11th International Geography Olympiad

Krakow, Poland

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Written Response Test

Committee Report

October 2014

Geography Olympiad 2014 - Krakow

Written Response Test Report

Student Performance

- Overall the paper was accessible by all students. The total marks were out of 90 with the lowest score being 14 marks (compared to 9 marks in 2013) and the highest score reaching 70 marks (75.5 marks in 2013). The median mark was 47 out of 90 (43 in 2013). Overall this was a higher scoring paper than last year's WRT.
- The highest scoring section overall was Section F (Globalisation and Transnational Corporations) where the median mark was 11 out of 15.
- Section A (Geology and Coastal Landforms) was the only section where a student achieved full marks (15)
- The lowest scoring section was Section C (Global Ecological Footprint) where the median mark was 8 out of 15.
- Section A had several students who did not score at all and Section C and E each had 2 students who didn't score at all. However, Section A was also where the highest mark was achieved.

General Comments

- The writing committee has continued to make a conscious effort to ask more 'open' questions which we hoped would encourage students to write in more extended prose.
- Questions were structured so that generally, the easier more closed questions came at the beginning of each section using command words such as *identify, outline, describe, name, and what?*
- The more open, challenging questions came towards the end using command words such as *explain, suggest, comment on and justify.*
- As in previous years, the team also tried to produce sections that integrated physical and human geography topics.
- We always try to provide a variety of data representation/visualisation (eg. maps, graphs, tables, etc.) to reflect the range of sources that geographers work with.
- We also tried to introduce some more modern topics e.g. geography of health; the solar powered boat schools and the recent expansion of globalisation.
- Some questions were very poorly answered by students:
    - In question C7 students were asked to comment on the differences between the data shown in the table for Africa and Oceania. 87 students did not score on this part.
    - QuestionA4 asked students to draw a series of diagrams to show the formation of a delta. 58 students did not score on this part.62 students were unable to give a reasonable definition of globalisation in question F1.

- However, other questions were more competently answered:
    - Question B2 asked about afforestation and only 8 students were unable to gain a mark here.
    - Section F2 asked students to give factors influencing the process of globalisation and only 21 students did not score on this section.
    - It was pleasing to see that more than half the students could explain the impacts of El Nino in Section D2.

Command words

- There seemed to be fewer instances where students misinterpreted the command words. This may have been because again time was given for students who are not educated in English to read and digest the command words before the test starts.
- The writing committee does not see this should be a particular problem for non-English speakers.

Marking

Again, I am grateful to everyone who marked the WRT this year and especially to Anu Printsmann and Dubravka Spevec whose academic backgrounds and meticulous approach contributed to a robust marking process.

Consistency and quality assurance is achieved by teams of two markers marking all the scripts of the students for one section. The provisional mark scheme was prepared by the writing team before the test took place. This was adjusted if necessary, by the paid of geography specialist markers and the moderators (Anu and Sue) after a sample of 30 papers had been marked. Each pair double marked papers where there was an issue or marked together and then the moderators sample marked papers from every team and marked each moderated question with a coloured dot. We moderated approximately 10% of all scripts and at least one question was moderated from a student from each participating country.

I am confident that this system is effective and robust.

Again, the writing team were pleased with the way in which students attempted all questions in the test. No topic seemed to be inaccessible to students, although certain parts appeared to pose a problem. This is still a small issue about command words we think for some countries where students are not educated in English. The writing team recognise that there is always room for improvement and will always strive to construct a fair and equitable test.

Additional points:

- We try hard to ensure that there is no cascading disadvantage, ie that students who get one question wrong are not penalised in subsequent questions.
- Correct exemplification is always considered for extra marks if the mark scheme allows.
- We want to credit what the students know, understand and can do in geography and so we use positive marking, unless the question requires a specific answer which can be right or wrong.

- For some of the more ‘open’ questions you will see from the mark scheme that we have used level marking rather than point marking. This arises from the increased opportunity for students to write extended answers. All the marking team were happy with this approach.

I would like to express my thanks to all the writing team:

Josef Tan, Anu Printsmann and Dubravka Spevec and to Kath Berg for the hours of work that went into producing the Written Response Test for the 2014 Geography Olympiad.

In order to support participating countries further, a selection of high scoring answers is appended below (Appendix 1). This is intended to be accessible from the iGeo website.

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Appendix 1

This section contains some examples of good answers with comments from the marking teams in speech bubbles. All the exemplar answers are taken from scripts of students who are not educated in English.

Section A (Geology and Coastal Landforms)

1a) Describe the processes occurring at stages A, B and C of the rock cycle.

b) Name the rock type formed at each stage and give an example.

Stage	Process	Rock type and example
A	This stage involves the cooling of lava (extrusive) and magma (intrusive). Rocks may gain different textures, densities and crystal sizes based on different pressures during the time of eruption and rate of cooling.	Igneous eg. pumice, obsidian
B	Sediments formerly eroded from rocks (maybe any rock type) and organic material are deposited. Over time lithification and compaction occurs, condensing these materials into rocks.	Sedimentary eg. shale, mudstone
C	Rocks (mostly sedimentary) undergo further heat and pressure, the compaction process and chemical reactions of which lead to the formation of new rocks.	metamorphic eg. slate, marble

This answer gives a good explanation of the processes including some technical terms. One example would still have got full marks. 6/6

2 Choose 2 features of the coastline and explain in detail how natural processes are shaping them.

Feature A wave cut notch

Natural processes Destructive waves cause the erosion of weaker portions of the cliffs along the joints and bedding planes of the rock. Hydraulic action and wave pounding make compressed air put huge pressure on the cliffs, weakening and breaking them into pieces, together with abrasion in which pebbles and sand are hurled at the cliff face, eroding it. In time, destructive wavs erode a small niche which will be widened and is called a wave-cut notch found at the base of the cliff.

Feature: Cave

Natural Processes Waves (especially breakers) are eroding and put pressure on cracks, widening them with hydraulic action (by compressing the air in cracks in the rocks). As the cracks widen, a larger hole is formed and pieces of rock are dislocated from the main rock and enlarging the hole. The waves are then able to penetrate deeper furthering the hole and creating a cave.

These two answers gave a detailed description of the process and scored full marks 5/5

Section B (Forest Resources)

1. Explain how people can benefit from forests (other than wood as a raw material).

People can use them as recreational areas which benefits their health, both physical and mental. Many forests are also important tourist attractions which brings money to the local community. Moreover, some cattle species may live and feed in forests so agricultural workers don't have to provide food for them. Also, hunting is still popular in some areas. Finally, forests consume vast amounts of CO2, reducing the greenhouse effect and global warming.

Here the student gives an example and then follows it up with a justification. There is more than enough for full marks 2/2

4. Give three reasons for the loss of forests worldwide.

1. Trees cut down for wood as a raw material for furniture production for example; many less developed countries cut down their forests in order to sell the wood. Trees are also cut down to provide a place for housing in densely populated areas and for agricultural production which often has severe consequences, like soil erosion.
2. acid rains affect coniferous forests severely (as seen on the map - European and Siberian parts of Russian Federation).
3. rising temperatures and declining precipitation in some areas is restricting growth or resulting in trees dying.

Although reason 2 is a little sparse, point 1 really contains 2 reasons. Therefore this answer gained full marks 3/3

Section C (Global Ecological Footprint)

2. Outline the trends of the global ecological footprint as shown in Figure C1.

The total ecological footprint has a steady rising trend. The rate of increase from 1961 to 2001 is about the same, but from 1961 to 1975 the rate is greater. Besides there is no significant increase for built up land, cropland, fishing forest and grazing, but there is a significant increase for carbon.

There is a statement of the overall trend followed by more detailed description and examples from the table. Full marks 2/2

3. Identify which of the graphs represents high income countries and justify your choice with two reasons.

Reason 1 With the prosperous development of tertiary industry primary industry like agriculture is declining greatly and thus the decrease of cropland in graph B matches this situation.

Reason 2 High living standards and high economic development in high income countries leads to the excessive use of fossil fuels for things such as transportation and power. A large fraction of the graph B shows the big carbon footprint of high income countries.

Two features of the graph are identified and an explanation of the two reasons are given for full marks 3/3

4.Explain how the economic recession could have effected the ecological footprint of the 3 different income economies.

Low income countries The recession reduced the aids (sic) from the high income countries, development is slowed down and even stopped in some countries. The composition of the ecological footprint and even the size of the footprint will probably remain the same.

Even though the English is not perfect, the meaning of the student is clear and so full marks 1/1

Section D (Impacts of Global Warming)

1. Suggest how global warming could affect food supplies in Africa.

Due to global warming climatic extremes are becoming more serious, mainly the decreased reliability and amount of rainfall causing severe droughts. This causes crop failure in many areas so there could be a decrease in food supplies.

This answer developed the idea of reduction in rainfall, describing how it could lead to reduction in food supplies. However, for 3 marks at least one more impact was required, so only 2/3 marks.

2. Suggest how global warming might effect the El Nino Southern Oscillation (ENSO) in the Southern Pacific.

Temperatures rise more on land than on the oceans, so west coasts of South America will experience higher temperatures. In such areas air is likely to rise and a low pressure area will be formed. The El Nino effect is likely to become more frequent and more developed. The mid-Pacific and N and NW coasts of South America are likely to experience more precipitation while SE Asia is likely to have a drought season.

The first part of this answer was not fully explained in relation to global warming but the latter part was worth 2/3 marks.

4. Explain how the climate and physical environment of Bangladesh mean that this type of solar-powered floating boat school may become more common.

Bangladesh is situated in South Asia in an area with a climate with monsoons and it has low relief (Ganges and Brahmaputra delta) so it is highly vulnerable to floods. The heavy rainfall brought by the summer monsoon will cause the flooding of the low-lying area. The threat of sea level rise caused by global warming will reduce the land area of Bangladesh and so land based schools will flood. As Bangladesh becomes more developed and more children go to school, more of the solar-powered boats mean their schooling will not be interrupted. The boats will keep children safe and provide a stable school for them.

This answer links the climate and physical environment and shows how this will lead to greater use of the school boats in a country that is trying to improve its educational standards. Full marks 3/3

5. Give 2 different circumstances (other than flooding) in which people might become 'environmental refugees'. For each, explain how different impacts lead to people losing their homes.

Circumstance 1 Earthquakes cause buildings to collapse when the magnitude exceeds 5-6 on the Richter Scale, especially if they are poorly built as in LEDCs. At higher magnitudes even strong buildings respecting construction codes (like in Japan) will collapse making people homeless. Moreover, submarine earthquakes can cause tsunami which will flood coasts and destroy buildings, causing homelessness. Earthquakes can also fracture gas pipes and destroy homes through fire or explosions.

Circumstance 2 Hurricanes are powerful storms occurring between 5 and 20 degrees north and south of the Equator which cause heavy rainfall powerful winds, gusts and storm surges. The high speed winds, exceeding 180 km per hour damage buildings, hurling their roofs in the air, breaking windows and making houses uninhabitable. eg. Hurricane Katrina in 2005 made more than 300,000 people homeless and killed and injured many others.

A full answer mentioning some factual information about the strength of earthquakes and intensity of hurricanes giving different ways in which people can become homeless gets the full 5/5 here.

Section E (Population and Health)

1. Suggest three reasons for the differences in life expectancy between high and low income countries.

- Sanitation – low income countries tend to have less access to sanitation. Cities do not have adequate sewer system. This increases the incidence of disease and lethal health conditions.
- Medication – In high income countries some diseases such as polio and TB have been largely eliminated by shots and strict government control, together with other medical advances.
- Vulnerability to natural disasters – natural disasters may be mitigated by preventative measures such as quake-proof buildings which are common in high income countries. Low income countries may not have the finances to do this.

Three different reasons with some examples lead to full marks 3/3.

4. Explain briefly 4 possible measures to reduce to the spread of infectious diseases as global tourism and travel increase.

- Vaccines: travellers may refer to clinics and hospitals to get preventative shots for diseases rampant in the destination prior to the journey.
- Examination of arrivals and immigrants: body temperature monitors may be set up at borders to assess health of entrants, particularly those who have been to known danger areas.
- Restriction of movement during times of new outbreaks (eg. SARS) through complicated visa application.
- Discouragement of tourism by government sites and develop a warning system.

Four separate ideas which are adequately explained - the question says 'briefly' so full marks 4/4.

SECTION F (GLOBALISATION AND TNCs)

1. What is globalisation?

Globalisation is the process through which advances in communication and transportation enhance connectivity amongst regions through exchange of goods, culture and increased interdependence.

A concise and comprehensive definition for full marks 1/1.

2. Explain giving two reasons, why transnational corporations (TNCs) adapt their products for different markets.

Reason 1 Adding the elements of local culture can increase the acceptance of products by people in TNCs. This can improve their image and their profits.

Reason 2 Convenience of material attainment (sic) Using local materials may reduce need for importing goods, thus saving costs. eg. coconut milk may be more easily attained in southeast Asia whereas dairy products may need to be imported from elsewhere.

Two clearly explained ideas give full marks 4/4

5. Describe and explain why some groups of people gain from the growth of TNCs in the host countries whilst others lose out.

The ones that gain the most are the ones in higher positions that have higher wages (directors, managers) while the ordinary people lose out because they are not paid well. They work many hours without appropriate conditions and they export their resources. When their resources are depleted TNCs leave the host country and it remains without resources and often with high environmental damage that may cost the country even more than it benefited from the TNC. People may gain because TNCs invest in the host country, developing infrastructure, giving social support and helping to reduce disease. They also may offer homes for workers and bring education and technology to local people. Life quality and unemployment could improve.

This was the last question on the paper and it provided an opportunity for some extended writing. This answer has a structure and several different points which lead to full marks 4/4

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