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Examiners' Report
June 2022

GCSE Geography A 1GA0 02

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Introduction

This was the fourth series of examinations for Pearson Edexcel GCSE (9-1) Geography specifications, but the first one to be sat by a full entry since June 2019. This Examiner's Report is intended to provide an insight into performance on Paper 2 – The Human Environment component (1GA02) – in particular, analysing the majority of questions in terms of what went well, where misconceptions / errors were common and where underperformance was particularly evident. Exemplar responses from actual scripts have been used to exemplify good practice, how the mark scheme was applied and highlight common pitfalls encountered by candidates.

The structure of the paper was different for the June 2022 series: in September 2021, the Department for Education published the outcomes of the consultation on proposed summer 2022 adaptations, confirming the implementation of optionality on 1GA02:

Current structure

Students answer questions on:

- Section A: Changing cities
- Section B: Global development
- Section C: Resource management (this topic has optional questions)

Structure for Summer 2022 only

Students answer questions on:

- Section A: Changing cities **AND EITHER**
- Section B: Global development **OR**
- Section C: Resource management (this topic has optional questions).

Therefore, the adapted paper for 2022 required candidates to attempt two sections, worth a total of 64 marks; the 4 marks awarded for spelling, punctuation and grammar (SPAG), and use of specialist terminology were moved from (the now optional) Section C to the compulsory Section A.

As usual the paper included multiple-choice questions, short open, open response, calculations and 8 mark extended writing questions. The exam command words which are used in this paper are defined in the specification. Each of the questions is mapped to one or more of the Assessment Objectives (AOs).

NB: It was noted during the pre-standardisation meeting, where the mark scheme is finalised, that there were two possible correct responses for 1a(i). This was unintentional, and steps were taking during the marking window, and after all of the candidates' scripts had been marked, to ensure that the correct mark was applied and no candidate was disadvantaged by this issue. More details about the check that were carried out to ensure that can be found on the following page of this report.

At the time of writing this report, data indicates that the size of the cohort sitting this paper had increased by approximately 7% in comparison to 2019; performance on this paper was broadly similar to 2019, with a mean mark of 31/64 (48%) compared to 48/94 (51%) in 2019. It was also noted that the optionality did not disadvantage candidates going down a particular route; for example, the mean marks for Question 2 (Global Development) and Questions 3+4/5 (Resource Management) were very similar, and the standard of responses on Question 1 closely mirrored that of 2019.

Question 1 (a)(ii)

1ai

An overwhelming majority of candidates identified the correct grid square (53% identified B, and some (17%) correctly identified C) through which the A1081 main road passed.

It was not intentional that there were two correct answers for this question, and therefore after running a report after all responses were marking, the following additional steps were taken to ensure that the correct mark was awarded:

- Candidates who selected Option A or Option D were automatically given a mark of zero by our automated marking system. We quality sampled candidates' responses to ensure correct marking and found no issues.
- Candidates who selected Option B were awarded a mark automatically by our automated marking system.
- Candidates who selected Option C ONLY were sent to our senior marker and they were manually awarded a mark. Once all scripts were returned, they were quality checked to ensure that they were awarded a mark.
- Candidates who made two selections were manually checked. We found one candidate who correctly selected both Options B and C. This candidate was awarded a mark.
- ALL Candidates who left the question blank (did not attempt) were manually checked to see if they have written anything extra on the page and we found none who did.

1aii

Although the vast majority of candidates correctly identified at least one of the two suburbs of St Albans, there were some who clearly had no real idea of the meaning of the term "suburbs" and instead put down buildings such as the school or gave a named road.

Question 1 (a)(iii)

Overall, this question saw quite a disappointing standard of response. Those who chose to identify the river as being a crucial factor in the development of the original site of St Albans, proved to be the most productive line of reasoning taking in the idea of it being a crucial transport link to other places, hence facilitating trade or as a water supply for people in their everyday lives (drinking, washing) and as a source of food (fishing) to supplement their diets. Following this the next most popular and successful answer focussed on the topography of the area namely the flat land which allowed the original settlers to construct their homes in relative ease. Hardly any candidate mentioned the woodland areas nearby.

The main errors, were related to the candidate's misinterpretation / understanding of the term "original site". The vast majority of candidates concerned themselves with where the settlement was located in relation to surrounding features, namely communications. They were intent on describing the modern road system based on the A1081 / A5183 and others further afield, so it was easy for people to travel to work. The other most popular error was to quote the site having places of worship which would attract people to St Albans.

(iii) Suggest **one** reason why the area in grid square 1407 became the original site of St Albans.

(3)

because it is located next to a river which means there is direct access to other areas which ships can trade to or to transport goods through.

ResultsPlus
Examiner Comments

The response was awarded 3 marks: identification of the 'river' as an original physical factor influencing the site of St. Albans, plus double-development through an idea of transport facilitating trade.

ResultsPlus
Examiner Tip

A 'double' development' is required when the command is 'explain/suggest **one**..' and the tariff is 3 marks.

Question 1 (a)(iv)

A significant proportion of candidates misread the OS map and referred to the wrong grid squares. Many candidates also referred to site features such as the river rather than just the land use. Some candidates gave a brilliant answer but got the grid squares mixed up in their explanation, hindering their success on this question. The most common land uses referred to were golf course, residential area, river and school. Successful responses generally picked out schools, residential areas, woodlands and golf course to contrast the areas. There was limited use of comparative language rather descriptions of what was within the grid squares. Weaker answers tried to offer reasons and explanations, which is not a requirement of the 'compare' command word.

(iv) Compare the land use in grid square 1409 with grid square 1505.

(3)

In grid square 1409 there is the suburb of New Grans having houses and a school, with the main A1081 running ~~thro~~ alongside and multiple areas of mixed woodland - Both wood. However grid square 1505, unlike 1409, has the River Ver running through it's centre - Sopwell, and features a golf course, coniferous woodland and a place of worship on the outskirts of St Julians.

ResultsPlus Examiner Comments

This response was awarded 3 marks. The candidate has identified (at least) three land use features in both grid squares.

ResultsPlus Examiner Tip

You need to be able to read 4-figure and 6-figure grid references, and to use an OS map key.

Question 1 (b)(ii)

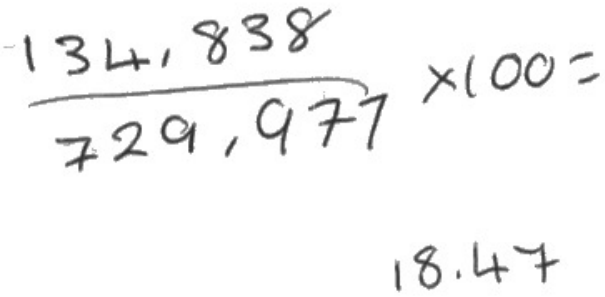
A large proportion of candidates had little or no idea how to carry out a percentage calculation. Also, some candidates were quite careless at times; for example, by arriving at a calculation of 18.47 as their answer, they then wrote 18 or 18.4 on the % line.

(ii) Calculate the percentage (%) of Nottingham's population aged 45 to 59 years old.

Give your answer to one decimal place.

You must show your working in the space below.

(2)



18.5 %

ResultsPlus Examiner Comments

This response was awarded 2 marks: correct answer (to one decimal point) and workings included.

ResultsPlus Examiner Tip

If the question is worth 2 marks, you will have to show your workings (for the second mark).

Question 1 (c)

Responses to this question were quite varied; successful candidates identified that it was the movement of people/business out of the CBD/central/city centre areas to obtain the mark. Quite a few candidates just referred to the movement out of the "city" but no reference to it being from the central area so failed to obtain a mark for this. Many did not know what decentralisation is, or confused with deindustrialisation, depopulation or urban sprawl.

(c) Define the term **de-centralisation**.

(1)

People moving away ~~from~~ from the centres of towns / cities

ResultsPlus
Examiner Comments

This response was awarded 1 mark for a correct definition of the key term.

Question 1 (d)(i)

Very accurate responses overall, with 86% of candidates being awarded 2 marks. The most common error was putting option D instead of E.

Question 1 (d)(ii)

Again, generally very well answered by candidates, with 70% calculating the correct range; the few inaccuracies suggested candidates did not understand what the range was or misread numbers.

Question 1 (d)(iii)

Generally answered well. Candidates were able to link increased demand to consequences such as rising prices. Where candidates did not get a second mark, it was often because they were not explicit about the increased population/demand. Many candidates did not fully extend their points, meaning they received only 1 out of the 2 possible marks for this question. Most candidates referred to migration leading to housing not meeting the demand but did not extend their point further re: influences on prices and availability issues.

Misinterpretation of the question led to comments on general migration into the UK and not specifically references to the impact upon housing. The majority of responses included the idea of there being increased pressure upon housing availability. There were very limited responses that focussed on out migration of people from urban areas.

(iii) Explain **one** impact of migration on housing in a UK city that you have studied.

(2)

Named UK city

Bristol.

One impact is house prices have increased due to the popuiation increasing as there are less houses avaiiable as more and more people migrate to the city.

ResultsPlus
Examiner Comments

This response was awarded 2 marks. The candidate has the idea of growing pressure on the housing stock in Bristol (1) with further development with regards to this increased demand pushing up house prices (1).

Question 1 (e)

Another generally well answered question with the mean mark being 2 out of 4 marks, but only around 20% of those achieving the maximum mark available. Many candidates concentrated on discussing “pull” factors, often spreading the same reason over the two points e.g., attraction of jobs in one, and then in the other talk of higher wages. It was somewhat disappointing to see the narrowness of their reasoning or inability to be able to fully develop a valid point such as natural increase of population. The best explained physical factor was the contrast in relief between different areas of the UK. Occasionally one would see a valid counter urbanisation point, mainly centred around the idea of deindustrialisation or social-environmental problems in urban areas forcing some “older” people to move out to rural areas.

Question 1 (f)

Overall, quite a well-answered question with many candidates accessing a level 2 mark. The most popular case study material seen was Mexico City, Sao Paulo, Mumbai and Lagos. Disappointingly, some candidates chose cities in developed countries, such as Birmingham and a few offered a country (rather than a city) like India as their example. The better responses were able to provide reflective comments and/or clear judgements throughout regarding whether or not the quoted approach was successful or not, and to offer reasons to support their argument. Structure was important, and the better answers saw the candidate begin with a brief description of either the problems facing their chosen city and / or an outline of the two approaches, followed by good use of case study material with 2-3 strategies covered, with evaluation, and finally an overall judgement as to which approach was the more successful.

A lot of the evaluation offered was focussed on the success or otherwise of the actual schemes described rather than on the general advantages or disadvantages of small-scale community development or government led top-down initiatives. However, this, if it did appear, with the weaker candidates would just say more simple comments like “doesn’t need a lot of money”, “can only deal with local problems”, “takes a long time to get going” or it “creates work for people living in the city”. These candidates would often jump straight into the case study material they might have learnt, described what was going on in their chosen city with a little specific detail, and weren’t really able to make the pros and cons very clear about the schemes they were describing. Too many responses consisted of rather disjointed simple generic descriptions that could apply to many cities around the world.

(f) You have studied a major city in **either** a developing **or** an emerging country.

Evaluate how successful bottom-up and top-down approaches have been in solving the problems caused by rapid growth.

(8)

Named city - ~~Mumbai~~

↳ Mumbai in India

In Mumbai India, rapid population growth has caused a huge shortage in affordable housing and extreme pressure on the limited infrastructure available. As a result informal settlements like Dharavi, housing 1 million people illegally, have grown on the outskirts of Mumbai.

One way ~~bottom-up approach~~ to manage this rapid growth in Mumbai is through bottom-up approaches, working with people in Dharavi slum to provide sufficient housing. More specifically the charity SPARC (an NGO) is working with local people to improve their quality of life and health. For example by putting in an additional level to existing homes to

house what [illegible] together, ~~to~~ in order to manage the housing shortages and problems with overcrowding within Dharavi. However SPARC only works on small-scale and ~~is not~~ does not have sufficient funding to provide long-term projects. ~~Therefore~~ despite ~~therefore~~ despite the benefits of socially keeping the community together in Dharavi, this strategy is not very successful in solving problems within Dharavi, as it only houses a housing in the short-term.

On the other hand perhaps a more successful approach to solving the problems with both housing and health within Dharavi is Mumbai's ~~are~~ is the top-down governmental approach. More specifically the government of India has a $2 million dollar plan to redevelop Dharavi by knocking the slums down and rehousing ~~the~~ two thirds of the population in new high-rise flats. As a result, the population of Dharavi will have access to a toilet, kitchen and bedroom, solving the housing crisis but also ~~problem~~ improving health. More specifically do water-borne diseases like cholera are a major problem within Dharavi where there is little clean water. ~~Therefore~~ quality of life will be greatly improved as disease will be less prevalent. However the complete destruction of Dharavi will mean a loss of the recycling industry, which provides income for many people. However this is often only £1 a day for the people sifting through rubbish and is often in dangerous conditions. // Overall, I believe top-down approaches are the best way to combat the growth of informal settlements in Mumbai as they provide a long-lasting, large-scale solution to both housing and health problems within Dharavi.

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Examiner Comments

This response was awarded 12 (8+4) marks. The candidate has selected a legitimate case study, and has considered a range of top-down and bottom-up strategies that have been used to tackle rapid growth. The candidate has thoughtfully used place-specific details to support their explanations about why specific approaches have been used – and there is some good evaluative commentary with regards to the success of these.

ResultsPlus
Examiner Tip

Case study information (e.g. facts and figures) is useful to bring your answer to life – and move away from a 'generic' response that could apply to any city.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

(f) You have studied a major city in **either** a developing **or** an emerging country.

Evaluate how successful bottom-up and top-down approaches have been in solving the problems caused by rapid growth.

(8)

Named city

Mexico City

Bottom-up projects are put together & run by local people in the community to help make improvements to their area. Top-down projects are run by the goverment to help improve society.

There are advantages & disadvantages of both. Bottom-up projects are good as they fix ~~face~~ things that local people acctually feel is an

issue. However, there isn't much funding for these projects the money used is from savings. Top-down projects are good as they impact a large area possitivly and the goverment has a large amount of funding to put into the projects. On the other hand though the pojects may not be supported by everyone.

ResultsPlus
Examiner Comments

This response was awarded 4 (2+2) marks. The candidate has chosen a valid case study, and have provided some details about the differences between top-down and bottom-up approaches. However, the response lacks explanation, and place-specific detail – something that would be expected at level 2.

In this question, up to four additional marks will be awarded for your spelling, punctuation, grammar and use of specialist terminology.

education

(f) You have studied a major city in **either** a developing **or** an emerging country.

Evaluate how successful bottom-up and top-down approaches have been in solving the problems caused by rapid growth.

(8)

Named city

Rio São Paulo

bottom up TOP - down Projects are those done by the Government, so they tend to be funded a lot better. for example, in são paulo, there was a scheme to build 100,000 new homes. This was done to battle the rise in population. Many people were living in favelas because they couldn't afford to live in houses.

As a result, the Goverment moved a bunch of favelas and ~~bui~~ to built ~~pe~~ proper housing. However, they only built around 14,000. Also people living in favelas, couldn't afford the rent of the housing. This caused major ~~issues~~ issues when it came to moving people since the people ~~were~~ living in favelas moved more homes else where. Therefore it wasn't that successful.

Bottoms up is done by communities and mostly lack funding. For example, in são paulo they attempted to open schools and nursing homes. However some lacked funding to stay open. However, ~~D~~ Dispite this, they do work better than what they have ~~at~~ and do form a tempory solution ~~to~~ to some issues in são paulo. Therefore they are ~~somewhat~~ somewhat successful.

(Spelling, punctuation and grammar and use of specialist terminology = 4 marks)

(Total for Question 1 = 34 marks)

~~For~~ For they are some ~~what~~ ~~useful~~ successful.

TOTAL FOR SECTION A = 34 MARKS

In conclusion both are successful but top down provides a much more secure and ~~better~~ better solutions to ~~the~~ problem However Bottoms up does provide solutions to lesser poblems in communities.

ResultsPlus
Examiner Comments

This response was awarded 6 (4+2) marks. The candidate has included some plausible local colour, although this is quite limited. In addition to this, there is some partial explanation about why the projects have been used – but this explanation would be expected to have greater depth and clearer links to the problem(s) they are addressing for Level 3.

Question 2 (a)(i–aii)

Candidates usually scored at least one of the two marks available here for correctly plotting Brazil's data on the graph. Stronger candidates obtained the second mark for correctly plotting Sierra Leone's data, but there was a lot more variability on where they plotted this data.

About 80% of candidates failed to secure the mark for correctly drawing the best fit line. Those that did tended to pass through India and Kenya, rather than Georgia and South Sudan.

2 The level of development of a country can be measured in different ways, for example by using the Human Development Index (HDI).

(a) Study Figure 2a below.

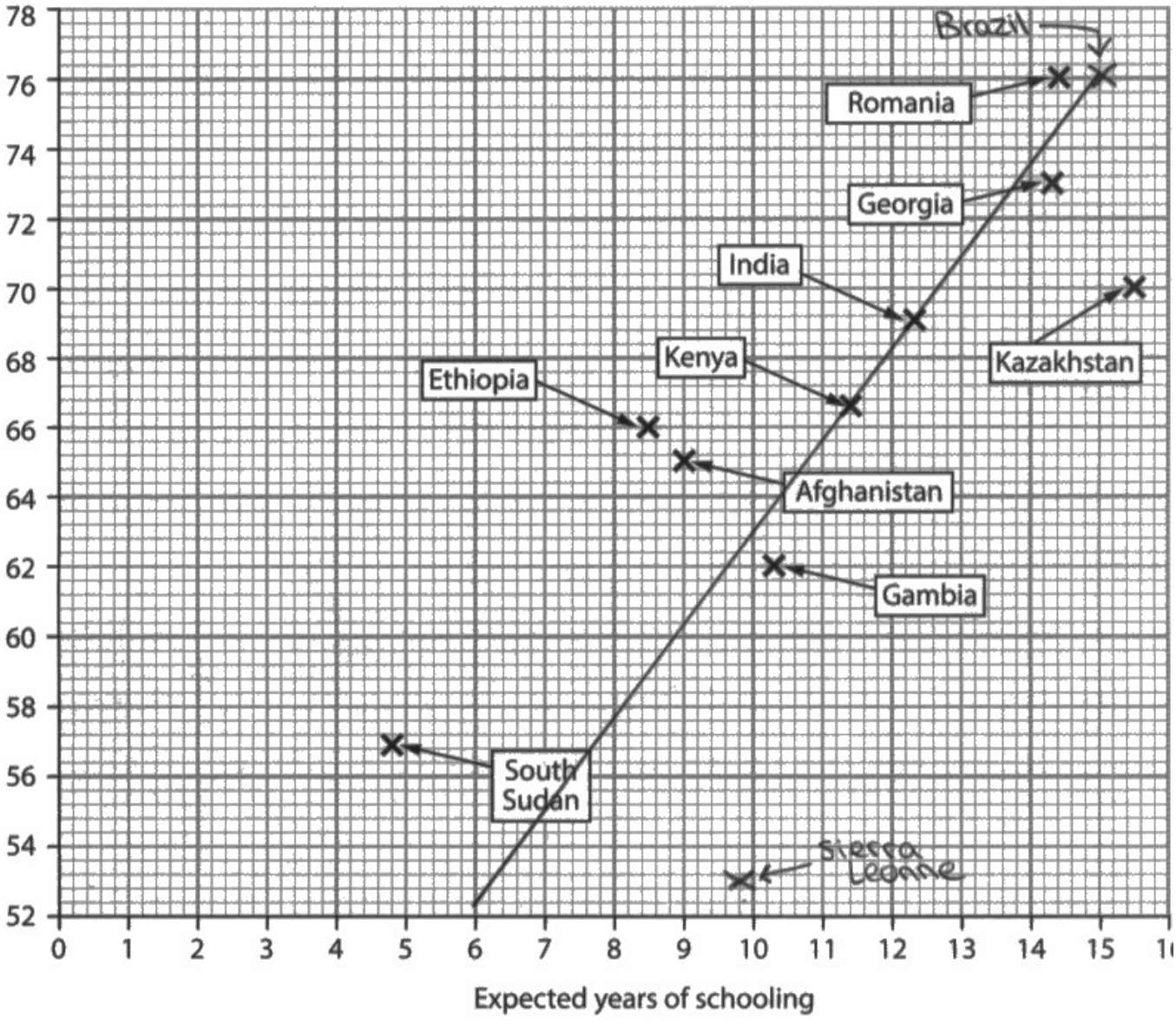

Figure 2a

Life expectancy and expected years of schooling for selected developing and emerging countries in 2018

(i) Complete Figure 2a by plotting the data in the table below.

(2)

Country	Life expectancy at birth (years)	Expected years of schooling
Sierra Leone	53	9.8
Brazil	76	15.0

(ii) Draw a best fit line on Figure 2a.

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Examiner Comments

This response was awarded 3 marks (2 for 2ai and 1 for 2aii) for two correct plots, and a best-fit line that passes through two plots, and has a similar number of plots above and below the line.

Question 2 (a)(iii)

This questions was generally done quite well, with just over 70% of candidates attaining at least one mark, and 38% of these securing full marks. Most candidates proved capable of correctly identifying the overall pattern. Disappointingly a fair number who did this, did not use the available data as instructed in the question and therefore lost one mark. Some candidates ignored the need to describe the relationship, but instead wrote about the difference between developed and developing countries . Weaker candidates merely described particular aspects of the data or graph, whilst others described the differences in life expectancy or years of schooling from the graph without any reference to the overall pattern. Occasionally one saw a candidate trying to explain the reason for a particular country having a lower or higher life expectancy / years of schooling e.g., in Brazil compared to Sierra Leone.

(iii) Describe the relationship shown in Figure 2a.

Use data in your answer.

(2)

As the expected years of schooling increases, so does the average life expectancy.

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This response was awarded 1 mark: the candidate has successfully described the overall relationship shown by Figure 2a.

(iii) Describe the relationship shown in Figure 2a.

Use data in your answer.

(2)

The longer schooling you have the longer the life expectency for exampe: expected years of schooling in Sierra leone is 9.8 with a life expectency of 53 but brazil has 15 years of schooling and 76 life

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Examiner Comments

This response was awarded 2 marks. The candidate has described the relationship, and has supported this description with data from Figure 2a.

Question 2 (a)(iv)

Almost 70% of the candidates who attempted this question were able to attain at least 2 marks. Popular factors identified by candidates focused on the fact that some countries were classed as developing and consequently were unable to afford health care; suffered from a lack of food due to famine; poor sanitation; lack of doctors; were at war; or, were prone to natural disasters.

also increases to 67 years.

(iv) Suggest **two** reasons for the differences in life expectancy shown in Figure 2a.

Use data in your answer.

(4)

1 One reason for the high life expectancy in Brazil (76 years) compared to the low life expectancy in Sierra Leone (53 years) could be because Brazil has a better health care system than Sierra Leone, meaning people are more likely to survive illness*

2 Another reason for the high life expectancy in Georgia (73 years) compared to the low life expectancy in South Sudan (57 years) could be because South Sudan is more corrupt than Georgia meaning not enough taxes are collected, so the health care system is poor, and infant mortality rates are higher.

*and there are vaccinations which prevent disease like polio.

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Examiner Comments

This response was awarded 2 marks. The candidate has successfully developed two separate ideas, and has included data in their response (a requirement for full marks).

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Examiner Tip

Always include data either extracted from the resource or manipulated (e.g. "twice as much as...") in your response if their is an instruction to do so.

Question 2 (b)

Overall, this was not a particularly well answered question and over 40% of candidates failed to score any marks on this; however, of the rest of the candidates who did pick up marks on this question, about 35% were able to secure full marks. The strongest explanations were those related to the Industrial Revolution. However, it was clear that are large proportion of candidates who referred to this, were confused how this affected different parts of the UK (e.g. many candidates wrote about the growth of industry during this period mainly taking place in the South-East, and the north of England being 'left behind'). Nevertheless, a good number of candidates did relate the Industrial Revolution to the growth of factories, creation of job opportunities which led to the expansion of specific urban areas. Another answer one saw quite often was to do with deindustrialisation, which has affected the North and Midlands most, leading to a loss of jobs and new investment. Some candidates offered physical factors instead e.g., climate, relief. Colonialism was cited at times, most successfully associated with the development of the areas around Bristol and Liverpool, but some could only talk about the factor in national terms. A minority of candidates successfully mentioned what has happened to the level of urbanisation in the post-industrial period, particularly associated with the growth in the tertiary / quaternary sectors benefiting the south.

(b) Explain **one** historical factor that has led to variations in levels of development within the UK.

(2)

in the 19th Century

The Industrial Revolution, which included the building of factories in urban areas providing people for more jobs causing them to migrate from the rural areas to the urban areas increasing more income and economically increasing the development within the UK.

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Examiner Comments

This response was awarded 2 marks. The candidate has developed their idea about why the Industrial Revolution has led to variations in levels of development *within* the UK.

(b) Explain **one** historical factor that has led to variations in levels of development within the UK.

(2)

The industrial revalution this was when brition started developing and getting together as a nation

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Examiner Comments

This response was awarded 1 mark. The candidate has identified a legitimate historical factor (1) but has not explained why this led to variations in levels of development *within* the UK.

Question 2 (c)(ii)

Another very well answered question with the majority of candidates (70%) offering an appropriate response for a positive factor (often linked to 'job opportunities' or 'better pay').

Similarly with this question, the vast majority of candidates gained a maximum score by using the ratio to calculate the correct starting salary.

(ii) The growth of this economic sector has increased the average earnings of the people in India. higher income

State **one** other possible positive impact of the growth of this sector for people in India.

(1)

reduction of informal jobs - that were dangerous. These jobs in this service sector are much safer.

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This response was awarded 1 mark. The candidate has stated one possible positive impact: safer jobs.

Question 2 (d)

This was not a particularly well answered question, with over 50% of candidates scoring 0 or 1 mark. Quite often, candidates left this question blank, or wrote a generic response without identifying an example of a geopolitical relationship. However, those candidates who successful picked up marks here, did so by using the example of India's dispute with Pakistan over Kashmir. Other examples chosen included India and Russia regarding armaments (missiles and fighter planes), India and Canada (uranium), Tanzania and Malawi over the ownership of Lake Nyasa, India and the UK. Too often in their development / extension, the answer became very disjointed and would veer away from the specific geopolitical relationship and talk in very general terms about trade relationships or levels of development.

(d) Describe how **one** geopolitical relationship has affected the development of a named developing country **or** emerging country.

(3)

Named developing or emerging country

India

India is ogtern in disagreement about kashmir with the chinese. Both countries believe the land is theirs and there has been numerous wars about it. This means a lot of India's money is spent funding the army over this war which could be spent on poor people and help get them out of slums

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This response was awarded 3 marks. The candidate has described one geopolitical relationship (India's dispute with China over Kashmir), and has added further details about this relationship – and how this has affected the development of India.

(d) Describe how **one** geopolitical relationship has affected the development of a named developing country **or** emerging country.

(3)

Named developing or emerging country

India

India has made a trade deal with Canada for 3.2 million kilos of uranium to be ~~supplied~~ supplied. This improves development as it allows for India to fuel a nuclear power stations for power, reducing pollution from fossil fuel plants.

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This response was awarded 3 marks. The candidate has described how India's relationship with Canada has had a positive impact on the country's development.

Question 2 (e)

This question proved to be generally a much better answered question than 2d, with around 65% of candidates attaining 2 or more marks. There were some excellent responses about the conditions in rapidly expanding cities, but some candidates did incorrectly focus on the problems facing the people / city authorities rather than impacts on the environment. Many provided logical connections between the identified negative environmental impact and the subsequent explanation of the consequence or why it happened. Some candidates, however, unfortunately dealt with the same environmental impact / theme for both parts.; whilst other candidates were not clear enough about the type of pollution. One saw a pleasing range of environmental impacts identified and some were even accompanied by specific detail about actual examples. A very popular impact was air pollution and the links to carbon emissions, waste pollution from overcrowded city areas leading to unhealthy living conditions / disease, deforestation, both reasons for and consequences well documented. The most notable error by candidates was to quote social impacts / consequences like lack of housing, health-care problems, jobs or poor educational provision.

(e) Explain **two** negative environmental impacts of rapid development.

(4)

1 Increase pollution from factories which means it will contaminate the air because factories need to work harder to meet needs of a higher demand.

2 Higher demand for crops which means a strain is put onto them in order to have enough food for more people / higher population.

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Examiner Comments

This response was awarded 2 marks. There is a developed point in the first section (and pollution is qualified), but the second section does not focus on environmental impacts.

(e) Explain **two** negative environmental impacts of rapid development.

and other modes of transport (4)

1 Increased number of people with cars will mean that there will be more pollution and therefore reduced air quality.

2 More houses are being built which means that some natural habitats will have to be destroyed and removed in order to create more space for housing, interfering with the natural environment.

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Examiner Comments

This response was awarded 4 marks. The candidate has written two developed points in each section – and these have an *environmental* (rather than social or economic) focus.

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Examiner Tip

When talking about 'pollution', be specific i.e. air pollution, visual pollution, noise pollution etc.

Question 2 (f)

Overall, this question was not particularly well answered, with only around 30% of candidates attaining higher than a low Level 2 (4 marks). The most frequently named countries included India, Mexico, Brazil and Tanzania, but there was a distinct lack of appreciation of the core – periphery idea. The best responses, mainly associated with the India case study, would talk of regional differences, often comparing in some detail the Gujarat / Maharashtra (Mumbai) / Goa region with Bihar, NE India. The weaker responses tended to only describe the general problems associated with development on a national scale and thus lacked any real regional perspective. It was apparent that some had learnt details of the Indian case study, by way of a comparative description, but they were often unable to assess the importance / significance of the very relevant factors they had raised in their essay. For too many candidates, the failing was only being able to describe the human / physical factors that could affect the level of development without this assessment of their relative importance, being able to weigh them up and then offer a considered statement on which they thought was the most important. Too many candidates using the Mexico example were unable to provide any really specific detail to illustrate / exemplify the generic points (factors) they were describing – and just described the conditions in the poorer areas of Mexico City without considering the broader context.

(f) You have studied development in **either** a developing country **or** an emerging country.

more significant

train line connects Dar es Salaam to Kigoma - 8 days

Assess the importance of different factors that have led to uneven development within this country.

(8)

Named country

Tanzania

A significant factor of uneven development in Tanzania is their trade deficit of over 8 billion which has lead to less people getting an education which leads to uneven development as there may not be an educated future. Compared to another significant factor with the train line being build connecting the cities and the country together when there people in the rural parts of the country who cannot even afford to eat this is a important factor in the uneven development of the country. However a less significant factor of uneven development is the refugees from surrounding countries as they were in war eg: Mozambique which leads to a strain on health care and the education system of a country.

This response was awarded 2 marks. There are some basic ideas about factors that affect Tanzania's level of development, but there is a lack of spatial context.

Ensure that the concept of 'core and periphery' is understood and can be supported by examples from your case study of an emerging/developing country.

(f) You have studied development in **either** a developing country **or** an emerging country.

└ India

Assess the importance of different factors that have led to uneven development within this country.

(8)

Named country

India

The location and position of different states within India has significantly impacted rates of development. For example, Goa, is situated on the coast which allows trade, bringing an abundance of resources to the region, leading to economic growth and so more money from taxes can develop the area for example for schools and hospitals. However, Bihar is landlocked and so has limited connectivity to other areas meaning the region has far fewer trade routes to provide resources. This means they've had to rely on their own resources mostly to use for development, resulting in slower rates. Overall, the position of different regions determines whether they will be a core states (like Goa) or peripheral states (like Bihar) as it impacts levels of trade & fund development.

A second feature is site and so the land upon which it is built. One example of Goa shows that having flatter land benefits development. This means that infrastructure

like roads is more easily built as well as settlements for the growing population (attracted to Goa due to the rapid rate of development and FDI attracted, providing well-paid jobs). However, Bihar is ~~built on~~ found in a more mountainous area. This means that more can be no profitable agriculture. As a result, those in the primary secter struggle ~~to~~ for adequate income and the area has limited resources to trade with other areas. Overall, the land where the region is built determines how easily profitable businesses can be established and maintained, bringing wealth for development. As such, areas like Goa developed at a faster rate than that of Bihar.

In conclusion, environmental features like site, ~~exact~~ situation and position establish how easy and fast economic growth can take place, determining the rate at which development can happen with limited funds. Due to this, areas are classed as either core (like Goa) or periphery states (like Bihar) with ~~the~~ a good or bad connectivity and a dense or sparse population.

(Total for Question 2 = 30 marks)

TOTAL FOR SECTION B = 30 MARKS

ResultsPlus
Examiner Comments

This response was awarded 7 marks. The response gets into Level 3 by considering a range of factors that have led to uneven development within India – and some good supporting place-specific information has been used. For full marks, the candidate could have addressed the command work in greater depth, by judging which factor(s) have been most influential – and why.

(f) You have studied development in **either** a developing country **or** an emerging country.

Political - Conflict
Core / Periphery
Physical
Social
rural - urban

Assess the importance of different factors that have led to uneven development within this country.

(8)

Named country

India

India is located between 8 and 37°N of the equator India is experiencing uneven development due to social, political and physical factors, which has led to the formation of the core and periphery, mumbai and Bihar.

A political factor which has led to uneven development is the dispute over the territory of kashmir India has with Pakistan. The wars have meant the areas became less developed than other areas, leading to uneven development.

Indias Physical geography is another factor affecting uneven development. The core, mumbai, is located on the West Coast, meaning due to its 11 international ports it allows for maritime trade which increases the GDP of the area and therefore makes mumbai more developed. The

periphery. Bihar, is located in the north East and is landlocked. This makes trade much more difficult and so the level of development is lower, causing uneven development across India.

A final factor thats led to uneven development across india is the population. younger economically active people tend to migrate to cities, in bihar theres a 30.7% outwards migration rate, this means theres a large dependent population of 100 million left behind. This causes the developed areas such as mumbai to become more developed and the less developed areas like Bihar don't make any development progress, leading to uneven development across India.

ResultsPlus
Examiner Comments

This response was awarded 5 marks. The candidate has offered some partial explanation as to why variations in development exist within India – and some local colour has been included in this. However, to get to the top of Level 2 (and beyond), these explanations needs to be more developed, and the quality of supporting case study material needs to be broader and more specific.

Question 3 (a)

Candidates demonstrated a very high level of accuracy (around 90% picking up 2 marks), with no common misconceptions evident.

Question 3 (b)

High level of accuracy were also evident here, with around 85% of candidates attaining at least one mark, and about 60% picking up both marks.

(b) Name **one** biotic and **one** abiotic resource.

(2)

Biotic resource

fish

Abiotic resource

Iron ore.

ResultsPlus
Examiner Comments

This response was awarded 2 marks. The candidate has correctly identified one biotic and one abiotic resource.

(b) Name **one** biotic and **one** abiotic resource.

(2)

Biotic resource

plants

Abiotic resource

animals.

ResultsPlus
Examiner Comments

This response was awarded 1 mark. Th candidate has correctly identified 'plants' as biotic, but 'animals' are also biotic.

Question 3 (c)(i)

The quality of answers for this question were very varied: over 50% of candidates failed to score, and about 45% of candidates correctly interpreted Figure 3 and named the region with the highest annual meat production in 1961; A common error was citing Africa as the correct answer.

Question 3 (c)(ii)

Over 40% of candidates candidates identified an increase, but only another 47% of candidates cited accurate data to develop the answer. Candidates generally were able to gain marks for the idea of in 'increasing' however many lost marks for being outside of the +/ – 10 million range on their data permitted in the mark scheme.

The line 'Use data in your answer' was commonly missed by the candidates in their responses to the question, which restricted them to one mark.

(ii) Describe the overall change in meat production in Asia.

Use data in your answer.

(2)

Around 1961 the Annual meat production in asia was around 10 million tonnes, however in 2017 Asias meat production rose to about 135 million tonnes.

ResultsPlus
Examiner Comments

This response was awarded 2 marks. The candidate has described the overall change (1) and has used some supporting data (1).

Question 3 (c)(iii)

Around 60% of the candidates misinterpreted the graph and thought that Europe had the higher meat production in recent times; this was often accompanied by sweeping statements about Asia being too poor to produce/eat meat. Candidates who answered correctly often referred to Asia's higher population but were unable to develop this for the full 3 marks. It was clear that there was lots of misunderstanding about how meat production works, e.g., reference to the types of animals/biodiversity in each ecosystem or reference to meat production in factories.

Successful candidates linked to Asia's increasing development influence on diets and meat demand. Unsuccessful candidates generally suggested Europe still had larger meat production than Asia.

Erroneous answers included reference to the size of Asia and Europe and 'better climates' etc. rather than an understanding of the changing diets and wealth.

(iii) Suggest **one** reason for the differences in meat production between Europe and Asia.

(3)

One reason for the difference is because of population Asia has a huge population around 3x the size of europes population meaning more people will be wanting to buy meat in Asia than in Europe.

ResultsPlus
Examiner Comments

This response was awarded 2 marks. The candidate has developed the idea about Asia having a larger population, but this response lacks the 'double-development' required for full marks.

Question 4–5

4/5 Over-arching observation: Weaker responses were often offered by candidates who attempted both questions 4 and 5 (and sometimes 2), with little development or use of proper sentences, bullet point ideas were given indicating a lack of time management.

4a.

Most candidates were accurate. Non-renewable was known by the vast majority.

4 b

Inaccurate responses often mentioned energy from water but did not link movement of water to turn a turbine. The mechanics of HEP are less well known/expressed – answers just cited power from water. Kinetic energy was included well into answers.

4c

The majority of candidates scored between 2 and 4 marks. The most successful response for a maximum 4 was related to uranium not producing carbon dioxide emissions, therefore not contributing to global warming / climate change, then dangerous radioactive waste produced which if not stored properly is a hazard to environment / wildlife. Occasionally, candidates focussed on the advantages and disadvantages of fracking based on the available information on 4a in the resource booklet. Some of the better answers pointed out that only very limited raw materials are needed to generate large amounts of energy compared to fossil fuel like coal; some developed the idea of the lifespan of dangerous radioactive waste – the waste products take thousands of years to decay and are highly radioactive as well as the health risks (i.e., cancer – leukaemia) from working close to or the result of leaks / accidents / terrorist attacks. A minority of candidates were clearly confused as to whether uranium was a clean or dirty resource in terms of CO2 emissions.

4 di

Most candidates successfully cited job creation as an advantage. The second line about "Only use evidence" was missed by some candidates.

4 dii

Generally accurate but the most common error was option D. There was evidence of working out next to this question, but generally this was answered correctly.

4 diii

This open-response question effectively differentiated between the candidates. The majority of candidates were able to achieve at least 2 marks by focussing on the consequences of an earthquake being used by fracking both in terms of infrastructure damage and / or contamination of water supplies, the former by far and away the most popular response. Both aspects of water contamination described in the mark and answer scheme were quite prevalent. Very few candidates linked the impact of transportation of large quantities of water to any drilling operation to air pollution / carbon dioxide emissions. Occasionally a candidate would say that the huge amounts of water used could lead to conflict with other users / farmers / industry or talk of the dangers of gas entering people's homes which could result in fires / explosions or even fatalities.

4e

Overall, a somewhat disappointing standard with relatively few candidates achieving a minimum of Level 2. This is such a popular topic of vital concern for our futures that one would have hoped to have seen a better understanding of why renewable energy resources are being developed. Many candidates did not set the scene or provide an introduction about why there is a need to manage our energy supplies in a more sustainable manner i.e., what is this due to, but too often the answer would go into what was being developed and why e.g., the measures being undertaken in China and Germany were frequently covered. When candidates did put forward examples of what is being developed, they often would then go on to discuss the negative impacts of such a project e.g. Three Gorges Dam (China) and in so doing look at the social and environmental consequences rather than actually assessing the type of renewable energy that was being developed. This AO2 element did receive the most treatment, along with changes to the energy mix of different countries due to non-renewable resources being finite. However, it was disappointing to see only a few uses the recent case in Ukraine which has clearly impacted upon energy supplies, particularly of gas, throughout Europe, so developing renewable energy source would certainly help to minimise reliance on gas imports. Beyond this one was a little disappointed not to see more of a reflective nature coming from AO3 element where the candidate often missed the opportunity to delve into why these renewable resources are being developed and why, reduction of GHG emissions or other factors i.e., reduced / no carbon dioxide emissions, limited running costs, energy efficiency, footloose as some have a relatively free choice of location, not being dependent on the weather etc. Again, it often proved the case of telling us what they know about renewable energy developments (e.g., China – LED and solar) rather than offering a more reflective consideration of the pros and cons of the actual renewable energy development. Also, a more reasoned conclusion from many candidates is encouraged – for example with regards to consideration about future renewable energy resource development leading to fewer environmental problems and so on.

5a

Most candidates were accurate in identifying the correct definition, but where not done correctly, the response A – lower rainfall in a region was generally selected.

5 b

Generally, a rather mixed outcome for this question from candidates. In some cases, they really grasped the idea of not damaging the environment and leaving sufficient to meet the needs of future generations in particular, whilst others talked about water surplus / deficit without any direct link to what 'sustainable management' actually meant.

5c

Overall, a rather disappointing range of reasons offered for why global demand for water has increased. Quite clearly population growth was a very popular response and could often be developed for the second mark (e.g. by explaining why population had grown, or why a larger population results in a larger demand). Sometimes, consequences of a growing demand for water were given as causes, suggesting a misunderstanding or misreading of the question. For instance, drought may be a consequence of global warming, but in itself it doesn't necessarily increase demand as it takes away the supply of water, unlike the idea surrounding increasing affluence where people are able to buy devices that use an increased amount of water to do their washing etc, and their purchasing of more of these items, due to technological advances is a major contributory factor in the increased demand for water. A very small proportion of candidates explained why changes to personal hygiene had taken place, or why the impact of sport and leisure activities, the increased demand for water in emerging or developing countries via fresh piped water, individual development i.e., in factories and thermal power stations, or the increased demand for foodstuffs has triggered a rising demand for water.

5di

Most candidates successfully cited the creation of toxic waste products as a disadvantage or the large set up cost. Some responses included more than one disadvantage in their answers.

5dii

Generally answered well by candidates, but the most common error was option D. Evidence of working out seen where candidates had selected the wrong check box. Most students were correct in their answer. There was noticeable evidence of mind changing and candidates not following the guidance on how to make an amendment.

5diii

The most common error in less successful candidates was writing about several advantages of desalination. Most successful candidates explored providing fresh drinking water and its impact on domestic and agricultural users to varying degrees of success but not many were able to develop fully for the full 4 marks. Most only included evidence from one source, but not always both.

5e

Candidate performance on this question was very similar to that on 4e . The stronger elements in a candidate's response were often linked to AO2, where they were able to assess the problems of water supply in the UK – but were less convincing in discussing in similar detail the problems facing water supply problems in emerging/developing countries and indeed looking at the potential (future problems) of climate change. In terms of AO3, one did see some discussion around population growth and how one of the problems of water supply could be tackled. Very few candidates really looked at how industrial growth, increasing affluence and tourism has, and is having an impact on water supply. Some candidates were skilled in their explanations about why each factor is important / significant to water supplies – but many did not include this in their response.

4 Renewable and non-renewable resources are being developed to meet the growing demand for energy.

(a) Identify the correct definition of **non-renewable** energy.

(1)

- ☒ **A** Energy from sources that cannot be reused or replenished
- ☒ **B** Energy from artificially produced materials
- ☒ **C** Energy from supplies that will never run out
- ☒ **D** Energy from resources that do not contain carbon

(b) Define the term **hydro-electric power**.

(1)

Using power of flowing/moving water to spin turbines and generate electricity

(c) Explain **one** advantage and **one** disadvantage for the environment of using uranium to generate electricity.

(4)

Advantage

Does not produce greenhouse gas eg CO_2 Therefore will not contribute to climate change

Disadvantage

~~Requires a great deal of energy to separate~~ The Produces radioactive waste which can be harmful to enviroment & people if not disposed of correctly

(d) Study Figure 4a and Figure 4b in the Resource Booklet.

(i) State **one** advantage of fracking.

Only use evidence from Figure 4a in your answer.

(1)

Can create 64 000 jobs

(ii) Identify the percentage (%) of UK residents in Figure 4b who are in favour of fracking in their local area.

(1)

☒ **A** 20%

☒ **B** 40%

☒ **C** 60%

☒ **D** 80%

(iii) Suggest **one** reason for the viewpoint held by the majority of the residents who took part in the survey.

Only use evidence from Figures 4a and 4b in your answer.

(4)

The 80% against ~~They~~ may fear it will damage the enviroment by contaminating water source (Fig 4a) which would result in possible death of animals and wildlife ~~resulting~~ leading to loss of biodiversity in their area.

(e) Assess the following statement. paris agreement

(8)

The aim of reducing greenhouse gas emissions is the main reason why countries are developing renewable energy resources.

Greenhouse gasses are gasses that contribute to climate change such as carbon dioxide and Sulfur dioxide produced trough combustion of fossil fuels eg Coal.

~~Countries such as~~ The UK is part of the paris agreement in 2017 where it was agreed the uk would be carbon neutral by 2050. This aim of reducing emmissions has led to development of renewable energy resources (energy resources that are infinite) such as the London array windfarm which now produces 630 mega-watts of electricity to power ½ million homes. This means the uk will become less reliant on fossil fuels for its energy and reduce emmissions.

Another example of a country reducing it's emmissions is China ~~eg H~~ which uses Coal for 50% of it's energy resulting in it being the greatest producer of carbon in the world. This is planned to change through development of renewables such as the 3 gorges dam which produces enough electricity for a million homes while producing no carbon.

However, reducing greenhouse gas is not the only reason why countries develop renewable energy sources. It can also be done for financial reasons as import of electricity currently makes up 35% of the UK's total ~~energy~~ electricity costing **(Total for Question 4 = 20 marks)** billions. ~~with~~ With development of ~~&~~ wind farms ~~to~~ such as whitelee and the London array the uk will become less reliant on ~~import~~ imported energy and despite high initial costs will benefit overtime resulting in a boosted economy.

ResultsPlus
Examiner Comments

This response was awarded a total of 14 marks for Question 4:

SCa	1
SCb	1
SCc	4
SCdi	1
SCdii	1
SCdiii	2
SCe	4

On part (e), the candidate was awarded 4 marks (just into Level 2) as a result of some partial explanation about why renewable energy resources are being developed – but generally the response focussed on the aim of reducing greenhouse gases as the reason for this. A broader range of ideas about why countries are developing renewable resources would have lifted this response to the top of Level 2.

5 Water resources are being managed to deal with changes in supply and demand.

(a) Identify the correct definition of **water deficit**.

(1)

- ☒ **A** There is low rainfall in a region
- ☒ **B** The demand for water is rising
- ☒ **C** The water quality has been affected by pollution
- ☒ **D** The demand for water is greater than supply

(b) Define the term **sustainable management**.

(1)

When a country manages its resources in a sustainable way.

(c) Explain **two** reasons why the global demand for water has increased.

(4)

1 There is an increase in population and therefore more people need water

2 There is an increase in technology globally and technology uses more water than doing things by hand.

(d) Study Figure 5a and Figure 5b in the Resource Booklet.

(i) State **one** disadvantage of desalination.

Only use evidence from Figure 5a in your answer.

(1)

The process often creates waste products such as brine and chlorine, which are toxic and could cause pollution.

(ii) Identify the percentage (%) of UK residents in Figure 5b who are against the development of desalination in the UK.

(1)

$\frac{72}{360} \times 100 =$

- ☒ **A** 20%
- ☒ **B** 40%
- ☒ **C** 60%
- ☒ **D** 80%

(iii) Suggest **one** reason for the viewpoint held by the majority of the residents who took part in the survey.

Only use evidence from Figures 5a and 5b in your answer.

(4)

Most residents in the UK said that they were in favour of developing desalination plants because it creates fresh water. figure 5a ~~show~~ states that desalination can provide thousands of people in the UK with fresh ~~water~~ drinking water and additional water for farming which made a lot of people want there should be a development of desalination as shown in the pie chart.

(e) Assess the following statement.

(8)

Low annual rainfall is the main reason why some countries have water supply problems and are struggling to meet demand.

Some countries have water supply problems and this is due to a number of reasons, low annual rainfall is a reason why but there are other reasons as well ~~that~~ examples are the development of a country and therefore not good, strong infrastructure, some countries that have low rainfall often has a lot of evapotranspiration happening and therefore the water doesn't have time to reach people's taps

Developed countries and developing countries can both have water supply problems. Developed countries will have because they have old infrastructure and can therefore cause many leaks which causes a massive loss of water. The infrastructure in developing countries can also effect the water supply problems because in developing countries there isn't ~~any pipe~~ a lot of houses that have access to clean drinking water because of the low level infrastructure. In 2012 11 percent of the world didn't have access to drinking water and in 2015 8 percent didn't have this meant that the ~~annual~~ amount of people that have drinking water is continuing to increase. This shows that low annual rainfall isn't the main reason why countries have water supply problems it also depends on the development of a country and ~~how~~ how developed their infrastructure is.

Another reason why countries might have water supply problems is because if they have very sunny weather the water that falls can evaporate very fast turning

the water to vapour before it had time to reach people. This could happen in places with low or high annual rainfall. The amount of rainfall a country receives can cause countries to have water supply problems but it isn't the main because there are many other reasons.

ResultsPlus
Examiner Comments

This response was awarded 14 marks for Question 5.

SCa	1
SCb	0
SCc	3
SCdi	1
SCdii	1
SCdiii	1
SCe	7

In part (b) zero marks were awarded as the candidate had simply re-written the question without showing knowledge of the key term.

The candidate was awarded 7 marks (Level 3) for part (e) as they had considered a range of different factors that help to explain why some countries have water supply problems; in other words, they did not simply focus on low annual rainfall as the only reason – which is what the majority of candidates did. To access full marks, the candidate could have included some additional detail to support their ideas, for example some 'local colour' about a specific country – and then incorporate this information into their overall assessment of the statement given in the question.

4 Renewable and non-renewable resources are being developed to meet the growing demand for energy.

(a) Identify the correct definition of **non-renewable** energy.

(1)

- ☒ **A** Energy from sources that cannot be reused or replenished
- ☒ **B** Energy from artificially produced materials
- ☒ **C** Energy from supplies that will never run out
- ☒ **D** Energy from resources that do not contain carbon

(b) Define the term **hydro-electric power**.

(1)

The use of flowing water to create energy. ~~is a turbine by turning a~~

(c) Explain **one** advantage and **one** disadvantage for the environment of using uranium to generate electricity.

(4)

Advantage

It is very efficient so only a small amount of uranium is needed and there isn't a lot of waste.

Disadvantage

It can be dangerous as it can cause cancer so must be disposed of properly and safely.

(d) Study Figure 4a and Figure 4b in the Resource Booklet.

(i) State **one** advantage of fracking.

Only use evidence from Figure 4a in your answer.

(1)

Could generate £88 billion of investment.

(ii) Identify the percentage (%) of UK residents in Figure 4b who are in favour of fracking in their local area.

(1)

- ☒ **A** 20%
- ☒ **B** 40% ✓
- ☒ **C** 60% ✗
- ☒ **D** 80% ✗

(iii) Suggest **one** reason for the viewpoint held by the majority of the residents who took part in the survey.

Only use evidence from Figures 4a and 4b in your answer.

(4)

They won't want the fracking to contaminate local water sources as they might need this water for things like irrigation in agriculture and to support local wildlife. Having contaminated water sources can also decrease tourist attraction as activities on open water won't be able to take place. This would be bad for local residents who work in tourism.

(e) Assess the following statement.

(8)

The aim of reducing greenhouse gas emissions is the main reason why countries are developing renewable energy resources.

I can disagree with the statement because lots of countries (for example, Butan) are developing renewable energy resources because they do not have the money to buy non-renewable resources such as coal from other countries. This renewable energy could also be more easily available - Butan has lots of rivers and valleys ~~around~~ which makes it ideal for collecting hydroelectric power.

I can agree with the statement because more developed countries such as the UK and the USA are developing renewable energy resources to reduce carbon emissions and to decrease their carbon footprint. These developed countries are doing this to try and reduce the effects of global warming and also decrease things such as health issues from air pollution.

Overall, I disagree with the statement because developed countries such as Norway are driven by energy security and future sustainability to develop renewable energy resources and developing countries such as Butan are developing

renewable energy because it is more widely available and will not run out.

ResultsPlus
Examiner Comments

This candidate was awarded a total of 13 marks for Question 4:

SCa	1
SCb	1
SCc	2
SCdi	1
SCdii	1
SCdiii	3
SCe	4

In part (e) the candidate attained a low Level 2 (4 marks) as they had presented a relatively one-sided argument, focussing on the viewpoint presented by the statement in the question; this argument lacks supporting detail (e.g. place-specific information) and lacks depth of explanation. For top of Level 2 and beyond, one expects additional ideas beyond those presented in the question, with some greater clarity and depth of explanation.

4 Renewable and non-renewable resources are being developed to meet the growing demand for energy.

(a) Identify the correct definition of **non-renewable** energy.

(1)

- ☒ **A** Energy from sources that cannot be reused or replenished
- ☒ **B** Energy from artificially produced materials
- ☒ **C** Energy from supplies that will never run out
- ☒ **D** Energy from resources that do not contain carbon

(b) Define the term **hydro-electric power**.

(1)

electricity which is sourced from water.

(c) Explain **one** advantage and **one** disadvantage for the environment of using uranium to generate electricity.

(4)

Advantage

Natural source, ~~meaning it wont be overly expensive to use~~ meaning it will be renewable.

Disadvantage

hard to obtain, meaning it can be limited to how much energy we ~~can use~~ have obtain at certain times.

(d) Study Figure 4a and Figure 4b in the Resource Booklet.

(i) State **one** advantage of fracking.

Only use evidence from Figure 4a in your answer.

(1)

cheaper energy

(ii) Identify the percentage (%) of UK residents in Figure 4b who are in favour of fracking in their local area.

(1)

- ☒ **A** 20%
- ☒ **B** 40%
- ☒ **C** 60%
- ☒ **D** 80%

(iii) Suggest **one** reason for the viewpoint held by the majority of the residents who took part in the survey.

Only use evidence from Figures 4a and 4b in your answer.

(4)

Fracking was mostly disapproved by the residents. This could have many reasons such as it taking a long time to occur; an 18 year old plan has still not takenplace. People believe it will cause earthquakes and contaminate water sources. People may even believe water supplies may deplete due to the huge amount of water the process requires.

(e) Assess the following statement.

(8)

The aim of reducing greenhouse gas emissions is the main reason why countries are developing renewable energy resources.

China is a ~~pac~~ giant place with a population of around 1.5 billion people. Due to the large population, China burns more ~~coa~~ coal than the USA and Europe combined. The coal ~~emits~~ emmits a concerning amount of greenhouse gasses into the atmosphere, contributing massively to global warming.

China have introduced a law in 2006 where coal restrictions where made. They also produced hydro-electricity and solar power stations to ~~help~~ be as sustainable as possible. The 3 gorges dam was built, producing a massive 100 billion kwh of power, providing over 1 million homes renewable power. This was expensive and must have been difficult to find suitable areas for this. However, this just reflects China's desperation to contribute to reducing greenhouse gas emmissions ensuring demands are still met, however much more sustainably.

Similarly, Germany has also introduced renew-

able energy sources to ensure their country is not contributing to global warming. The Bavaria solar power station has produced around a milion Kwh of energy to the population and Germany aim to reduce carbon emmissions by 40% by this year. Solar power can

(Total for Question 4 = 20 marks)

have difficulties, explaining why it hasn't produced as much energy as China. Solar power depends on Sunlight and only works in the day however it can work in remote areas.

such as China & Germany

Overall, it is undeniable countries^ are working hard to manage their energy sustainably, to stay in Line with the high demands all while protecting our environment from green-house gas emmissions.

ResultsPlus
Examiner Comments

This response was awarded 11 marks for Question 4.

SCa	1
SCb	0
SCc	0
SCdi	1
SCdii	1
SCdiii	2
SCe	6

In part (b) zero marks were awarded as the response is too vague; reference to 'moving water' or 'turbines' would have gained credit.

Zero marks were awarded in part (c) because uranium is non-renewable (first section) and the second section was too vague.

The candidate was awarded 6 marks (top of Level 2) for part (e) as they had gone beyond just considering a reduction in greenhouse gases to explain why some countries are developing renewable energy. The inclusion of place-specific detail is helpful and strengthens the response – but for Level 3, one expects a broader range of ideas to counter the statement (as the argument presented by this candidate is imbalanced / one-sided in favour of the view presented by the statement in the question).

Paper Summary

Based on their performance on this paper, candidates are offered the following advice:

- When answering the 8-mark 'assess' questions (2f, 4e and 5e) candidates need to remember that they need to include evidence to determine the relative significance of something, considering all factors and identifying which are the most important. These question types carry a 4 x AO2 + 4 x AO3 weighting, which requires candidates to apply their geographical knowledge and understanding, rather than merely recalling facts and figures. It is important that candidates can apply place-specific information from their case studies to unfamiliar contexts, or when asked to refer to a named country.
- Candidates should be able to define all the key geographical terminology in the detailed content: For example, a knowledge of the terms 'decentralisation' (1c), 'geopolitical' (2d) and 'hydro-electric' (4b) were not fully grasped by a significant proportion of candidates.
- Read the resources (including the text) carefully: a large number of candidates misinterpreted the 'majority viewpoints' displayed on Figures 4b and 5b.
- Double-developed points are needed on the more challenging 3 – and 4-mark 'explain/suggest one…' questions (e.g., 1aiii, 2d and 4diii/5diii). This was also an issue in 2019, where there were a number of instances on these types of questions where candidates struggled to develop an initial point.
- Remember how to perform different calculations. In general, questions that required candidates to complete a graph and questions where a 'calculation' was required were done well – and the failure to display workings where required was less common that in previous series. However, the use of OS map grid-references (1a), the calculation of a percentage (1bii) and the drawing of a best-fit line (2aii) are three areas of the 2022 paper that were least well done by candidates resulting in marks targeting AO4 being lost. In a minority of instances, candidates had difficulty rounding up/down the correct answer to the nearest decimal point.
- Ensure that candidates have been exposed to every type of graph listed in the specification; in 2022, the graph shown on Figure 3 was often misinterpreted by candidates.
- Avoid 'mirrored' responses on the scaffolded 4-mark questions, for example 1e and 2aiv; this means that the development of a different idea is required for more than 2 marks to be awarded.
- Centres are encouraged to use the Past papers (from 2018-2022), Sample Assessment Materials (SAMs) and specimen papers to help familiarise candidates with the structure of the paper and questions types – including the tackling of the 8-mark extended open response questions. Centres should spend time reviewing the examples in this report, and other support materials via the qualification page on the Pearson website. This will help candidates become more familiar with the range of command words and how they are attached to different Assessment Objectives.

Grade boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html

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