

Examiners' Report
June 2016

GCSE Geography B 5GB3H 01

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Introduction

This paper was the third of the 'unseen' versions of 5GB3 and probably the most accessible for candidates. With a clearly synoptic focus on the issue of declining global biodiversity and its causes, the material included in the booklet would have been more familiar than either the Ogallala aquifer in 2015 or Jamaica's tourist industry in 2014. More than half of the questions could be answered effectively by simply using the Resource Booklet selectively and intelligently and many did exactly that. The final four questions (2(d), 3, 4 and 5) carried 30 of the 53 marks and required candidates to be more than usually attentive to the command words used, if they were to access the higher levels of the mark scheme. Above all this paper examines the flexibility of candidates in their thinking and especially rewards their skills of assessment and evaluation. There were some very impressive answers at the top end of the cohort.

Question 1 (a) (i)

One possible answer could be dug out of the Resource Booklet but most did not need to do this and offered a variety of largely accurate definitions.

1 Study Section 1 (pages 2 and 3) of the Resource Booklet and answer the following questions.

(a) (i) Define the term **extinction**.

(1)

Extinction is a natural result of evolution due to plants and animals adapting to suit their developing environment



ResultsPlus
Examiner Comments

A missing 'not' here in this otherwise sophisticated reading of the question means the candidate misses out on a mark.



ResultsPlus
Examiner Tip

Try to reread your answers! Exams are stressful and it is easy to leave out critical words!

Question 1 (a) (ii)

Most candidates used the data relating to rates of extinction although some took a more circuitous route drawing inferences from Figure 1a. A very small number thought it sufficient to comment that 'scientists say so' selectively lifting from the 6th bullet point on page 2.

(ii) Outline the evidence that we are living in a sixth 'extinction event'.

(3)

Over 30,000 species are dying out every year which exceeds the rates of other extinction events. It is thought to be caused by human activity which has caused extinction rates to go up by 100 times the natural rates.



ResultsPlus
Examiner Comments

This is a comprehensive response that gained full marks.



ResultsPlus
Examiner Tip

In this style of exam many of the answers are in the Resource Booklet - not all, but certainly this one.

Question 1 (b)

There were hints in the Resource Booklet about the significance of the food web but this question required some knowledge drawn from Unit 1 to relate plants to the survival of animals. There were a few mistakes made, largely terminological but they were unusual.

(b) Study Figure 1a.

Explain why the extinction of plant species impacts on the survival of animal species.

(3)

Animals species require a plant species (producers) for food. And also ~~the~~, they don't have a complex ~~web~~ ^{food web}, means that they only eat a low type of food. If some plant species extinct and decrease in numbers, ~~the~~ ^{the} food chain is disrupted and they ~~are~~ ^{need to try} harder to find food. This may decrease the number of animal species or make them ^{to} extinct.



ResultsPlus
Examiner Comments

This response gained all 3 marks.

There are no trick questions but they do need reading carefully - this can be translated as 'why do animals depend on plants - even if they don't consume them directly?'



ResultsPlus
Examiner Tip

Highlight keywords - 'impacts' would be a good choice here.

Question 1 (c)

Some centres are very well versed in how best to prepare candidates for this type of question, which after all, are hardly exclusive to this paper. However, the significance of the word 'distribution' still escapes too many candidates who prefer to answer a question of their own making which is frequently something on the lines of 'Identify three places where hotspots are found'.

This response gained 3 marks.

(c) Study Figure 1b.

Describe the distribution of global 'hotspots' of biodiversity.

(3)

The global hotspots of biodiversity are mainly found near the equator, in West Africa, Madagascar, and South America. Most of the hotspots are found in South America. There are little to no hotspots in colder areas, especially on the North of the planet.

(Total for Question 1 = 10 marks)



ResultsPlus
Examiner Comments

These questions are pretty formulaic and should be embedded in teaching.



ResultsPlus
Examiner Tip

In all distribution questions try to open with an overview - 'even' or 'uneven'. This candidate doesn't do that effectively.

Question 2 (a)

This question relied heavily on Figure 2a and the vast majority had no difficulty in accessing the correct information.

1 mark was awarded for this response.

- 2 Study Section 2 (pages 4, 5 and 6) in the Resource Booklet and answer the following questions.

- (a) Study Figure 2a.

Describe the main causes of animal extinctions since 1600.

(2)

The main causes of animal extinction is Climate change will increase causes of extinction and introducing a new species will cause animal extinctions.



ResultsPlus
Examiner Comments

The question clearly asks candidates to 'Describe...' - this is a statement.



ResultsPlus
Examiner Tip

Command words matter - make sure that you know them and revise them.

Question 2 (b)

Using Figures 2a and 2b, as instructed in the stem to this question, candidates had a fairly wide set of possibilities from fishing increasing to non-native introductions. In most cases the second mark was gained by adding some detail to this either from the booklet or from their own knowledge of the topic.

is due to mining, computer quarrying the land and clearing the habitats
(b) Study Figures 2a and 2b. as well as deforestation.

Explain why many natural habitats are likely to disappear by 2060.

(4)

This is in order to keep the demand for survival resources such as food and with population increasing more ^{by 2060 more resources} are required so more habitats have to be destroyed in order to use as land for agriculture. At 0.5 to 1.5% are being cleared each year. Also in order to accommodate a much larger population more ^{habitats} land will be cleared for housing destroying more habitats.



ResultsPlus
Examiner Comments

This is a good response which scored 4 marks, but it is a bit of a muddle.



ResultsPlus
Examiner Tip

In longer written answers try to organise your answer into clear sections as in, for example 'Firstly..... Secondly...'

Question 2 (c)

There were several routes possible here with a lot of assistance in the Resource Booklet if candidates knew where to look. The instruction to study Figure 2c in the question stem was not followed by all and indeed very few tied the idea of hotspots with population growth all that effectively. Most went down the route of addressing the local processes of habitat destruction, much as they had in the previous question, rather than the significance of biodiversity concentration in some regions rather than others.

This response scored 4 marks.

(c) Study Figure 2c.

Outline **two** reasons why there is a serious threat to biodiversity in areas of rapid population growth.

(4)

1. Land is needed for housing and agriculture therefore habitats will need to be destroyed which results in species dying and a overall decrease of biodiversity.

2. Another reason is, in developing countries an increase in population will result in an increase in fishing which will further lead on to a increase in pollution which can ultimately kill the fish and reduce the biodiversity of the sea creatures.



ResultsPlus
Examiner Comments

Another keyword was often missed here - 'rapid'.



ResultsPlus
Examiner Tip

If you give examples, always do so - remember that you cannot lose marks - ever!

Question 2 (d)

The first part of this question was reasonably accessible given the information available in the Resource Booklet but the second required more thought. Some of the most thoughtful responses explained that the disadvantaged were often forced into situations that often led to environmental destruction; desertification was a productive route for some.

This response was awarded 4 marks.

(d) Study Figures 2d and 2e.

Explain why the environment is threatened by

(6)

economic growth

The richer a country is the more resources it consumes so the resources that come from bio diverse regions (coal, wood, oil) are exploited and the area that contains them is destroyed by companies obtaining those resources. As countries are slowly getting richer, more countries are consuming these natural resources and harming the environment.

inequalities of wealth and consumption

The richest 20% of the population consume $\frac{1}{4}$ of resources which affects the environment as richer people are needing more natural resources to consume. The world's middle class that is 60% of the world consume 21.9% of the resources but as there is a growing middle class this will rise. The poorest 20% consume 1.5% of the resources.



ResultsPlus Examiner Comments

Questions that are divided into parts sometimes (as here), although not always, allow a 3/1 or 1/3 distribution of marks as well as the more conventional even 2/2 split.



ResultsPlus Examiner Tip

If in doubt add points rather than take them away - allow the examiner to decide what is relevant.

Question 3

The most obvious weakness at the lower end of the mark range was a failure to obey the command word 'Compare...'; preferring to describe two theories but leaving it (optimistically) to the examiner to draw his or her own conclusions as to the similarities and differences between them. The most obvious 'gap' in understanding was less critical in terms of this examination but rather worrying in a broader context; it would be helpful if candidates understood that the central point of Boserup when applied to population is that it is argued that population growth is the cause of technological innovation providing the essential stimulus to invention.

*3 Study Section 3 (page 7) in the Resource Booklet.

Use evidence from Figures 3a and 3b and your own knowledge.

Compare the two different theories on the relationship between population growth and resources.

(6)

Thomas Malthus believed that as ~~popul~~ population ^{grew} grew geometrically, resources would rise arithmetically meaning that we would eventually run out of resources to supply the population causing a natural decrease in population. Boserup agreed that although population grew faster than resources, as population rise, we would make improvements in technology that would help support the population growth. Malthus believed that his theory would lead to a ^{decrease in} natural decrease in population whereas Boserup believed that population would continue to rise as long as there was enough resources to support the population. ~~as long as~~ there would be enough resources because people would react to resource shortages and invent new methods of increasing the rate of resources to support population.

(Total for Question 3 = 6 marks)



ResultsPlus Examiner Comments

This candidate adds material that they have learned in other units, specifically from Unit 2 'Consuming Resources', and achieves a Level 3 mark. On this paper that is a very useful thing to do.



ResultsPlus Examiner Tip

There are useful comparative words and in this example 'whereas' is the best example; so if asked to compare you really need to do so!

Question 4

As expected, given its position in the paper as the penultimate question, this was found challenging by many candidates. There seemed to be considerable discomfort caused by a conflict between their preconceptions and the reality of the data offered by Figure 4. The general perception that people were more likely to agree, in principle, with environmental protection but would turn to opposition if it came to higher prices, especially if they were poor, was difficult to sustain given the Indian and Chinese data. As often happens when prejudices meet data it was the prejudices that usually won. The relative and observable damage to the environment and the impact on the poor of that damage wasn't often explored; although some saw that Chinese air pollution or Indian water pollution would have a differentially severe impact on the disadvantaged, who also had little to lose given that they were too poor to be consumers and thus indifferent to 'higher prices'.

This is an example of a Level 2 response.

*4 Study Section 4 (page 8) in the Resource Booklet.

Use evidence from Figure 4 and your own knowledge.

Explain why attitudes to protecting the environment vary from country to country and from time to time.

(6)

From studying figure 4, it is clear that countries are more ~~poor~~ towards the first option. However, countries (especially Brazil) have changed their thoughts on the second option and strongly now disagree. ~~More~~ Almost half of the people that agreed with the first option in Brazil then disagreed with the second option. Countries like China and India have a very high population and consume many resources which are likely to damage ~~the~~ the environment and are therefore strongly ~~agreeing~~ agreeing (Total for Question 4 = 6 marks) agreeing with both options. China and India have a rapidly growing population.



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Examiner Comments

The resource that was the focus of this question had a great deal of data - in common with many others, this candidate seemed reluctant to use it.



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Examiner Tip

Use data whenever and wherever you can - especially when it is the focus of the question!

Question 5

Candidates are now accustomed to this type of question. More or less unique to this paper the question is known in advance or, at least, the basic structure of the question. There were no subtle restrictions this year such as 'people and the environment' so candidates could pursue their own routes in justifying their choice. There were many very good answers with candidates presenting argument and counter-argument, drawing on their own knowledge and understanding and offering some case-study based support for the points that they made. Option 1 was by far the most popular choice, Option 4 the least popular. There was a sound enough reason for that given the information available in the Resource Booklet but it is a little dispiriting to think that most 16-year-old Geography students take the view population control is the answer. Indeed, too many talked about population decline rather than a declining rate of growth about which the option was explicit: '... and slow down population growth'. Some, perhaps encouraged by the Brexit debate, localised the debate to migration with arguments that frequently descended into polemics. Whilst there were excellent Option 1 answers perhaps the best responses took the Option 2 or Option 3 route with some very sophisticated responses, especially to the latter, using Boserup and some of the material from Figure 4 as part of their justification. There was, encouragingly, less evidence of shortage of time this year than in previous exam series.

This response just reaches Level 3.

Spelling, punctuation and grammar will be assessed in your answer to this question.

***5** Study the four options about the declining biodiversity of the planet.

Option 1: Biodiversity decline is mainly caused by population growth. Governments must tackle this immediately and slow down population growth, to gain some time.

Option 2: Biodiversity decline is mainly caused by economic growth. Governments must tackle this immediately and slow down economic growth, to gain some time.

Option 3: Biodiversity decline can be prevented by creating new technologies. Governments must spend much more money researching solutions despite the cost to us all.

Option 4: Biodiversity decline seems unavoidable. Governments should carry on as they are now and hope for the best.

Select **one** option.

Justify your choice.

Use information from the Resource Booklet and your own knowledge from Units 1 and 2 to support your answer.

Chosen option ~~1~~ 2

(12)

If human has option to in fact as make the decline of biodiversity is inevitable, this is because there are too many things that pose as a threat to biodiversity for it to be sustainably managed. For example the development or placement of new species means that other animals will become endangered. I believe this is a natural process and new animals will not rise as a threat to the environment as they. The uneven pattern of wealth and economic growth of countries not only causes exploitation but poses as a threat

to the environment and biodiversity overall. The rapid growth of economies means more deforestation is happening to cope with high agriculture demands and the need for new land to build houses on, destroying animal / species habitats. The development of new technologies would cost lots and lots of money to do and potentially could still cause environmental issues as resources would need to be consumed for the research to happen and keeping up with time and population growth means new technologies will constantly need to be developed to meet the demand, wasting even more money.

Governments should work together to create a sustainable plan which will prevent the abuse of resources by their developed countries. It should also work to prevent the exploitation of poorer developing countries as they are being forced to give up land and resources to Trans National Companies affecting their development.

Monitoring economic growth will stop people from taking things for granted and wasting resources and destroying natural land. Also if a countries economy stops rapidly growing it may affect birth rate which means the population of the country

Will stop increasing means only meaning the demand for land and resources decreases. ~~and~~ This option will help decrease the rate in which biodiversity declines as it will ~~stop~~ slow down the amount of deforestation happening as not as many resources will be required to meet the countries demand which means that habitats can not get destroyed and (less) animals will be put into danger.

This is better than targeting population growth directly as decreasing population can lead to many tensions in a country and perhaps even lead to a greying population. Monitoring economic growth works at monitoring all aspects in which could affect biodiversity and that's why this option is thought to be the most reliable. It also stops developing and poorer countries from being affected as they won't be exploited anymore and they will not be forced to decrease population which is important as the chance of babies dying in developing countries is high and children are needed to help with work. This is because it is only the richer and more developed countries who are consuming too many resources which is affecting biodiversity.



ResultsPlus Examiner Comments

This type of question is pretty predictable - you will be given a choice and asked to justify it or explain it. Much can be prepared ahead of time in practising similar questions. Try to highlight in blue the passages here that do NOT add to the overall answer and might be deleted and suggest TWO ideas that could be added.



ResultsPlus Examiner Tip

Remember that almost all policy decisions will have drawbacks; they will have 'winners' and losers'. Practice counter-argument as well as argument.

Paper Summary

Of all three Units on Specification B, this is the least changed for teachers and their candidates come September. Thus the lessons learned during this examination season will be very useful in preparing students for both 2017 and 2018.

Grade Boundaries

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

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