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June 2011

GCE Geography 6GE01 01

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June 2011

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Introdcution

This paper provided candidates with many opportunities to showcase their understanding of areas of core geographical knowledge, including the causes of climate changes, the factors underpinning globalisation, sea-level rise mechanisms, demographic processes and the global distribution of tectonic hazards.

There was little evidence of candidates having insufficient time to complete the paper, and most provided good coverage for all the topics examined.

Excellent use was often made of some contemporary case studies, including the Japanese tsunami and Gulf of Mexico oil spill.

Question 1(a)(i)

Very few failed to identify the boundaries correctly.

Question 1(a)(ii)

Very few failed to identify the boundaries correctly.

Question 1(b)

This question proved to be a good discriminator. Some answers made reference to the San Andreas Fault, but failed to develop the statement. Some candidates were unsure of movements at plate margins or gave very simplistic descriptions using poor terminology. The best answers provided a concise account employing appropriate AS-level terminology.

(b) Describe the processes at boundary type **Z** that cause earthquakes.

(3)

Boundary Z is a conservative plate boundary where two plates move alongside each other. Tension can build when the two plates get stuck or grind into each other causing an earthquake to release that energy through seismic waves as the plates continue to move past each other.

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Examiner Comments

This answer uses appropriate terminology and shows the candidate has a clear understanding of the nature of the hazard risks distributed along a conservative boundary.

(b) Describe the processes at boundary type **Z** that cause earthquakes.

(3)

At boundary type Z the two convergence plates rub together. This causes friction as the surfaces move against one another thus creating a quake beneath the earth.

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Examiner Comments
This answer is extremely imprecise and only scored 1 mark.

Question 1(d)

Most candidates understood why volcanoes occurred in the Philippines and made clear reference to plate names, movements and the processes at destructive boundaries. However, many candidates wrongly thought that it is the lighter continental plate (the Eurasian plate) that is subducted by the denser oceanic plate. Others failed to refer to melting of the subducted plate as the source of volcanic lava. Some thought the volcanoes in the Philippines are caused by 'constructive' rather than 'destructive' plate boundaries, and there was much confusion between 'conservative' and 'constructive' plate boundaries. Sadly, many good candidates omitted to explain why volcanoes did not occur at the conservative boundary at the Californian coast. Identification of the human aspects of hazard risk was acceptable here (although the majority addressed the physical dimensions exclusively).

(d) Explain why volcanic hazards are common in the Philippines but not on the Californian coast.

a hazard poses threat to human life or property. (5)

volcanoes are a hazard in the philippines due to the plate tectonics there. It is a destructive plate boundary where the denser oceanic Philippine plate is subducted under the Eurasian plate. The plate this results in volcanoes such as Mt Pinatubo which erupted in 1991. killing 600 people

80% of volcanoes are found on destructive plate boundaries. California however is on a fault line more at a conservative boundary where the North American and Pacific plate slide past each other and lock causing earthquakes but not volcanoes.

↳ such as the 1989 San Francisco EQ

The difference in plate tectonics and boundaries is why California isn't at risk from volcanoes.

(Total for Question 1 = 11 marks)

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Examiner Comments

In-depth knowledge of physical processes is not required by this paper. However, candidates should be able to provide some outline of the key hazards they are required to investigate (rather than merely name them - after all, not all volcanic hazards are the same!). This answer is an appropriate guide to what is expected of candidates - around 10-20% of the cohort provided this level of accurate detail.

Question 2(c)

This question laid bare many candidates' insecure knowledge of the key mechanisms that underpin a critically important climate change impact. It is important that candidates recognise:

the primacy of thermal expansion (as the main process responsible for current sea-level rise) and can also say a little about how it operates.

That the melting of land ice, not just 'Arctic ice', is another main concern. Sea ice does not, on melting, lead to a eustatic sea-level rise. The best answers stressed this and also volunteered permafrost and glaciers as examples of terrestrial ice.

Weakly-focused answers explained how GHG emissions lead to climate change and said little about *why* this would lead to a sea-level rise.

(c) Explain how global warming leads to rising sea levels.

(4)

Global warming is leading to a rise in global temperatures (a predicted 2°C increase by 2050) and as the world heats, the ice stores around the world melt. The biggest are the ice caps, for example the ice at the arctic is disappearing. Glaciers and other frozen water like permafrost is melting, adding to the water in oceans and creating sea level rise. Thermal expansion (where water molecules expand) is also raising sea levels.

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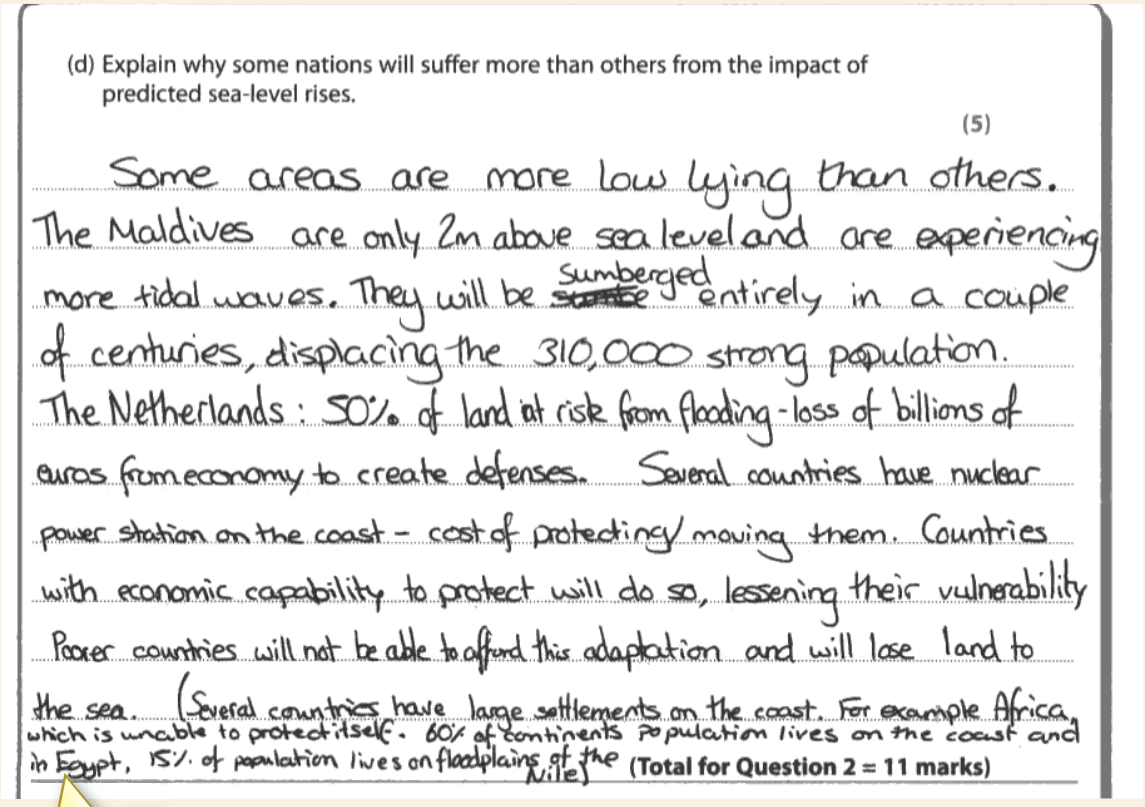
Examiner Comments

This answer scored full marks, showing a sound understanding of how climate change impacts on Earth's oceans.

Question 2(d)

Many excellent, wide-ranging answers were seen. Candidates dealt with a range of human and physical themes with good supporting evidence usually provided. Limited credit was gained from simply listing the names of 'low-lying' nations unless some additional quantification of the risk was offered (what percentage of land might be affected, for instance).



(d) Explain why some nations will suffer more than others from the impact of predicted sea-level rises.

(5)

Some areas are more low lying than others. The Maldives are only 2m above sea level and are experiencing more tidal waves. They will be ~~some~~ submerged entirely in a couple of centuries, displacing the 310,000 strong population. The Netherlands: 50% of land at risk from flooding - loss of billions of euros from economy to create defenses. Several countries have nuclear power station on the coast - cost of protecting/moving them. Countries with economic capability to protect will do so, lessening their vulnerability. Poorer countries will not be able to afford this adaptation and will lose land to the sea. (Several countries have large settlements on the coast. For example Africa, which is unable to protect itself. 60% of continents population lives on the coast and in Egypt, 15% of population lives on floodplains of the Nile)

(Total for Question 2 = 11 marks)

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Examiner Comments

This answer scored full marks by covering a range of themes with good supporting detail.

Question 3(b)

Not many candidates referred to the percentages provided in the resource. Natural causes, tipping points and 'emissions still rising (China)'were popular themes that allowed some answers to reach full marks. While many candidates scored well here, there was also evidence of some worryingly widespread misconceptions. A large number believed that carbon dioxide 'accumulates' in the ozone layer (over and over again, candidates tried to implicate the ozone layer as being responsible for global warming). They also wrongly asserted that it is UV radiation that heats the atmosphere (it has negligible impact on temperatures within the troposphere). Another common misconception was that global warming increases rainfall and, therefore, this is 'filling up the Earth's oceans'. Examiners reported that it was worrying to see such fundamental errors made by a significant number of candidates.

Question 3(d)

Many good answers were seen here, correctly focused on the ecological/environmental aspect of the question. Some weaker responses strayed from the Arctic areas and others were unrealistic as to the ecological nature of the Arctic. There was also some confusion as to the meaning of 'albedo', with many saying that it 'increased' as a result of melting snow and ice. 'Irreversibility' was not always explicitly addressed, even in the highest scoring answers.

Some weaker candidates became distracted - they mentioned the impact of flooding on tundra coasts with sea level rise then carried on in the wrong direction and focused more on impacts of sea level rise elsewhere in the world, usually Bangladesh.

(d) Explain why the 'business as usual' projection shown in Figure 3 may bring irreversible ecological and environmental impacts to Arctic areas.

(5)

This sceneria means 'to do nothing' with emissions left to increase. The Arctic region will see both vegetation and species shift northwards. The coniferous forest encroaching on tundra and ice dessert. Marine species such as walruses, polar bears will to die out or become endangered due to changes in their habitats. Freshwater fisheries will become endangered. Thawing of permafrost will lead to large quantity of methane released, a major greenhouse gas. A loss of hunting culture for the indigenous people.

(Total for Question 3 = 10 marks)

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Examiner Comments

This answer scored 4 marks. While the focus and detail are fine, it is a shame that nothing was said about irreversibility (e.g. by mentioning a tipping point being reached).

Question 4(b)

Answers to this question divided into two camps - those who asserted that a lack of money for some countries meant little demand or ICT infrastructure; and those who could provide a more sophisticated analysis that considered the nature of different economies (primary or tertiary industries, for instance) and the different kinds of ICT user demands that might result.

(b) Suggest reasons for the difference shown in ICT use between Group 1 and Group 2 countries.

(4)

Grcup 1 and ~~nape~~ 2 experience different levels of industrialisation resulting in different levels of ICT used. Grcup 1 industrys ~~are~~ consist of tertiary and secondary sectors which ~~the~~ the use of ICT will be key where as grcup 2 is mostly primary sectors such as farming where ICT is not used. The level of government and money is different as the strong governments in grcup one means the country is developing at a faster rate making ICT key ~~to~~ in comparison grcup 2 do not have the financial support needed to get up ICT. Grcup 2 countrys are known as 'switched-off' places compare to Grcup 1 ~~where~~ which consists of many 'switched-on' countrys.

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Examiner Comments

This answer scored full marks by providing some reasoning grounded in human geography knowledge.

Question 4(c)

The idea of 'physical' factors was generally poorly understood: many talked about countries being 'too far away' from other places to communicate (a surprising misapprehension, given how much is made of the 'shrinking world' effect: after all, Australia and the UK are a long way apart, yet this is no obstacle for Facebook friends). The better answers focused on continental interiors and extreme environments as a brief analysis of physically 'switched-off' places. Responses to the second part were much stronger, with many able to discuss China or North Korea as mini-case studies. Some good up-to-date examples were also given, like Egypt and Syria. Many were able to cite political groupings as another explanation.

Question 5(a)(b)

Part (a) was uniformly well answered.

Graph description was accurate with good use of data, almost every candidate identified the virtual mirror image of females and total, only a few misread the key and reversed the male/female trend.

In part (b) some good understanding was shown of a range of demographic influences by many candidates. Inevitably, there were a few misconceptions amongst those who did not think carefully about the source material they had been shown (e.g. those who thought the post-war baby boom was responsible for the recent increase in centenarians).

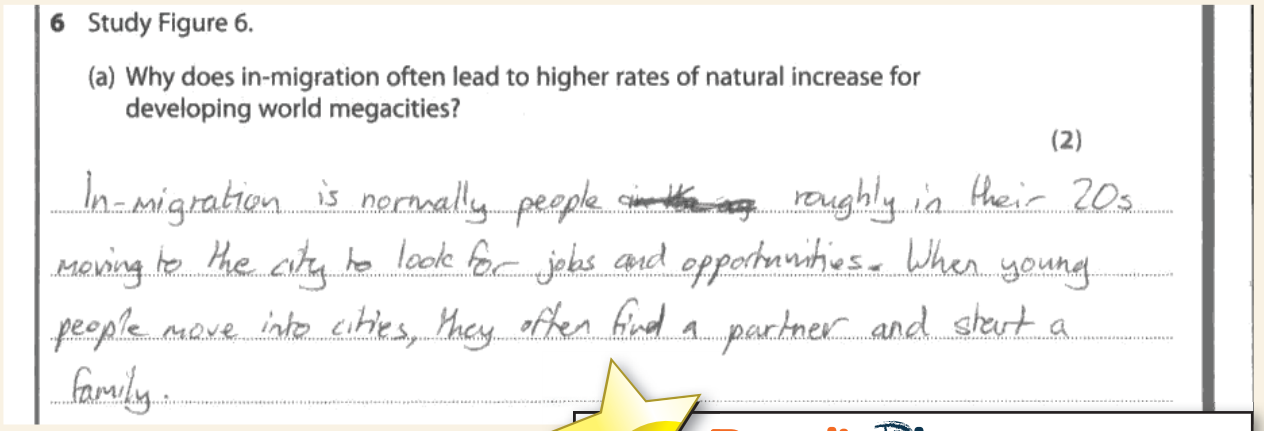
One candidate identified that the graph encompassed people born between 1811 and 1911 and provided an excellent 'then and now' comparative explanation.

Question 5(c)

Many answers properly linked fertility trends to economic changes through time and knew plenty about the increased status and rights of women, which was pleasing to observe. This question was generally well-answered, although many were at times clearly writing about changes to the birth rate rather than fertility rate (for instance, delaying having children until a war ends may not actually impact on a woman's lifetime fertility: although this idea was credited by examiners, it would be good to see more geographers showing knowledge of the important distinction between the crude birth rate and the fertility rate).

Question 6(a)

This question was poorly answered by the majority of students. A gap in their human geography knowledge was exposed - very few understood the vital link between youthful in-migration to urban areas and fertility rates.



6 Study Figure 6.

(a) Why does in-migration often lead to higher rates of natural increase for developing world megacities?

(2)

In-migration is normally people ~~in the age~~ roughly in their 20s moving to the city to look for jobs and opportunities. When young people move into cities, they often find a partner and start a family.

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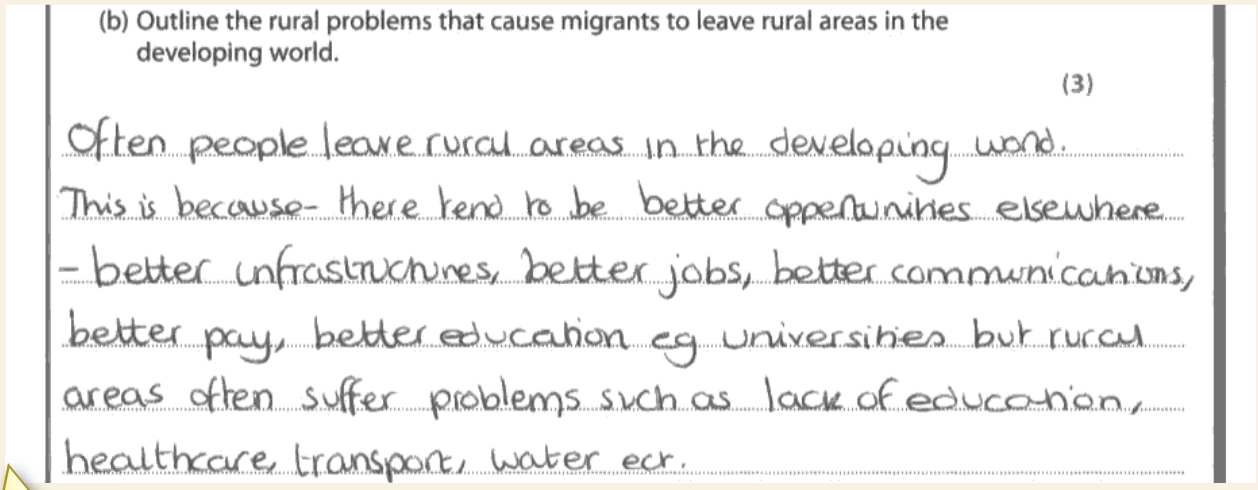
Examiner Comments

This answer scored 2 marks: however, it was amongst a worrying minority that did so.

Question 6(b)

Answers tended to be rather generic ('lack of jobs, lack of services): only a minority showed any 'global perspective' when outlining the processes of rural out-migration that drive megacity growth (such as the mechanisation of farming by agribusinesses). It is a pity that most A-level students seem to have no knowledge of rural-urban migration beyond what is taught at GCSE level. More worryingly, there was 'word blindness' for many, with the question focus on 'rural problems' overwhelmingly ignored in favour of an account of urban attractions.



(b) Outline the rural problems that cause migrants to leave rural areas in the developing world.

(3)

Often people leave rural areas in the developing world. This is because- there tend to be better opportunities elsewhere - better infrastructures, better jobs, better communications, better pay, better education eg universities but rural areas often suffer problems such as lack of education, healthcare, transport, water ecr.

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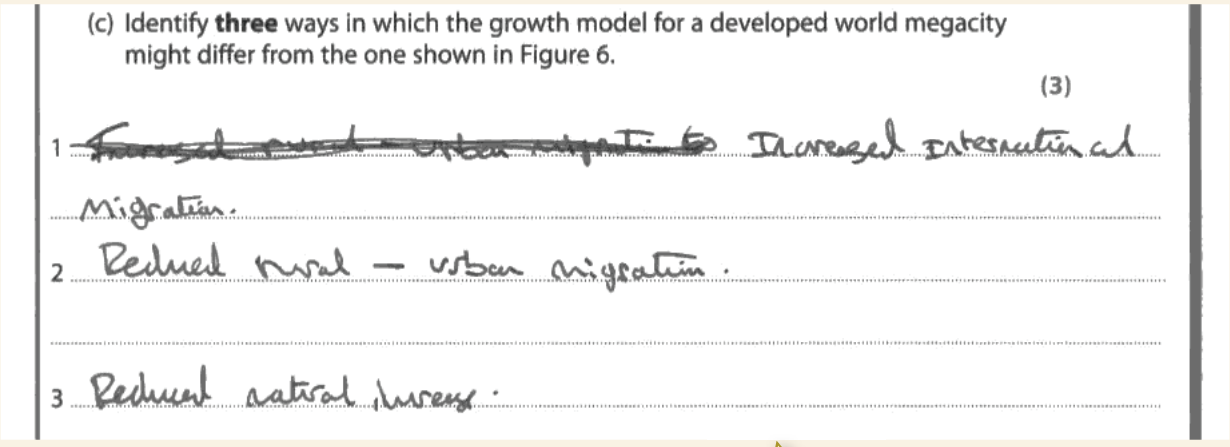
Examiner Comments

This answer is poorly focused on 'rural problems' and instead discusses urban attractions. Only 1 mark was awarded.

Question 6(c)

Intelligent suggestions were made by many candidates (urban-rural migration, less natural increase etc.).



(c) Identify **three** ways in which the growth model for a developed world megacity might differ from the one shown in Figure 6.

(3)

1 ~~[illegible]~~ Increased international migration.

2 Reduced rural – urban migration.

3 Reduced natural increase.

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Examiner Comments
This answer scored full marks.

Question 6(d)

Like 6(b), this question was often poorly-answered. Simplistic answers along the lines of 'bigger cities = more jobs, more transport, more schools, etc.' were self-limiting and only gained up to 2 point marks. Good answers, as expected at A-level, understood that megacities are enormous settlements of more than 10 m people, and are places where FDI is often concentrated and key economic functions located. Reputation also aids the cumulative growth processes that result in runaway and disproportionate megacity growth.

(d) Explain why megacities usually attract more migrants than smaller cities.

(4)

Megacities tend to be the hotspots for financial investment. TNCs tend to set up their businesses and HQs in megacities as there is a larger consumer market and bigger workforce. Megacities, therefore, offer more ~~career hunter~~ career opportunities and ~~server~~ services than smaller cities. Megacities are more well-known than smaller cities, often migrants will have only heard about the megacity.

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Examiner Comments

An appropriate A-level response that gained full marks. The candidate is drawing on a range of ideas here, including TNCs and global network theory, and not just knowledge of megacity sizes. Some 'joined-up' understanding of the significance of megacities is always good to see, given that this section of the Unit is titled 'going global'.

(d) Explain why megacities usually attract more migrants than smaller cities.

(4)

With megacities, there is a better chance of finding a job that pays well than a smaller city, which may only have low pay, hard working jobs. Megacities give the possibility of having a better quality of life, with more services and sanitation, whereas a smaller city may only have one or the other.

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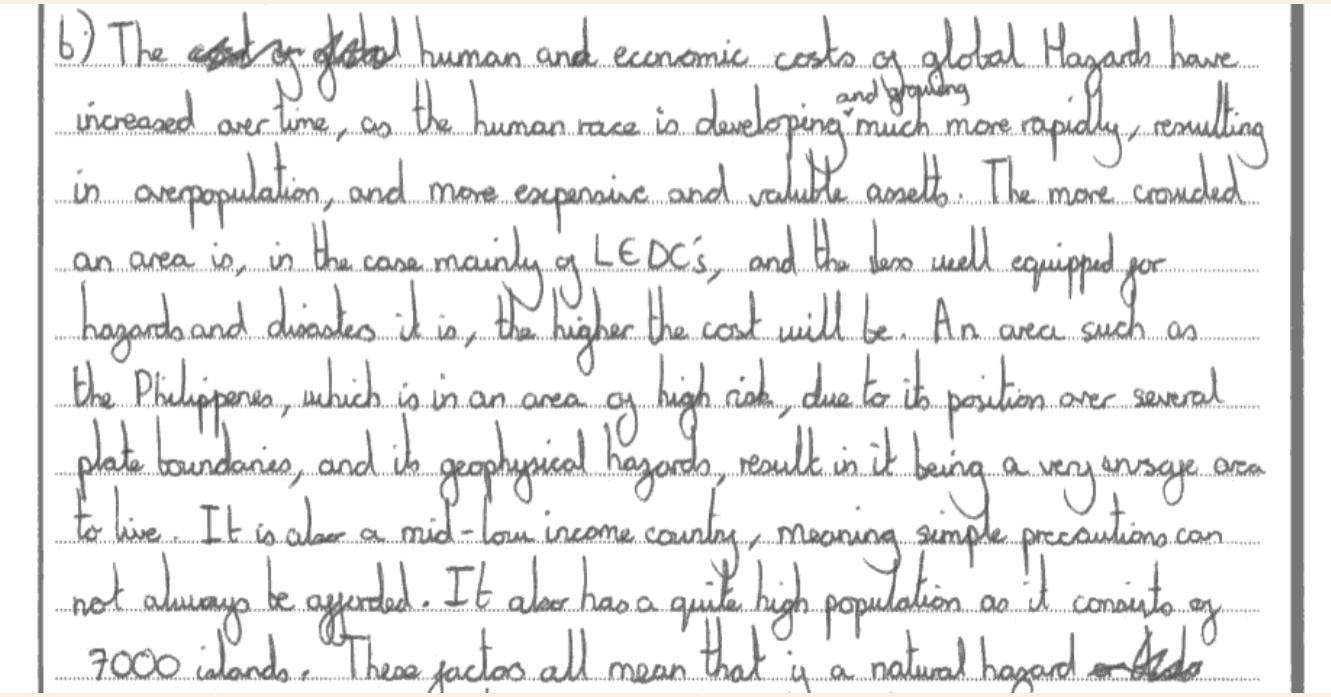
Examiner Comments

A weak answer showing little progression beyond earlier Key Stages.

Question 7

7a Good answers often made some excellent use of the resource; the discriminator here was if candidates fully picked up on the word 'challenging'. Higher level answers referred to the resource frequently and offered ideas about the vulnerability of specific industries. However, many did not fully hone in on the 'challenge' issues. Those that did mention high costs, uncertainty, difficulties in preparing for anomalous weather conditions and their effects in place specific settings scored highest. There was good knowledge of effects in the Americas. Weaker candidates frequently attempted to describe the anomalies shown on the map, but often this was so generalised as to be meaningless ('Africa is drier, wetter, warmer' or 'Australia has more storms and droughts and fires'). It also became clear that a lot of candidates had not studied the map carefully and had carelessly assumed it was Pacific-centred, which is often the case when studying El Nino and La Nina. South America was mistaken as Australia and Africa as South America.

7b Some excellent answers addressed rising risk and insecurity on a global scale, contextualising population and asset growth in a world of increasing risk and vulnerability. As usual, weaker candidates insisted, irrespective of the actual question set, on re-producing a pre-prepared essay on the theme of 'LEDCs suffer disasters, MEDCs don't' - even though this is not a teaching focus of the current Specification. The key problem appears to be that many candidates only view 'human costs' in terms of deaths. While few people may have died in the UK floods of 2007, the insurance costs reached £3 billion, a measure not just of high levels of property damage, but also of displacement, loss, interrupted education, emotional stresses, etc. In other words, the human costs were extremely high. Similar arguments can be made about the flooding of New Orleans. Just because the death toll was relatively low, this does not negate a great deal of other kinds of human suffering! The bar needs to be raised in terms of what we hope to see weaker candidates achieving in the future. In (sometime stark) contrast, the best answers made links with themes such as rising hydro-meteorological hazards (climate change links), the growth of population ('coastalisation' and the use of marginal land) and general increases in wealth and investment globally (in line with emerging markets).



b) The ~~cost~~ effect of global human and economic costs of global Hazards have increased over time, as the human race is developing and growing much more rapidly, resulting in overpopulation, and more expensive and valuable assets. The more crowded an area is, in the case mainly of LEDC's, and the less well equipped for hazards and disasters it is, the higher the cost will be. An area such as the Philippines, which is in an area of high risk, due to its position over several plate boundaries, and its geophysical hazards, result in it being a very unsafe area to live. It is also a mid-low income country, meaning simple precautions can not always be afforded. It also has a quite high population as it consists of 7000 islands. These factors all mean that if a natural hazard ~~strike~~

occured, there would be high levels of human casualties and loss of livlihood and homes. In an Area such as Caliyornica, an LEDC, while there is still a high population and risk (due to the San Andrea fault line), the government have enough money to afford shelters and other precautions for people. The area however is quite developed, so the loss of services and buildings could cause large economic losses, due to fires, or loss of power stations, or any other loss of expensive grids or buildings.

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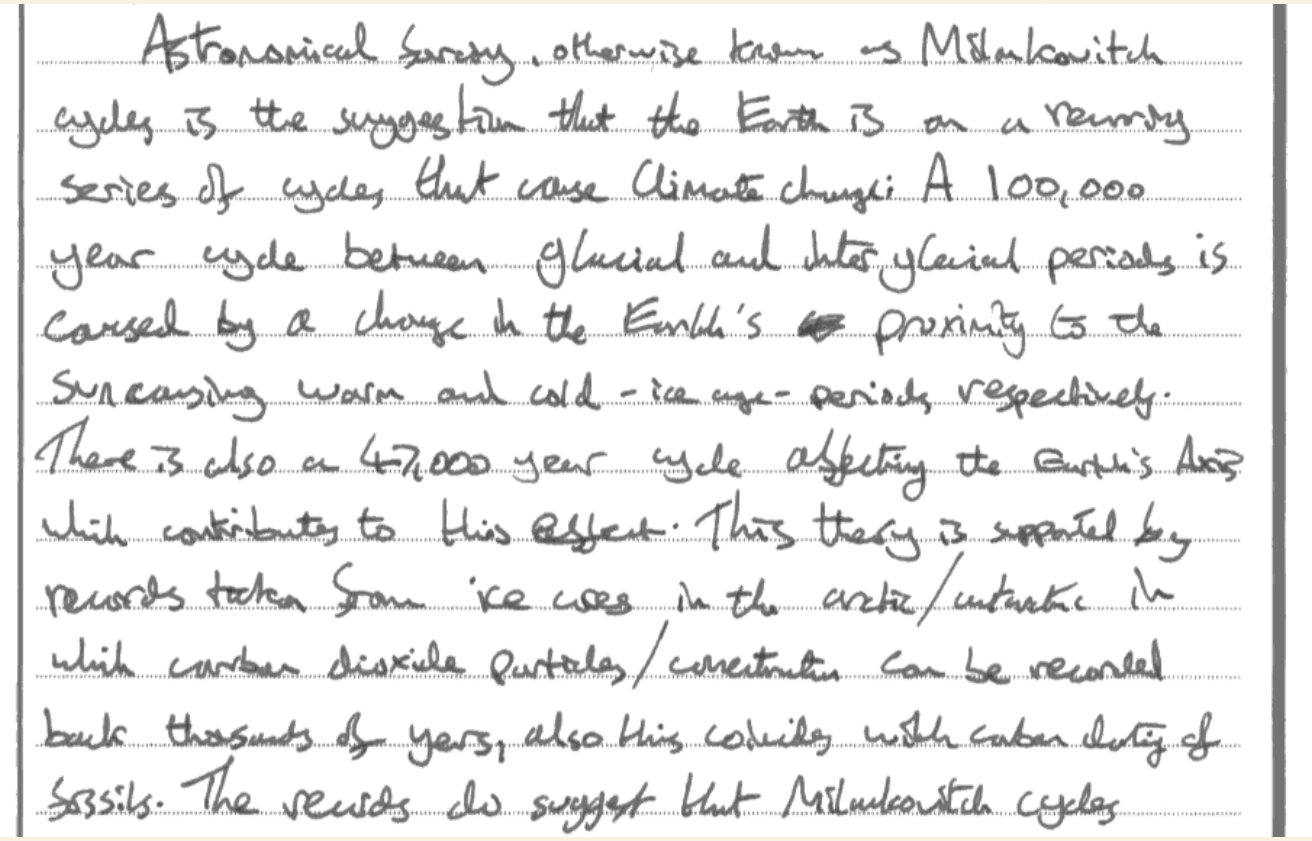
Examiner Comments

Here, a weaker candidate has (all too predictably) drifted into a 'default setting' argument ('LEDCs suffer, MEDCs don't') that contradicts the title of the essay (which asks for an account of rising costs everywhere). This is taken from a Level 2 response.

Question 8

8a Excellent links were often made to the resource, demonstrating a good grasp of the question, especially in relation to population increases, pressure on resources and increased global warming implications. Better candidates were able to also link political and intergovernmental agreements to the raised level of challenge and could identify the countries that are key sources of the challenge - especially NICs, China and the USA as major players.

8b Many students were well versed in the causes of natural climate change and their answers were particularly well-structured with some in-depth explanation offered. A significant number covered astronomical forcing, orbital eccentricity, volcanic eruptions, and sunspots (employing various degrees of detail). There was, however, some muddling with anthropological causes amongst weaker candidates.



Astronomical forcing, otherwise known as Milankovitch cycles is the suggestion that the Earth is on a recurring series of cycles that cause climate change. A 100,000 year cycle between glacial and interglacial periods is caused by a change in the Earth's proximity to the Sun causing warm and cold - ice age - periods respectively. There is also a 41,000 year cycle affecting the Earth's Axis which contributes to this effect. This theory is supported by records taken from ice cores in the arctic/antarctic in which carbon dioxide quantity/concentration can be recorded back thousands of years, also this coincides with carbon dating of fossils. The records do suggest that Milankovitch cycles

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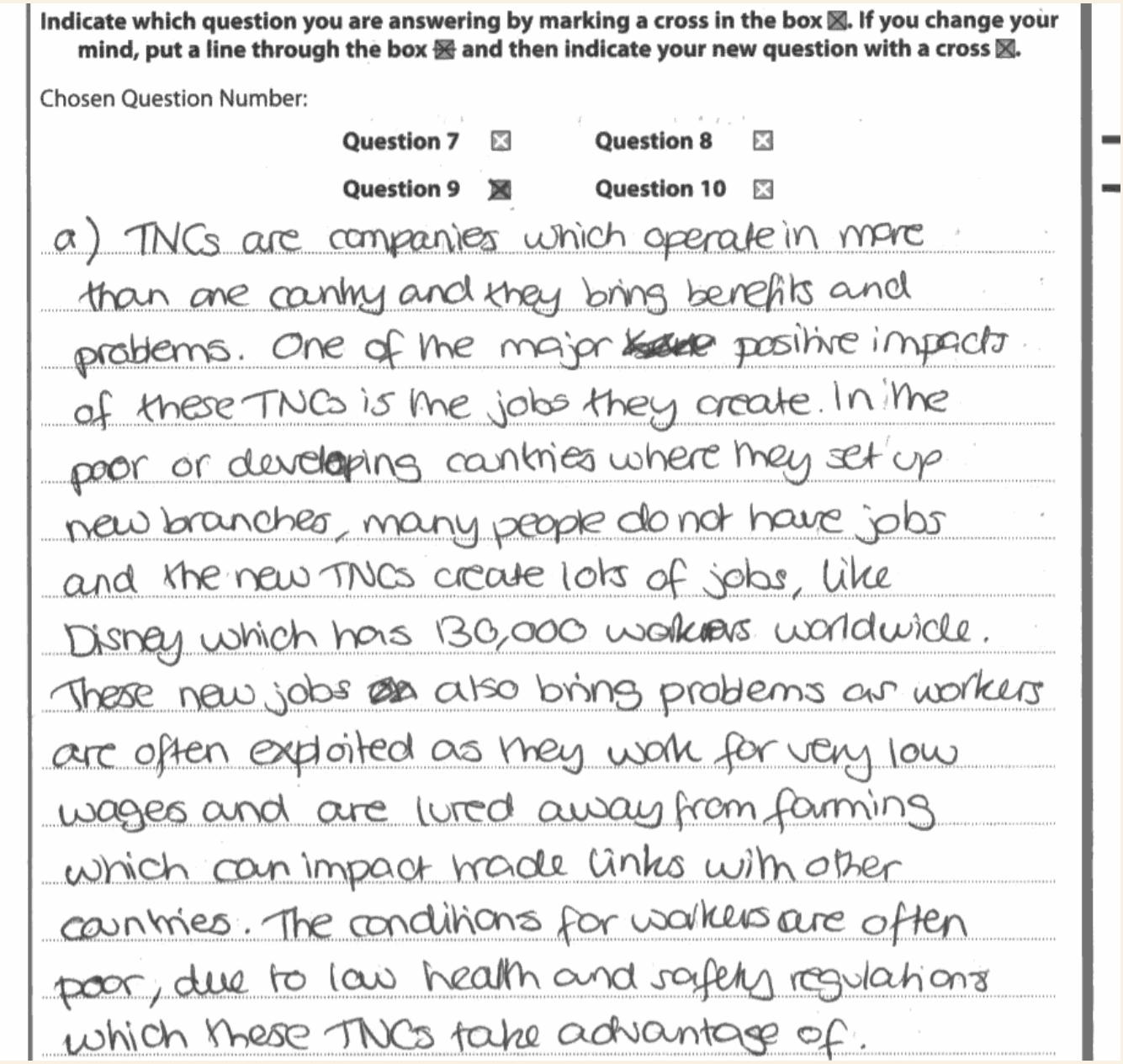
Examiner Comments
This is an extract from a Level 4 answer.

Question 9

9a Potentially excellent answers to this question sometimes only scored 7 marks (level 2) because no mention was made of Figure 9. The Assessment Objectives that are linked with part (a) of the essay questions require that candidates do more than simply recall knowledge. It was a pity to see quite so many good candidates failing to meet the assessment criteria on this occasion. Luckily, they tended to score highly in part (b)

9b Candidates generally answered this question well. The best answers often explained the role of TNCs (following on from part (a) of the question) and then extended their work into the technological and political fields. Some good answers introduced a time line of developments in transport, communications and technology. Those that took the chronological approach found that the structure helped them provide a more comprehensive response. Many explored the idea of the media accelerating globalisation and higher level answers explained in detail the glocalising strategies that TNCs adopt in emerging markets. Weaker answers had a more limited range, typically describing only transport developments and electronic communications.



Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen Question Number:

Question 7 ☒ **Question 8** ☒

Question 9 ☒ **Question 10** ☒

a) TNCs are companies which operate in more than one country and they bring benefits and problems. One of the major ~~issues~~ positive impacts of these TNCs is the jobs they create. In the poor or developing countries where they set up new branches, many people do not have jobs and the new TNCs create lots of jobs, like Disney which has 130,000 workers worldwide. These new jobs ~~are~~ also bring problems as workers are often exploited as they work for very low wages and are lured away from farming which can impact trade links with other countries. The conditions for workers are often poor, due to low health and safety regulations which these TNCs take advantage of.

However, the income they generate for these countries as a whole is very large. The selling of products and the grants which are often given to the host countries benefit the economy largely (for example Fiat gave grants to the area when setting up a new branch in Sao Paulo). The new TNCs often create a

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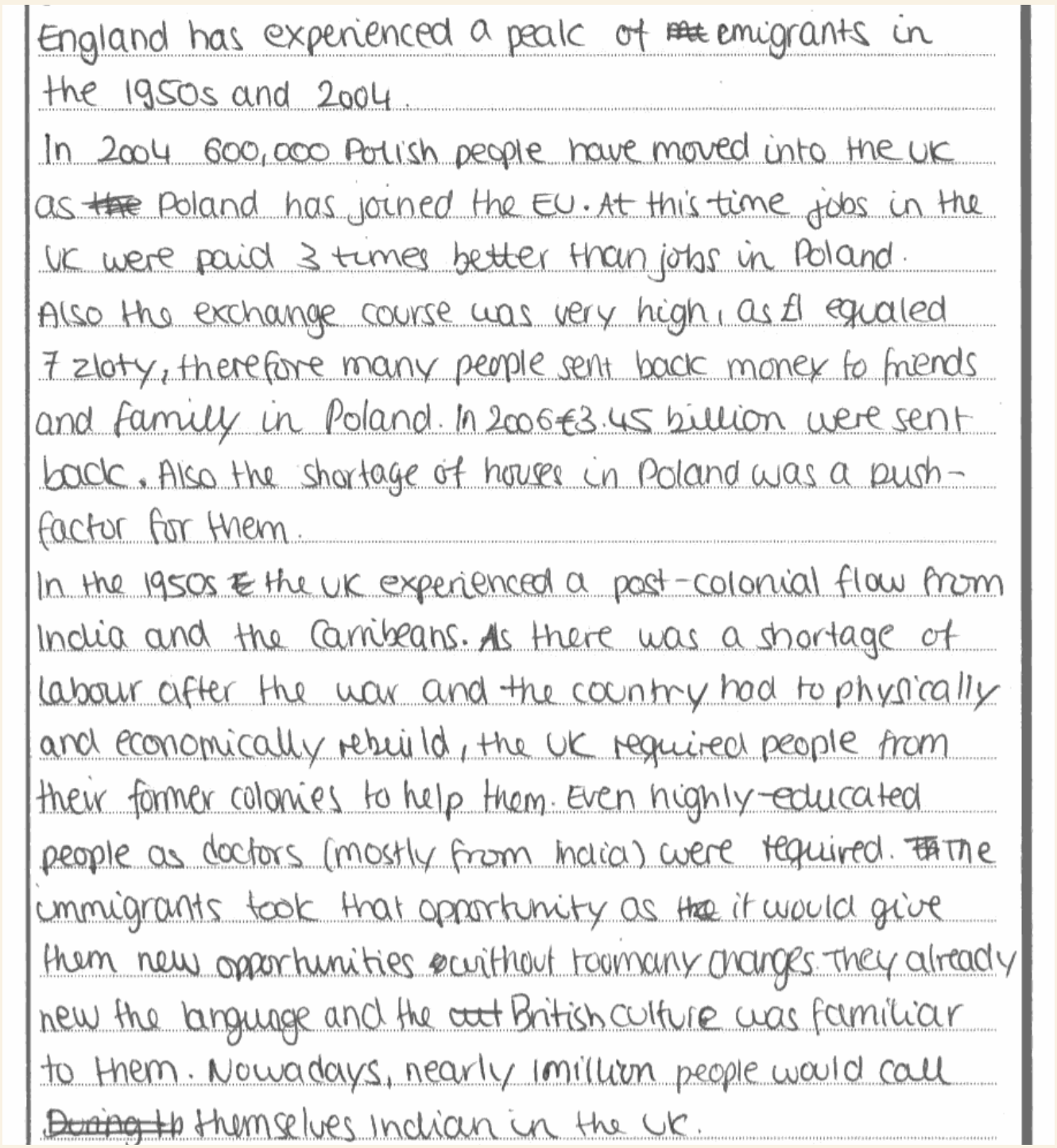
Examiner Comments

This candidates had clearly rehearsed for a hoped-for part (b) essay question dealing with TNCs - and was clearly writing 'on auto-pilot' here. The candidate continued like this for more than 2 pages but, sadly, made no reference to the Figure at all. Use of the resource is a fundamental requirement in part (a) of Section B questions, or else the Assessment Objectives for geography AS-level are not being met. This candidate only scored 7 marks (top of Level 2) as a direct result.

Question 10

Q10a. A division was seen here between those that just described the resource and those that could add explanations and extended knowledge to their descriptions. The overall impression given was that this part of the syllabus is well taught. Detailed comments on migration towards the Spanish sun and the global pull of excellent UK universities were often included, as was the idea of EU expansion.

Q10b. Most answers referred to colonial links and EU enlargement. Some better candidates included Holocaust Refugees, Ugandan Asians in the 1970s and recent reverse (credit crunch) flows from Poland in particular. Some answers started with the slave trade and continued on through time. Weaker candidates typically provided basic or inaccurate descriptions of A8 EU accession and migration from Poland.



England has experienced a peak of ~~the~~ emigrants in the 1950s and 2004.
In 2004 600,000 Polish people have moved into the UK as ~~the~~ Poland has joined the EU. At this time jobs in the UK were paid 3 times better than jobs in Poland. Also the exchange course was very high, as £1 equaled 7 zloty, therefore many people sent back money to friends and family in Poland. In 2006 €3.45 billion were sent back. Also the shortage of houses in Poland was a push-factor for them.
In the 1950s ~~&~~ the UK experienced a post-colonial flow from India and the Caribeans. As there was a shortage of labour after the war and the country had to physically and economically rebuild, the UK required people from their former colonies to help them. Even highly-educated people as doctors (mostly from India) were required. ~~The~~ The immigrants took that opportunity as ~~the~~ it would give them new opportunities ~~&~~ without too many changes. They already new the language and the ~~cult~~ British culture was familiar to them. Nowadays, nearly 1 million people would call ~~During th~~ themselves Indian in the UK.

During the world wars many ~~Germ~~ germans (especially Jews) moved to England as they were politically persecuted.

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Examiner Comments

This is an extract from a Level 4 response that shows good knowledge of post-colonial flows.

Paper Summary

General observations include:

Weaker candidates struggled to produce much content that was merit-worthy in many question sub-sections; whereas well-revised and clued-up candidates scored extremely well across the entire paper.

For the first time, there was a proper spread of essay choices. Less than a quarter of the cohort attempted 'the hazards question' (question 7). This was due to (i) the focus on El Nino events in question 7 (which many candidates struggle with) and (ii) the popularity of essay questions 8 and 9, both of which tested core areas of the Specification in a straight-forward way.

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