 4aii
As with question **Q2aii** candidates demonstrated a clear ability to describe trends shown. In this case, candidates scored marks for identifying a steady increase in Asia's population between 1950 and 2019, followed by a decline after 2050.

Question 4aiii
This question asked candidates to apply their understanding of demographic trends to Europe and Africa. Candidates must be aware of the issue of

mirrored answers, as these do not gain credit, for example some candidates describe Europe as developed and having contraception and then Africa as not developed and so lacking contraception. The best responses applied their understanding of Europe's ageing population and explained this was due to women having children later in life/ accessing careers. With regards to Africa, they understood that death rates had been declining due to improved vaccination programmes and water and sanitation.

Question 4b
This question was successful for most candidates, gaining at least one mark with clear explanations as to why an ageing population impacted healthcare provision. The second mark was less awarded since candidates often failed to extend their original idea e.g., that elderly people required a lot of healthcare provision due to illnesses such as dementia (1 mark) which means that the government is forced to allocate more funding at the expense of other areas of the economy e.g., education (1 mark).

Question 4c
Candidates demonstrated some sound knowledge on the relationship between population and resources, with many candidates stating the work of Malthus, Boserup and Club of Rome. Level 2 candidates tended to know the work of these theorists and could describe their theories, whereas level 3 candidates were able to apply their theories to modern day examples e.g., the use of GM groups and desalinisation. Weaker candidates often described the idea that, as population increased, they needed more resources but didn't extend this any further.

Question 5a
Candidates were required to explain how Figure 5 helps to understand the causes of long-term natural climate change. Overall, this question was not answered well by candidates as many simply described the cycles shown without adding any of their own knowledge or explanation. Candidates should have been able to explain how each of the Milankovitch cycles shown led to changes to the Earth's climate to gain A01 marks. However, A02 i.e., application of knowledge, is where the candidates struggled, leaving many candidates in level 1 or the bottom of level 2. Candidates were expected to explain what these cycles were, though contribute very little, with obliquity thought to be the most important cycle impacting climate change. Candidates could also have discussed other factors that were thought to be more significant, for example, changes to the extent of ice sheets and atmospheric carbon dioxide.

Question 5b
There was considerable variability in the level of responses that candidates wrote in response to this question. At the top end, candidates could clearly explain the impacts of sea level change and why some locations were particularly at risk from this threat from global warming. Key to their

success was clear process knowledge and for Level 3 and 4, candidates were able to explain a range of other threats brought about by global warming that were threatening communities, and to what extent these were a lesser of greater threat than sea level change. At the bottom end, candidates struggled to recognise that sea level rise was a threat that was unequally felt across the globe and so answers tended to be generic and focused upon loss of land and people moving. Level 2 responses tended to recognise that sea level rise was most of a threat to low-lying communities and those who didn't have the economic development to tackle this but lacked examples to support their statements.

Question 6a
As part of the specification candidates are expected to have studied both the KOF index of globalisation and AT Kearney Index. Candidates were impeded by their lack of explicit knowledge of the KOF index and that the index measured economic, social, and political dimensions of globalisation. As a result, several candidates fell into a description of the pattern of globalisation rather than suggesting plausible reasons as the question dictated. Better responses applied their understanding of what it meant for a place to be globalised and used this to identify countries that scored highly on the index e.g., European countries and suggested reasons why they were globalised e.g., being part of the EU. This was then contrasted with countries such as North Korea who are switched off, and candidates could explain why this would result in them scoring low on the KOF Index.

Question 6b
Candidates performed well on this question by demonstrating clear knowledge and understanding of the role of the internet in contributing to recent globalisation. Weaker candidates tended to lump 'the internet' together rather than breaking it down into its component parts e.g., social media, electronic banking, and mobile phones; all of which have had a differing impact on furthering globalisation. Stronger candidates had a clear understanding of the different facets of the internet and the role that these had playing in deepening, lengthening, and increasing the speed of globalisation. To move to Level 3, candidates were expected to consider others that had been more or less significant than the internet in driving globalisation. The best responses considered the role of global organisations such as the IMF and World Bank, as well as containerisation in its role in allowing TNCs to outsource production to Asia.