A Level

Geography

7037/2

Report on the exam

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Summary

Students were well-prepared and familiar with the structure of the examination such that there were only a handful of incidences of rubric infringement. Equally, it was noted that there is a growing familiarity with the requirement of the assessment objectives applied to each of the questions. This is a credit to students and teachers in their preparation for the examination.

Students completed the two compulsory sections and then their chosen option with some consistent performance across these sections. Many students produced responses in line with the answer space provided although a considerable proportion used additional pages. This would suggest that timing was not an issue and students are generally suitably prepared in terms of producing suitable length responses to the questions.

The paper allowed students to show good knowledge and application of knowledge to broad sections of the specification and to make good use of the places and concepts studied. The skills questions relating to AO3 provided variety in terms of response with a range of data presentation methods used that required interpretation and analysis.

Those questions, X.3, which used stimulus resources (photographs, text, infographics) presenting novel situations generated suitable responses balancing use of the novel situation with students' own knowledge and opinions.

Of the options, *Contemporary urban environments* and *Population and the environment* were significantly more popular than *Resource security*.

There was some variation in the effectiveness of responses to the different question types. The 4 mark (AO1) questions were answered well by some students but weaker students scored fewer marks as their responses often lacked clarity, purpose and direction - tending to skirt the focus concepts.

In the AO3 questions, Q1.2 was quite demanding as the amount and complexity of data was significant and some struggled to analyse it successfully. Q2.2 also presented some challenges with a significant proportion of students seemingly unfamiliar with a triangular graph and therefore failed to plot the point correctly. The interpretation of the ward level data shown on the graph was often misunderstood and so the analysis made little sense. Option AO3 questions appeared to be rather more accessible. In Q3.2 the trend was fairly readily picked out with some successful use of data to illustrate patterns and effective data manipulation. Q4.2 also provided a number of approaches for analysis – the maps allowed students to compare and link different data sets as well as to show skill in the use of the key. Q5.2 clearly presented opportunity for some considered analysis if the data and scales were correctly understood.

The 6 mark questions, X.3, assessing AO1 and AO2 using novel situations gave students the opportunity to assess and evaluate themes using the stimulus material. The resources used (photographs and text) enabled this quite well but some students did drift into an analysis of the resources, addressing AO3 which was not creditable. This was also the case in examination 7037.1. These questions gave students the platform to put forward informed opinions based upon subject matter they had studied and linking it to the unseen material.

The 9 mark questions in the option sections (.3 and .4) also gave students opportunity to evaluate, discuss and assess themes. Successful responses demonstrated familiarity with relevant concepts (such as urban recycling schemes, end uses of resources).

The 20 mark responses in all 5 questions produced some interesting and considered responses from many students although some leaned very heavily on some outdated and clichéd views of places or made contrasts between places that were difficult to compare in a meaningful way.

Areas where students excelled

- In the Global systems and global governance unit, Q1.3 was answered well. Students were able to engage with the novel resource and they used this to develop a clear perspective on the ways that globalisation (especially TNCs) can create injustices through the exploitation of their workers. Many responses quoted examples of particular TNCs or industries in which there had been notable cases of workers being underpaid, exposed to poor working conditions, long hours or labour restrictions, or indeed the victims of commercial building disasters. Some also balanced their answers with reference to the benefits brought by such organisations to workers and low income countries / NEEs.

- The cross-specification synoptic question this series appeared in unit 1 - 20 mark question Q1.4 was a particularly well-answered question. Many students relished the opportunity to discuss the threats posed by climate change, tourism, fishing and whaling, scientific research and potential future resource exploitation student and they were clearly able to link this part of the Human Geography specification to the Water and Carbon unit of Paper 1. Arguments were often well-constructed with good AO1 knowledge of the threats and strategies to manage them.

- In response to Q2.3 many Q2.3 was answered quite well by some students. responses successfully utilised the novel resource to engage in a discussion of how place meaning is influenced by past processes, not only using the resource, but including good AO1 about Liverpool or similar examples such as London Docklands which had undergone change as a result of deindustrialisation, regeneration and a desire to use evidence from the past in constructing present-day place meaning.

- Q2.4, the 20 mark question in this section also produced some good responses. The range of near and far places studied was wide-ranging but many used east London (Stratford, Brick Lane, Docklands) as a case study. In the main, students kept to the requirements of the question and focused on either economic or cultural changes assessing the impacts on both their near and far places. Essays were often well-structured, clearly coming to an evaluative conclusion and the length and structure of these responses showed good preparation for the paper.

- In the Contemporary urban environment option Q3.2 (the AO3 question) was answered well. Many students had a clear strategy for these questions; looking for the broad trend (in this case a positive correlation between GDP per capita and % of total population living in urban areas), identifying high and low examples / extremes, using data in support, employing some form of data manipulation, in this case also looking at countries in terms of continental pattern and identifying anomalies.

- Q3.3 showed good responses with students using the unseen resource as a way into evaluating the success of pollution reduction policies in Mexico City but also in other places studied such as London (congestion charge and the ULEZ) and Beijing.

- Q3.4 was also quite successful with the better answers using a diverse range of schemes and informal strategies in their discussion (Amsterdam, London, Lagos and Mumbai were all frequently used to illustrate responses).

- In the People and Environment option, Q4.1 was completed successfully by those students who clearly knew the concept of salinisation and its impacts on plants and agriculture so could score four marks quite readily. Secure subject knowledge was the key to gaining marks here as in other AO1 focused questions. This point is also noted in the 7037-1 Examiner Report.

- The resource provided in Q4.3 allowed many students to develop good discussion of the possible health impacts of climate change; the best answers linked impacts to the

progressive effects that would develop as temperatures increased following the increase shown in figure 8.

- Q4.5, the responses to the 20 mark question were positive with some strong local case study knowledge or well-used text book case study material used to support students' responses.
- In Resource security option, Q5.1 like other 4 mark AO1 questions distinguished between students who had a firm grasp of the concept of the resource frontier and those who did not with marks reflecting this.
- Q5.3 was answered well. The novel resources prompted many effective discussions of the conflicts between resource security and human welfare, with the latter usually focused on the threat posed by further fossil fuel use and climate change.
- Q5.5 demonstrated good case study use with some detailed knowledge of water transfer schemes and desalinisation projects employed to illustrate and evaluate the sustainability of water supplies.

Areas where students struggled

- In the *Global systems and global governance* section Q1.1 proved a challenge to many. Students often gave definitions of globalisation as a concept rather than focusing on patterns of global production and consumption and how globalisation had led to shifts in the old-world order. Some did attempt to show patterns by way of particular products or industries which was a valid approach.
- Some had difficulty with Q1.2. The data presented had a lot of information and some students attempted to analyse many aspects of it consequently producing some rather confused responses. In the time and space available to answer these questions the strategy of looking at a 'big picture', identifying some useful illustrative data as evidence, showing some manipulation and links is sufficient to access level 2 without the need to comment on every aspect of the data shown
- Q2.1, the four mark AO1 question of *Changing places* produced some varied responses but some were unable to clearly link a data source they had used to investigate lived experience sufficiently to gain full marks. The identification of a source, the data shown and how this linked to lived experience in the distant place studied would have generated full marks but some answers lacked focus and listed sources, explained the concept of lived experience or did not link the data source to the lived experience in that place. A number evaluated the validity or usefulness of the data source which was not required.
- The AO3 skills question Q2.2 demonstrated that a large proportion of students were neither familiar with the concept of a triangular graph nor able to relate each of the points plotted to an individual ward and then read the graph to see the age structure of that ward. Therefore, many responses gave broad and incorrect descriptions trying to link the wealth of different age groups or the demographic structure of Bristol as a whole. Time spent really thinking about the data being presented and understanding the stem of the question might have produced more considered and accurate responses analysing the data shown. This highlights the importance of students being familiar with all of the geographical skills included in the specification.
- Whilst a good proportion of students produced some good responses in Q2.4, a significant number produced some rather tired, out-dated and stereotypical information about the near and far places studied. There should be greater awareness that Brick Lane is not 'full of curry houses' or that the regeneration of Liverpool cured it of being 'crime ridden and riot-fuelled'.
- Q.3.1 required students to outline how the rise of the service economy had led to urban change. Rather than focus on the nature of services and the impacts of the growth of this sector, many discussed the decline of the primary and secondary sectors and the causes of

deindustrialisation. In these short answer questions, it is important to focus on the key ideas in the question, not create a longer more discursive and wider ranging response.

- The essay in Section B (Q3.5) was geared towards the assessment of the relative importance of physical and human factors in creating patterns of inequality. Some responses became a long history of the area studied or made contrasts between urban areas that were somewhat incongruous – for example, a contrast between a big city and small rural village.
- Q4.2, the AO3 question of People and the Environment often had discrete points noted from the four maps rather than analysing the resource as a whole and looking for similarities, differences or links between the different components.
- Q4.4 proved a challenge for those students who either did not know the concept of epidemiological transition or those who referred to a communicable disease rather than a non-communicable one. It was however still possible to access the lower parts of Level 2 in this case.
- In the Resource Security section, the data analysis in Q5.2 was quite challenging for some students and often seemingly random data points and values were stated in a rather descriptive way instead of looking for a bigger picture and connections between aspects of the figures.
- Finally, regarding Q5.4 many responses featured much learned case study material of the specified ore rather than focusing on relevant aspects of demand and end use of the ore to provide a more suitably focused response to the question.

4 mark AO1 questions

These questions assess knowledge and understanding and require students to outline key processes, concepts, interactions and change.

Qualities seen in more successful responses

In order to score well in these questions students should produce clear and straightforward responses that are focused on the concept being assessed. Subject knowledge is therefore paramount and then constructing a concise, focused response – often along the lines of 'what is it"? Why is it important? Where does it happen? How might it be suitably illustrated?

Q1.1 needed to focus on patterns of global production and consumption. Q2.1 required a knowledge of their distant place study, lived experience and how this had been investigated in the classroom. Q3.1 required a knowledge of the service economy and related urban changes. Q4.1 required straightforward knowledge of salinisation, its causes and effects on agriculture. could quickly build to four marks. Q5.1 was similar in that if there was knowledge of the concept of the resource frontier, then developing that with statements of what it is, where it might be found, a relevant example of a resource and location along with a comment on accessibility, controversy or other such issues, would also build to full marks.

The student answer to Q2.1 below shows a straightforward response demonstrating a clear understanding of the concept of lived experience, it clearly states the source used, what data this produced and then how this informed the student about the lived experience in this place. It therefore scored 4 marks.

Question 2 Changing places

| 0 | 2 | . | 1 |

Outline how you used one data source to investigate lived experience in your distant place.

[4 marks]

Lived experience is the view a person or group holds of a place based of personal encounters with the area over time. One data source I used was a survey of local residents about how their lived experience has changed Stratford. The data showed that 63% of residents believed their lived experience was positive and

Extra space regeneration had improved it in the last decade – which helps to show regeneration can improve lived experience.

Limitations of less successful responses

The key issue with the 4 mark AO1 questions is student subject knowledge. If students do not know the key concept then it is very difficult to gain credit. Secondly, answers that are unclear and unconvincing do not score well. A thorough review of all the key terms in the specification is good revision and exam preparation for this type of question.

In this example below, the student gets one mark early on for the observation of food production from LICs and transportation to HICs but then does not make any further clear statements and is rather vague.

Question 1   Global systems and global governance

0 1 . 1   Outline how patterns of global production and consumption reflect globalisation.

[4 marks]

Global food production usually occurs in LICs. For example tropical fruits, these fruits will be imported by HICs to put in supermarkets for customers to buy. This helps show us that globalisation is the cause of the patterns of production and consumption. Globalisation is the idea of connecting countries together. This would

Extra space happen with these HICs and LICs, as they would be connected through trade of goods. [V]

6 mark AO3 questions
These questions assess how students interpret, analyse and evaluate data, evidence and resources.

Qualities seen in more successful responses

These questions, testing AO3, geographical skills, demand students demonstrate a particular skill, or show the ability to analyse, interpret or evaluate some form of geographical data presented as maps, graphs, tables or infographics. As with all of the questions in the examinations, students are required to 'think on their feet' and should be ready to deal with data and skills in any of the ways prescribed in the 'skills checklist' of the specification.

The example below is from Q3.2 and was awarded level 2, 5 marks. It gives a clear overview of the general pattern, makes good use of some data (there is a slight error in reading from the scale), identifies regional patterns and comments on an anomaly.

Figure 5 is in the insert.

Figure 5 shows the GDP per capita and the percentage of total population living in urban areas in selected countries in 2016.

0 3 . 2 Analyse the data shown in Figure 5.

[6 marks]

(A03) There is a positive correlation between people living in urban areas and GDP per capita for example Niger has 13% living in urban areas and (A03) a very low $900 GDP per capita. All European countries have 60% or over living in urban areas and all earn over $20000 GDP per capita. (A03)

(A03) An anomaly in the data is Sri Lanka, although only 19% live in urban areas, they are making roughly $11,000 GDP per capita, this does not fit the trend. Asia is also very highly diverse with countries like cambodia very low compared to (A03) Singapore who have 73% more people in urban areas and earn 48,500 more (A03) GDP per capita than them.

Extra space

L2

Question 3 continues on the next page

Good use of data to analyse positive correlation. Patterns and anomalies considered.

Turn over ▶

Limitations of less successful responses

It appeared that fewer students this year drifted from the analysis of the data into an attempt to explain the information presented. This would appear to be testament to teachers preparing students for these questions.

The data used in these questions is drawn from a variety of sources and is often complex, especially when seen for the first time and under the pressure of exam conditions. Students must therefore ensure they have studied the stem of the question and taken enough time to understand what is being shown and how. The should take time to read and understand scales, keys or other contextual information. Responses that have engaged with the data in this way are invariably better.

The example below (to the same question) makes a valid point at the beginning to show an understanding of the general pattern, but then starts to drift and the data used is not accurate. It was placed in Level 1 and awarded 2 marks.

Figure 5 is in the insert.

Figure 5 shows the GDP per capita and the percentage of total population living in urban areas in selected countries in 2016.

0 3 . 2 Analyse the data shown in Figure 5.

[6 marks]

Figure 5 shows that LIC's that mainly exist in Africa and Asia are amongst those with the smallest GDP per capita. [AO3] It also shows that the countries with low GDP have the lowest number of people living in urban areas, [AO3] Many people in Europe and North America live in urban areas (60-90%) resulting? in their GDP per capita being the largest from $20,000 in Poland to $65,000 in the USA, proving a close link between population in urban areas and GDP per capita. African countries that have less than 50% of their population

Extra space in urban areas are almost capped? at GDP's of $15,000. For example Ethiopia have just 20% of people living in urban areas and a GDP per capita of less than $2000.

L1

Basic relationship observed with some use of figure; not all support accurate

Question 3 continues on the next page

6 & 9 mark AO1/AO2 questions with stimulus

These questions assess knowledge and understanding when applied to novel situations (resource prompts)

Qualities seen in more successful responses

This type of question demands students focus on the key command within the question and evaluate, assess or discuss the relevant concept whilst making connections to the resource used. Consequently, students need to be ready to combine their knowledge and understanding with the stimulus material.
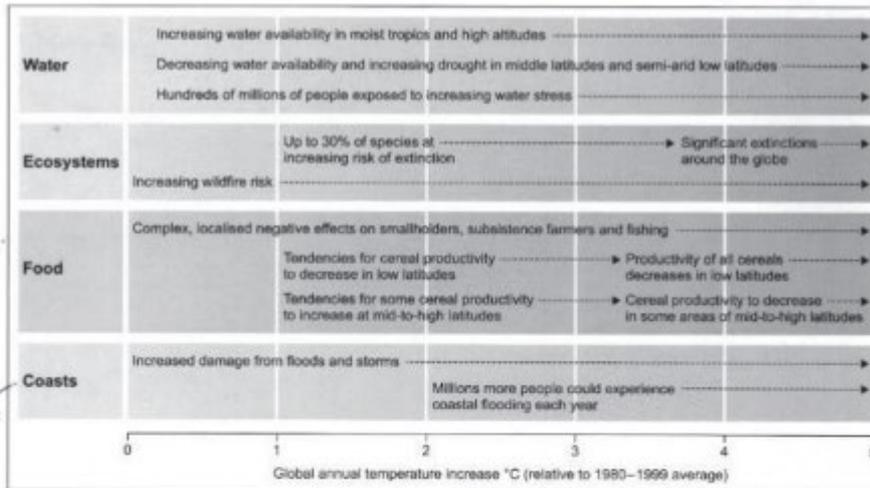
For example, in Q2.3 good responses could connect the role of past processes in creating present-day place meaning with identification of the connections between the Albert Docks of 1885 and their transformation to an area of shopping and entertainment in 2021 by referring to the modern use of the dock infrastructure such as the buildings, waterfront spaces and industrial architecture. Some very good responses built on the 'layered' ideas of past function and processes to create the contemporary place meaning.

Q4.3 in the People and Environment section required a discussion of the possible health impacts of global climate change using the figure provided to help. The figure showed predicted impacts of climate change on water, ecosystems, food and coasts but did not explicitly mention health. Therefore, students needed to make the links to health aspects such as food security, malnutrition, the availability of clean water, disease vectors and in many responses the mental as well as physical health impacts.

In the example shown below the student has engaged with the resource and made links to health implications, even considering some positive as well as negative impacts. There is a good balance of AO1 and AO2 statements and the response got Level 2, 6 marks. In order to access the top level the points could have been developed further – the idea of health getting progressively worse as the temperature increased towards the + 5°C mark, or more specific reference to parts of the world they had studied would have increased the mark given.

Figure 8 shows some predicted impacts of global climate change.

Figure 8

Water	Increasing water availability in moist tropics and high altitudes		
	Decreasing water availability and increasing drought in middle latitudes and semi-arid low latitudes		
	Hundreds of millions of people exposed to increasing water stress		
Ecosystems	Up to 30% of species at increasing risk of extinction	► Significant extinctions around the globe	
	Increasing wildfire risk		
Food	Complex, localised negative effects on smallholders, subsistence farmers and fishing		
	Tendencies for cereal productivity to decrease in low latitudes	► Productivity of all cereals decreases in low latitudes	
	Tendencies for some cereal productivity to increase at mid-to-high latitudes	► Cereal productivity to decrease in some areas of mid-to-high latitudes	
Coasts	Increased damage from floods and storms		
		Millions more people could experience coastal flooding each year	

Global annual temperature increase °C (relative to 1980–1999 average)

| 0 | 1 | 2 | 3 | 4 | 5 |

27°1·

crop

0 4 . 3   Using **Figure 8** and your own knowledge, discuss the possible health impacts of global climate change.

[9 marks]

1. Water &
   food.

2. Ecosystems
   & coasts.
   55cm
   by 2100.

[AO2]

[AO1]

Water and food will be drastically impacted by global climate change. Figure 8 shows that hundreds of millions of people will be exposed to increasing water stress as temperatures increase by 3°C. This will have a severe impact on health as people cannot survive without water. Food productivity may decrease in some areas, which will add to global food insecurity – 27% of Africa is already food insecure. These could Decreased cropyields and subsequent food availability will lead to famine and more people being

(A01) treated for malnourishment. However, figure 8 **(A02)**
does suggest that the impacts on health are regional
as some places may benefit from climate change.
For example, it says that there may be increasing
(A02) water availability in moist tropics and high
altitudes. Similarly, crop yields in Europe have
grown in recent years due to warmer temps.
(A01) Extra space (e.g. melons can be grown). However, this
is significant as it widens the LIC/HIC divide. **(A02)**
Ecosystems and coasts also have a huge impact
on health. The IPCC predicts that sea levels will
(A01) rise by 55cm by 2100 which will cause extreme
coastal flooding. This could be of agricultural
land, which will decrease yields. Furthermore, figure
8 shows that frequent flooding & storms will be
(A01) a product of early temp rise (under +2°C) which
e.g. cholera
could lead to more water-borne diseases. Water-
borne diseases already kill 3.4 mil people per
Question 4 continues on the next page
(A01) year, meaning this would be a significant impact. **(A02)**

L2

> links to health impacts but they
> could have been more developed
> to access the higher level.

Limitations of less successful responses

Less successful responses tended to miss the command word (assess, discuss, evaluate…) and simply write about the topic (producing AO1 heavy answers) or failed to incorporate a link to the stimulus material. For example in Q1.3 some responses discussed injustices and the problems

caused by TNCs without reference to figures 2a and 2b, or they simply described the information presented (lifting from figure 2b) instead of 'using' the information as a starting point for a discussion.

The example below illustrates a level 1 response from Q2.3. Here the student only provides some quite simplistic AO1 statements and they have not really understood the idea of place meaning changing over time.

Figures **4a** and **4b** are in the insert.

Figure **4a** shows the Albert Docks, Liverpool, a working port in 1885.

Figure **4b** shows the Albert Docks, Liverpool, a shopping and entertainment area in 2021.

0 2 . **3**   Using **Figure 4a**, **Figure 4b** and your own knowledge, evaluate the role of past processes in creating present-day place meanings.

[6 marks]

Past processes of industrialisation in the Albert docks allowed boats to easily offload their

[A01] cargo straight into factories which manufactured raw materials into products before globalisation occurred. This created a rustic looking place that previously experienced high locale? and employed

[A01] thousands of people in the UK in one of the busiest ports in Europe. This gives many families high place meanings (emotional attachment to a place) as they are able to see the old buildings in which their ancestors once used to work in.

Extra space _____

L1

Some general comments about
Liverpool's port history generated from
first image but not really developed.

9 mark AO1/AO2 questions (no stimulus)

These questions assess application of knowledge and understanding of links within topic specification content.

These 9 mark questions in Section C required an understanding of links with the option units as the cross-specification question was the 20 mark question on Section A.

Q.3.4 required students to consider the success of recycling schemes in relation to the economic characteristics and attitudes of the population. Good use was made of a variety of case studies including Mumbai, Lagos, Singapore and London with effective contrasts made between cities with successful schemes or otherwise.

Q4.4 connected the epidemiological transition with a knowledge of a non-communicable disease (most frequently coronary heart disease, asthma or diabetes). Even where students were unsure of the concept of epidemiological transition they could often link economic and social development to the prevalence of their chosen disease and make some form of evaluation as to the extent to which they are connected.

Q5.4 required that links between the demand and end uses of the mineral ore they had studied be assessed for level 2 credit. Many students found this quite challenging.

Qualities seen in more successful responses

The keys to good marks here were knowledge of the topic (AO1), the ability to link the parts of the question and evaluate the components and having an awareness of a context through well-chosen examples. Good answers tend to be focused and respond effectively to the question within the answer space on the paper. This is important for consistent scoring and effective timing over the whole paper.

The example below is focused, shows good knowledge and understanding (AO1) and effective application (AO2) to answer the question. It was assessed as a Level 3 response and awarded 8 marks.

4 stages. Famine Recieding Degenerative Delay of pandemics. down regenerative disease

0 4 . 4 To what extent is epidemiological transition the most important influence on the global distribution of a non-communicable disease you have studied?
→ CHD
[9 marks]

1. Epidemiologic transition.
[AO2]

To a large extent, epidemiological transition is an important influence on the global distribution of Coronary Heart Disease. It was the leading cause of death in 2019 globally, which means that is prevalent.

2. Levels of development.
[AO1]

It costs the UK government £1.93un a year, which contributes that could be a result of

[AO1]

the UK being in stage 4 of the epidemiological transition model (delay of degenerative disease) as it has the healthcare system to combat the

[AO1]

diseases that come as a result of lifestyle choices (as seen in stage 3). It has moved through the stages, unlike many LICs which are in stage 1 (Angola) or stage 2 (Haiti). These are unlikely to have high levels of CHD, which illustrates

[AO2]

how it is concentrated in countries that are in stage 3 or 4 of the model.

Le

Level of development is also an important indicator,

[AO1] Extra space

as healthcare improves with development level. An HIC is likely to have better healthcare (better sanitation, food security etc) in comparison to an LIC - for example, the only sewage system in Bangladesh is in Dhaka and it only services 18% of the cities population. The CHD is a product

Link to CHD?

detailed understanding of ETM and links to non-communicable disease. L3   29

A01

L3

of lifestyle choices (such as smoking - 90% more likely) which illustrates how level of development and subsequent lifestyle choices affect where CHD is located. Overall, CHD is globally distributed mostly in HICs and areas in stage 3 & 4 of the ETM, which are closely linked.

Limitations of less successful responses

As explained above, a lack of understanding of the subject matter is an important element in successful answers. Making statements without substance and not having the subject knowledge or place knowledge to back up these statements also limits the level and mark awarded.

The illustration below is of a response that makes baseless comments without any real understanding. It was assessed in Level 1 and awarded 2 marks.

0 4 . 4 To what extent is epidemiological transition the most important influence on the global distribution of a non-communicable disease you have studied?

[9 marks]

The Epidemilogical transition isn't the most important influence on non-communicable diseases because it completely depends on the experience and knowledge you have. For example, CHD is a non-communicable disease that is caused by bad heath, but is easily preventable by knowledge, but also the area you live in. For example, if you are aware that smoking and eating fatty foods can lead to CHD, then you are most likely going to try and prevent it from happening.

However, the epidemiological transition model does have a huge impact because, LICs such as Angola, do not get information, like HICs such as the UK. Therefore leading them to failure as they know very little about these non-communicable diseases and also aren't able to treat it as they don't have the facilities that HICs may have.

Extra space

29

Therefore epidemoligical is the greatest influence on the global distribution.

L1

20 mark questions

These questions assess knowledge, understanding and application: constructing arguments and drawing conclusions.

As mentioned in the introduction, there were some very clear and focused 20-mark responses and it is apparent that students are well-trained for these questions. It is important for the balance of responses and consistency across the paper for students to produce essays that are not overly long. Good practice was seen with responses that start with a clear position statement and then developed a clear thread with evidence from valid examples. This balance of AO1 and AO2 is the way to good marks. There should be a final conclusion that clearly links back to the question set.

Qualities seen in more successful responses

The best essays followed the structure outlined in the previous paragraph and made good use of case studies. For example, in Q1.4 there was plenty of detailed knowledge of Antarctica and the Southern Ocean, the threats from both climate change and the changing carbon budget along with other issues such as fishing and whaling, tourism, scientific research and the future prospect of resource exploitation. Students were also conversant with the organisations and agreements in place to manage Antarctica and could provide effective critique.

The example below illustrates all of these characteristics and was awarded Level 4, 18 marks.

LTISF

0 1 . 4 'The impacts of changes in the carbon cycle represent the greatest threat to Antarctica and the Southern Ocean.'

How far do you agree with this view?

[20 marks]

Intro:
AC?

P1-Climate
change
1°C 1955
3°C
W/E
Ronne 2021

P2- Other
threats
e.g. mineral
resource 2048

Conc: Agree
as there are
being combatted.

The carbon cycle involves a series of feedback loops and changes that affect the carbon budget. Climate Change is a ~~global~~ problem which is having a significant impact on the polar area of Antarctica There are other prevalent threats - mining, tourism and fishing and whaling which all must be mitigated in order to protect Antarctica's fragile ecosystem.

In Antarctica and the Southern Ocean (Antarctic Convergence Zone) the temperature has been rapidly rising, causing devastating impacts. It has increased by 1°C since 1955, and in some areas 3°c, which is the largest rate in the world. This has led to many regional environmental problems, such as melting of the ice sheet in the West, which leads to increased sea levels. This therefore adds to climate change - as a positive feedback loop. However in the East, the ice has been thickening, which suggests that the threat of climate change is not the most significant as it only affects some areas. ~~It is~~ Arguably, it is becoming an increasingly prevalent problem and will have a large global

[AO1] [AO1] [AO2] [AO1] [AO1] [AO1] [AO1] [AO2]

impact in the long term. In 2021, an iceberg of 4000km² was carved off of Ronne iceshelf, which (AO1) exacerbates the negative impact of the changing carbon budget as carbon dioxide sequestered in the ice may have been released. This means that Antarctica is not only shrinking, but climate change is also a global problem that is not being successfully mitigated, merely monitored (e.g. IPCC). (AO1) (AO2)

There are numerous other significant threats to Antarctica, many of which are exacerbated by the increased population growth and globalisation (AO2) of the world. The Antarctic Treaty System, (AO1) which was set up in 1959, aims to combat these threats (it represents 80% of the world's population). Antarctica is rich in minerals like (AO1) gold and iron, and due to exploitation, the Madrid

Extra space Protocol was signed by all member countries to protect these natural resources - it has been (AO2) successful. However, it runs out in 2048, which will lead to huge problems as countries like Russia (AO2) are unlikely to renew it. Similarly, after the creation of the first Marine Protection Area (AO1) (MPA) in 2012, Russia has blocked plans for any more, despite NGOs like Greenpeace, organising (AO1) a meeting on it in Australia. These threats

Do not write outside the box

> have a detrimental impact on Antarctica. [AO2]

[AO2] In conclusion, I agree with the statement to a large extent as changes in the carbon cycle (climate change) are significantly harder to mitigate than the other threats that Antarctica faces. However, it is also important to acknowledge that the regional threat of mining and fishing will [AO2] became increasingly prevalent as the threats from globalisation cause countries to feel the need to overexploit.

L4

36

End of Section A

Clarity and focus on the threat from climate change with supporting evidence; considers ways of tackling the threat.
A clear conclusion.

Limitations of less successful responses

Where students did not perform as well in the essay questions, the opposite characteristics were often evident - namely, no clear position statement, copious AO1 retelling case study knowledge without application and an absent, vague or unsubstantiated conclusion.

In each of the essays there were some misunderstandings and errors. In Q1.4 some students failed to consider threats beyond climate change or drifted into a discussion of the causes of climate change such as deforestation of the rainforests. (The existence of polar bears in Antarctica was an all too frequent worry!).

In Q2.4, there were some stereotypical and out-dated perceptions of place presented. The biggest issue with Q3.5 was being able to contrast the importance of physical and human factors or the selection of urban areas that were too large to contrast effectively. Q4.5 also had some rather stereotypical ideas that were simplistic and suggested a lack of real understanding.

The biggest issue with responses to Q5.5 was that of recounted case studies of water transfer schemes without discussion of the sustainability aspect that the question was probing.

The example below is a student response to Q1.4 and whilst is presents a view it is clear there is a lack of depth and detail with regard to the subject content. It just gets into Level 2 and was awarded 6 marks.

0 1 . 4 'The impacts of changes in the carbon cycle represent the greatest threat to Antarctica and the Southern Ocean.'

How far do you agree with this view?

[20 marks]

I strongly agree with this statement, 'The impacts of changes in the carbon cycle represents the greatest treat to Antartdica and the southern Ocean'. (A02)

The carbon cycle has a huge impact on the climate and When not properly managed it is one of the main drivers of global warming. (A01) higher global temperatures will result in ice melting the which threatens Antartica greatly. (A02)

(A02) changes in the carbon &cycle may also influence ocean temperatures, if the southern ocean temperatures fluxuate to much it will effeoct the aquatic life their either this (A02) could have catistrophic impacts on areas where fishing is its main income.

Turn over ▶

However changes in the climate cycle is not the only the threat to Antartica, **AO1** Tourisum also threatens this fragile cold environment, as the wild life their have very little contact with the rest of the world they are susepible to diseases we may carry, for example a tourist once touch a whale passed on a certain bacteria what killed a large group of whales. **?**

Although I do not believe this is as great as a Extra space ~~threat~~ threat as changes to the climate cycle as I stated previously I believe it is the greatest threat to Antartica and the southern ocean. **AO2**

L2

level 2, manages to offer a view with some support

Synoptic question

These questions assess knowledge, understanding applied to links across specification content

The synoptic question appears once each series in either Paper 1 or Paper 2 and makes links across specification content.

The question illustrated above was the synoptic question linking between the Physical and Human geography content of the specification. It was approached well by the vast majority of students and scored the highest mean mark of all the 20 mark questions.

Students were able to make the links between the carbon cycle, climate change and the extent of the threats to Antarctica and the Southern Ocean as well as considering other threats facing the region.

Qualities seen in more successful responses

In Q1.4 there was often very detailed knowledge of the threats alongside the organisations and policies / agreements being put in place. Many students could make effective connections to the physical side of the changes with good knowledge of systems, feedback loops and dynamic equilibrium. The longer-term future was also a feature of many responses and students considered the possibility of Antarctica being 'opened up' to exploitation of fossil fuel and mineral resources as more ice melts and protocols come to the end of their life span. There was certainly good evidence of synoptic thinking in the responses to this question.

Limitations of less successful responses

Those students who did not respond so well in this question often had a very basic or absent understanding of the carbon cycle and its effects on Antarctica, sometimes their discussion was directed more to the worldwide causes of climate change or they failed to appreciate the range of other threats in the region.

Further support

Mark ranges and award of grades

Grade boundaries and cumulative percentage grades are available on the results statistics page of our website.

Enhanced Results Analysis (ERA)

Use our exam results analysis tool to create and customise as many different reports for comparison as you like.

Professional development

Attend one of our feedback courses where you can review example responses from students and commentaries from our examiners.

Contact us

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