OCR
Oxford Cambridge and RSA

GCSE (9-1)

Examiners' report

GEOGRAPHY A (GEOGRAPHICAL THEMES)

J383

For first teaching in 2016

J383/02 Summer 2023 series

Contents

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. A selection of candidate answers is also provided. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper and the mark scheme can be downloaded from OCR.

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Paper 2 series overview

June 2023 saw a return to the traditional format of the examination after the optionality offered in June 2022. Candidates were required to answer all three compulsory questions as per the 2018 and 2019 examinations.

All examiners and team leaders agreed that the 2023 examination was pitched at an 'appropriate level' for the candidates. They felt that most candidates made good use of their time to complete all necessary questions. Many also made good use of the additional pages to develop their responses to medium and high tariff questions. The majority of answers were well written, with about three quarters of candidates scoring two or three for their SPaG mark on question 2(c).

Question 1 was the most successfully answered question, with Questions, 2 and 3 sharing a similar level of performance. All three questions involved a case study for the higher tariff 6, 8 and 12 mark questions. Question 3 (d) about the impact of a drought event was the most successfully answered, with Question 1 (d) about rainforest interdependence and Question 2 (c) about employment structure and economic development, showing similar levels of success.

A key factor for high performance was the successful application of knowledge and understanding to meet the requirements and demands of the questions. This was most important for the higher tariff questions. The 12 mark question will always cover a range of requirements and assessment objectives. This ability to read the questions and focus on applying precise knowledge and understanding distinguishes the best candidates from the rest.

The three exemplar answers included in this report show full mark responses to the least successfully answered questions in the exam, Questions 2 (b) (ii), 3 (b) (ii) and 3 (c).

Candidates who did well on this paper generally:	Candidates who did less well on this paper generally:
- were able to interpret climate data - had sound knowledge and understanding of - how plants are adapted to a desert ecosystem - threats to rainforest biodiversity - interdependence in a rainforest - were able to interpret a population pyramid - understood advantages of the HDI - understood how employment structure change can influence economic development in an LIDC or EDC - could describe a relationship shown on two line graphs - had sound knowledge and understanding of - a natural cause of climate change - how extreme weather events are linked to climate change - how global air circulation can cause extreme wet weather - the human impact of the environmental effects of a drought event - selected relevant named examples, gave developed ideas supported with valid place specific detail for all three case studies.	- did not focus ideas on desert or tropical rainforest ecosystems - did not know what the HDI was - gave an incorrect example for an LIDC/EDC country - did not understand the causes and consequences of climate change - gave only simple ideas for the impact of a drought event - did not attempt more challenging questions.

Question 1 (a) (i)

Ecosystems of the Planet

1   (a) Look at the table below, which shows climate data for a hot desert ecosystem.

Climate data for a hot desert ecosystem

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall (mm)	6	5	4	2	1	0	0	0	0	1	3	6
Average Temperature (°C)	14	15	17	22	25	27	28	28	27	24	19	15

(i) State the **mode** for the rainfall data.

.... **[1]**

This was correctly answered by most candidates. They knew what the term mode meant and correctly applied this to the data. Some incorrect answers gave the highest temperature value, others added up the temperatures or used the rainfall data.

Assessment for learning

Three or four out of the seven skills marks in the exam are usually linked to numerical and statistical skills (Specification Theme 3.3). One of the more straightforward vehicles for this is to ask candidates to interpret a numerical data set. Data sets linked to the Specification Themes could be used to enable candidates to familiarise themselves with the range of terms and to practice their interpretation skills.

Question 1 (a) (ii)

(ii) Calculate the **mean** annual rainfall.
Give your answer to **one** decimal place.

.... **[1]**

This was correctly answered by a number of candidates. The wording of this question led candidates to give other responses, which were discussed at the standardisation meeting. The answer examiners were looking for was 28.0.

Question 1 (a) (iii)

(iii)   Identify **two** features of the climate data which are typical of a hot desert ecosystem.

Feature 1 ....

....

Feature 2 ....

....

[2]

> The simplest responses were the most successful. Reference to high temperatures and low rainfall secured both marks for about two thirds of the candidates. Some gave over complicated responses analysing seasonal variations or used terms that were not typical of hot deserts, such as 'warm' temperatures. Others included features of hot deserts not shown in the data, such as cold night time temperatures.

Assessment for learning

Candidates should practise writing short, clear and coherent responses to two mark, low tariff questions. The clues are the mark allocation and the limited lines for the answer. This saves time to focus on the medium and higher tariff questions.

Question 1 (b)

(b)   Explain how plants are **adapted** to the climate of a hot desert ecosystem.

....

....

....

....

....

.... **[4]**

> Many candidates gained all four marks. This was achieved by separate, simple but relevant ideas or more complex developed ideas or a combination of both approaches. Reference to water storage, longer root systems, spikes for protection and features to reduce water loss were the most common ideas.
>
> Some detailed responses included technical terms such as xerophytes and psammophytes, others possibly drew upon learning from biology to develop their answers.
>
> A common misunderstanding was that roots are used by plants to store water.

Question 1 (c)

(c) Explain briefly **two** threats to the biodiversity of tropical rainforests.

Threat 1 ....

....

....

....

Threat 2 ....

....

....

....

[4]

Unlike Question 1(b), this question required two separate, developed points to gain full marks. A tick was given for stating a valid threat to rainforest biodiversity and the annotation 'DEV' was used to credit a valid explanation of how the threat operates. Deforestation leading to habitat loss and contamination of water sources by mercury used in gold mining, were the most common examples. Many candidates gained full marks. Other valid responses included hunting and poaching leading to species decline, oil and gas exploitation, road building, and clearance for farming. Less convincing were ideas about climate change, with some suggesting that higher temperatures alone could decimate rainforest vegetation.

Assessment for learning
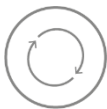
Candidates should note the difference between these two four mark questions. For Question 1(b) full marks can be gained with four separate, simple valid ideas. For Question 1 (c) two separate, developed ideas are needed. Candidates should look closely at the key words in the exam questions and the structure of the space where they write their responses, in this case the separation of the answer space into 'Threat 1' and 'Threat 2'.

Question 1 (d)

(d) CASE STUDY

Tropical rainforest interdependence

Tropical rainforest you have studied: ....

Explain the **interdependence** of climate, soil and plants in tropical rainforest ecosystems.

....

....

....

....

....

.... **[6]**
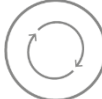
Many candidates gained marks for the question, but only a few produced well-developed Level 3 responses.

The Peruvian Amazon, as featured in the OCR endorsed textbook, was the most common example. A few candidates used the Amazon, the Congo and Gunung Leuser in Indonesia as their examples. The best responses provided detailed coverage of plants and climate links for the water cycle and the relationship between plants and climate for the production of nutrients. Others also covered how plants protect the soil from leaching and how roots hold the soil in place.

Lower level responses gave ideas that could apply to interdependence in any ecosystem without clear reference to tropical rainforests. Others included irrelevant ideas about valuable resources or threats to the rainforest. Some mentioned the role of humans and animals but these ideas were not credited. A feature of medium and higher level responses was the lack of place specific detail (PLC) needed for a case study answer to gain full marks at Level 2 or Level 3.

Assessment for learning

Candidates should learn relevant place specific information to apply to case study questions like this. Credible climate data, location information or plant species would have been useful in securing full marks for Level 2 and Level 3 responses.

Question 2 (a) (i)

People of the Planet

2   **(a)**   Look at **Fig. 1** in the Resource Booklet, which shows a population pyramid for a Low Income Developing Country (LIDC).

     (i)   What is the approximate total of the population aged **under** 15 years?

         A   6 million

         B   10 million

         C   14 million

         D   18 million

     Write the correct letter in the box.   **[1]**

Most candidates gained the mark for this question. Incorrect answers were due to candidates not realising that six bars needed adding on Fig.1 to reach the correct answer of C.

Question 2 (a) (ii)

     (ii)   Which of the statements about the population pyramid is **correct**?

         A   There is a high birth rate and high life expectancy

         B   There is a high birth rate and low life expectancy

         C   There is a low birth rate and high life expectancy

         D   There is a low birth rate and low life expectancy

     Write the correct letter in the box.   **[1]**

The correct option B was chosen by most candidates.

Question 2 (b) (i)

(b) (i) Define economic development.

....

.... **[1]**

Most candidates secured their mark by offering a valid definition of economic development.

Question 2 (b) (ii)

(ii) Explain the **advantages** of using the Human Development Index (HDI) as a development indicator.

....

....

....

....

....

.... **[3]**

Candidates' ideas showed that they did not know what the Human Development Index (HDI) was or they incorrectly stated that the HDI was comprised of measures such as birth rate, death rate and internet users. Stating the correct measures used for the HDI was only given credit if this was linked to an advantage, such as the HDI combines economic and social measures. Or the HDI gives a wider view of development, compared to just one measure such as GNI per capita. This approach secured 1 or 2 marks for some candidates. The few who gained full marks also made reference to the ranking system used for the HDI enabling easy comparison between countries. Fewer still commented on the reliability of the HDI as the United Nations is the source.

Exemplar 1

One advantage of using HDI as a development indicator is that it takes the value of three different indicators, giving more of an average, rather than focusing on one sector which might be unusually poor, HDI takes the values of life expectancy, Education and GDP (gross domestic product) to produce a score between 0 and 1. **[3]**

This response achieved full marks. The first mark is for the idea that the HDI takes the value of three different indicators, this is developed by stating that this gives more of an average that one sector which may be usually poor, for the second mark. The third mark is for examples of measures used to produce a score between 0 and 1. The inclusion of GDP is incorrect but this does not detract from the quality of the answer or mark awarded.

Question 2 (c)

(c)* CASE STUDY

LIDC or EDC development

LIDC or EDC you have studied: ....

To what extent do changes in employment structure over time **influence** economic development?

....

....

....

....

....

.... **[12]**

🖉 Spelling, punctuation and grammar and the use of specialist terminology **[3]**

As with all 12 mark questions there was a wide range of achievement demonstrated. A small minority did not attempt the question. Some who answered did not gain any marks, usually because they did not understand the term 'employment structure' or gave incorrect case study examples such as Rosario, Lagos, Istanbul and Mumbai.

Some candidates did gain Level 1 marks for simple ideas about jobs or employment linked to government taxation to spend on development or wages being spent in the local economy. This also applied to those who did chose a valid LIDC or EDC country, usually Ethiopia, but could not offer any clear ideas about changes in employment structure. By contrast some candidates delivered very strong Level 4 answers. Most of these considered the change from reliance on primary industry to the growth of secondary and tertiary sectors in the context of Ethiopia's economic development. Ideas and content were closely related to the OCR endorsed textbook with valid exemplification supported by relevant place specific detail (PLC). Ethiopia's reliance on primary products, such as coffee and flowers linked to low wages, unreliable export revenues and the trade deficit was considered as a factor which limits economic development. Some responses also made accurate connections with Rostow's model of economic development. Investment by Transnational Corporations (TNCs), such as H&M and Hilton Hotels, were also covered along with the positive and negative effects of such investment.

The strongest responses took advantage of the 'To what extent' element of the question and embarked upon discursive accounts comparing the importance of employment structure with other factors which affect Ethiopia's economic development such as its landlocked location, political history and international trade. Less successful were those who tried to include education and goat aid as part of their answer. India was also chosen as a valid case study example. These answers tended to focus on developments in ICT industries or the growth of Bollywood as a global entertainment hub.

As usual there was a connection between the quality of responses given and the related spelling, punctuation and grammar mark. Examiners were impressed with the high quality of responses given. Many candidates were awarded a SPaG mark of 3. Some candidates, who wrote well but did not tackle the key elements of the question were awarded a SPaG mark if they made some simple, valid connections with employment and development.

Assessment for learning

A successful approach to a 'To what extent…' question can be to offer a simple judgement at the start of the response. This is followed by relevant supportive ideas and evidence and in some contexts evidence to contradict the judgement. This enables a summative conclusion to consider the validity of the original starting judgement. Candidates should be encouraged to try out this approach.

Question 3 (a) (i)

Environmental threats to our Planet

3   **(a)**   Look at **Fig. 2a** and **Fig. 2b** in the Resource Booklet.

     Fig. 2a shows average global temperatures for the last 400 000 years.

     Fig. 2b shows carbon dioxide levels in the atmosphere for the last 400 000 years.

     (i)   State the **lowest** temperature shown on **Fig. 2a**.

         Give your answer as a whole number.

         .... **[1]**

Most candidates gave the correct answer of -9°C. Some incorrect answers of -10°C were given and some candidates omitted the minus symbol.

Question 3 (a) (ii)

     (ii)   Which of the statements is a correct definition of an **ice age**?

         A   Cooling average global temperatures causing increased snowfall

         B   Lower than average global temperatures when glacial ice covers more land

         C   Variable average global temperatures causing glacial ice to form and melt

         D   Warming average temperatures causing glacial ice to melt

         Write the correct letter in the box.   **[1]**

Most candidates identified B as the correct definition of an ice age.

Question 3 (a) (iii)

(iii) Look at **Fig. 2a** and **Fig. 2b**.

Describe the **relationship** between average global temperatures and carbon dioxide levels.

....

....

....

.... **[2]**

One mark was gained by most candidates for describing how rises in carbon dioxide levels were matched by rises in temperature. A second mark could not be given for the mirror point that they also fall in conjunction. This second mark was for giving an overview of the relationship by stating that there was a positive correlation between the two variables. Some also correctly described the relationship as directly proportional. Some candidates explained causation or struggled to select data to exemplify the relationship.

Assessment for learning
When asked to describe a relationship between variables or a pattern, a good response will offer a summative statement followed by exemplification from the evidence given. Candidates should practise this with a range of data and evidence sources..

Question 3 (a) (iv)

(iv) Greenhouse gases are one cause of increases in global temperatures.

Explain **one** possible **natural** cause of increases in global temperatures.

....

....

....

.... **[2]**

Many candidates did not score any marks for this question. Their responses made reference to human causes of global temperature increase or the impact of greenhouse gasses. Included in these ideas were wildfires and cows releasing methane as both are linked to human activity. Some secured both marks with a tick given for a valid natural cause and the annotation 'DEV' used for an explanation of the cause. The most common ideas were sunspot activity, axial tilt, precession and eccentricity. Some mentioned the Milankovitch cycles but were only given credit if they referred to a specific element. Credit was given to volcanic eruptions and 'DEV' applied if the explanation focused on the emission of gases that cause global warming. Those who referred to volcanic ash blocking sunlight were only given 1 mark.

Question 3 (b) (i)

(b) Look at **Fig. 3** in the Resource Booklet, which shows extreme weather and climate events costing one billion dollars in the USA from 2010 to 2017.

(i) Which type of event, shown in **Fig. 3**, occurred **most** often in 2017?

.... **[1]**

Almost all candidates correctly identified severe storms as the correct answer.

Question 3 (b) (ii)

(ii) Suggest how the increased frequency of extreme weather and climate events, shown in **Fig. 3**, may be a consequence of global climate change.

....

....

....

....

....

.... **[3]**

This was the second least successfully answered question in the exam. Some candidates seemed to be confused with the word 'consequence' in the question, with some giving accounts of the impact of an extreme weather event on people and places. Successful responses included higher temperatures leading to ice caps melting leading to increased coastal flooding. A few linked higher temperatures to warmer seas, increased evaporation and more frequent tropical storms. Some also covered hot, dry conditions leading to an increase in wildfires. Marks could be gained with simple valid ideas for different extreme events or by a developed explanation linked to one event.

Exemplar 2

Wildfires will increase due to higher global climates due to more evaporation leading to the drying of grasses and other flora, making them more vunerable to fire and easily spread quick. Droughts can be increased due to climate change as less water is cycled and circulated as rainfall, their fore no rainfall is leading to drought **[3]**

This response achieved full marks. Increase in wildfires linked to higher global temperatures gained the first mark. This was developed with reference to more evaporation for the second mark with further development for this dries vegetation making areas more vulnerable to the spread of fire for the final mark. The second part of the response linked to drought was also credit worthy but maximum marks had already been secured.

Question 3 (c)

(c) Explain how the global circulation of the atmosphere leads to extreme wet weather conditions in **one** part of the world.

....

....

....

....

....

.... **[3]**

Question 3(c) was the least successfully answered question in the exam. The question is linked to part of the specification which candidates may find challenging. . Some candidates met this challenge to score full marks. The most common of these responses started with the Hadley Cell or Equator, then mentioned hot air rising leading to increased evaporation and heavy rainfall. Less successful were attempts to link El Nino and La Nina to extreme wet weather, as often this had been learned in the context of drought conditions. A few successful responses focused on circulation of the atmosphere linked to the Jet Stream, Monsoon season and movement of the Intertropical Convergence Zone (ITCZ).

Exemplar 3

conditions in **one** part of the world. One of the air cells over the equator being
~~Many of the air cells especially~~ Hadley the
cells create ~~warm~~ wet weather due to its
low pressure. The low pressure of the air
causes it to rise and therefore rise with
evapourated water which then cools and
condenses to form clouds which sink and
fall as percipitation as they get heavier
with more water condensing from **[3]**
the warm atmosphere.

This response achieved full marks. The first mark is for a valid part of the world, the Hadley cells over the Equator. The second mark is for the low pressure causes air to rise, leading to evaporation, condensation and heavy precipitation for the third mark.

Question 3 (d)

(d)* CASE STUDY

Effects of a drought event

Drought event you have studied:..

For a drought event you have studied, examine how far the environmental effects had an impact on **people**.

....

....

....

....

....

.... **[8]**

This was the most successfully answered case study question and in contrast to Question 1(d) the most rich in terms of place specific detail (PLC). Overwhelmingly, the most common example was the 'Big Dry' event in Australia, with ideas and content closely gleaned from the OCR endorsed textbook. There were some good responses based around the Cape Province drought event in South Africa and some weak ones about drought in general using Ethiopia as an example. A number of candidates chose the Somerset floods as their case study example. A minority of candidates produced only Level 1 responses as their responses gave only simple ideas and did not focus on the environmental effects element of the question. Level 2 responses offered some developed ideas about the impact of the drought on people, usually domestic water consumption but did not include clear links to the environmental effects of the drought.

By contrast, the Level 3 responses did this effectively by linking lack of rainfall, depletion of water sources and arid soil conditions to the impact on farming. Most then provided detail about the impact on cattle farming including increased suicide rates, government support and rural urban migration, well supported with accurate data. Some also made correct references to the impact on cotton farming. The impact of depleted water supplies and the drying up of rivers in the Murray-Darling basin was clearly linked to restrictions on domestic water use and the opening of a desalination plant in Sydney. .

To gain full marks candidates were also required to offer an evaluation of how far the environmental effects had an impact on people. This was triggered by the command word 'examine'.

Assessment for learning

Candidates should note that the amount of place specific detail (PLC) is used by examiners to decide the mark given within a particular level. However, it is the quality and depth of the ideas and whether they are judged to be 'developed' and/or 'well developed' which determines the overall level awarded. Some responses to question 3d) had lots of correct PLC but the ideas given were only simple. This meant that the answer could not be given a mark higher than Level 1. Candidates should practise writing developed points in connection with their case study answers and adding a piece of PLC to support the point being made.

OCR support

OCR's 'GCSE Geography Command Words' gives clear definitions of command words and examples of how they are used for different types of questions, including case studies. This invaluable tool is closely referred to when setting exam questions. Candidates should be familiar with the content and could use it to audit the range of command words used for case study questions on past exam papers. They could also draw up strategies to support their approach to tackling the different demands of these questions.

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