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GCSE (9-1)

Examiners' report

GEOGRAPHY A (GEOGRAPHICAL THEMES)

J383
For first teaching in 2016

J383/02 Summer 2019 series

Version 1

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. 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 can be downloaded from OCR.

Paper 2 series overview

June 2019 was the second examination session for J383 02, GCSE (9-1) Geography Specification A. J383 02 is comprised of three main sections, one for each Theme in The World Around Us component. Each section has low, medium and high tariff questions. The high tariff questions range from 6 to 8 to 12 marks and are the only questions that are levels marked. The total mark for this component is 60.

As with all examinations the stronger, more able candidates performed at higher levels than the others. A key factor for high performance on this examination is the successful application of knowledge and understanding which met the requirements and demands of the questions. This is most pertinent for the higher tariff 6, 8 and 12 mark questions. The latter will always cover a range of requirements and assessment objectives. This ability to read the questions and focus on delivering precise knowledge and understanding distinguishes the very best candidates from the rest. One Team Leader summarised this:

'Candidates found a number of aspects of the examination challenging, as it should be, especially as regards the case studies. Weaker candidates appeared to think that learning the case study, instead of applying it, would be enough.'

	AfL	Many centres develop sound practice during 'walking-talking mocks' and other exam technique sessions. During the stressful environment of the real examinations some candidates rush into their answers before calmly analysing exactly what is required. There were encouraging signs of candidates doing this for the higher tariff questions. With key words in questions underlined and mini plans covering examples and key ideas to be used for responses.

An additional challenge for two of this year's higher tariff questions was the requirement to apply knowledge and understanding to evaluate and make judgements in the context of the question's requirements. The ability to do this with clarity, coherence and confidence distinguishes the most able candidates from the able.

Being concise is also a key success factor. Many examiners commented on candidates who wrote too much. They had secured maximum marks for a question item but continued with their response, thereby wasting time for no further gain. Candidates should be encouraged to write enough to gain full marks and then have the confidence to move to the next question.

Another Team Leader also noted the role of the GCSE A endorsed textbook:

'Most candidates used text book examples rather than refer to other case studies. Use of the text book did result in good recall of relevant knowledge.'

The two textbook case study examples which featured strongly were the Andros Barrier Reef for Question 1e) and the city of Rosario for Question 2b). A wider range of relevant case study examples were also seen, but examiners thought that some candidates found it difficult to fit these to the question requirements. The selection and coverage of up to date and relevant case studies is part of the challenge of teaching GCSE Geography. The specification (p.5) notes ' Case studies should eb chosen from the 21st century. When exploring new case study examples it might be useful for teachers to regard those in the approved textbook as models for how to address the precise content of the Specification for examination purposes.

Question 1 assessed the Ecosystems of the Planet section of Theme 2. This was the most successfully answered question in the 2019 examination. This may be due to it being the first section answered by most candidates or the structure of the questions as noticed by one examiner:

'The paper encouraged lower ability candidates to 'have a go' by having shorter answer questions at the start, using stimulus material, not launching into a more complex higher tariff question too early.'

Question 2 assessed the People of the Planet section of Theme 2. This was marginally the third best performing question, both overall and for the higher tariff question.

Question 3 assessed the Environmental threats to our Planet section of Theme 2. Candidate performance was very close to that of Question 2, but marginally better for both the whole question and the higher tariff question 3d).

Some of the key features of Component 02 which can be challenging for candidates, are worth noting:

- The number and type of questions (low, medium, high tariff) within each section will vary from year to year.
- Content covered in the 2018 and 2019 examinations may be revisited in future examinations.
- Medium and high tariff question items will cover a range of assessment objectives.
- The higher tariff questions will not always require a case study example.
- The higher tariff questions may also include the requirement to evaluate and make judgements.
- Geographical skills questions include numerical and statistical skills in a geography context.
- Multiple choice questions will be targeted at the full range of ability, not just the lower ability.
- Subject specific vocabulary (key words) are taken directly from the Specification Themes to generate the wording of the questions.

Question 1 (a)

Ecosystems of the Planet

1 (a) Study **Fig. 1**, a map showing the global distribution of tropical rainforests.

Describe the distribution of tropical rainforests shown on **Fig. 1**.

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..... **[3]**

Question 1a) featured Fig. 1, a map showing the global distribution of tropical rainforests, with candidates needing to describe the distribution pattern. One of the three marks given was for communicating the answer in an appropriate and logical order. This meant that two clear and coherent points were needed to gain full marks. Just under 60 percent of candidates were able to do this using the Equator and the Tropics of Cancer and Capricorn as their reference points, others supported their answer with precise reference to continental locations. Less convincing answers listed countries with rainforests or named areas of rainforest. Others were imprecise with their choice of vocabulary with phrases such as 'above' and 'below' the Equator. Some candidates wasted time and effort by explaining why tropical rainforests were found at these locations. Others had secured their three marks but felt obliged to continue writing to fill all the available answer space. Consideration will be given to how much answer space to offer for future questions of this nature.

?	**Misconception**	A common misconception was that the Tropics lie 30 degrees north and south of the Equator.

Exemplar 1

Tropical rainforests are typically found between the tropics of Cancer and Capricorn. They are found in Central America and Africa (Congo River Basin) as well as the South East of Asia.

Exemplar 2

The tropical rainforests are located between the tropic of cancer and the tropic of capricorn across the world. There no tropical rainforests in the North part of the world due to the colder temperatures. The rainforest are located along the equator not only because of hot temperature but also that theres a lot of rainfall [3]

Exemplar 3

Tropical Rainforests are mostly located above and below the equator, inbetween the tropic of cancer and tropic of capricorn.

Exemplar 1 gained full marks, there are two clear, concise statements, 'along the equator' with exemplification. The third statement was also valid but not needed. Exemplar 2 has two valid points, between tropics and along the equator, but the inclusion of where there are no rainforests and two explanation ideas impairs the quality of communication, so only two marks were given. Exemplar 3 gained one mark for the in between the tropics idea, above and below the equator is not precise enough for credit.

Question 1 (b)

(b) State **two** climatic conditions needed for a tropical rainforest to grow.

1 .....

2 .....

[2]

Precision of language was a key factor for Question 1b). The marks allocations of 0, 1 and 2 were split evenly among the candidates, with two marks being the most common. These answers referred to high temperatures and high annual rainfall, along with high levels of humidity, with some including accurate data. Those who did not gain marks were too vague with responses such as 'rainfall' and 'warm', some also included sunshine.

Question 1 (c) (i)

(c) Study the table below about areas of tropical rainforest in five countries.

Country	2005 rainforest area (km^2)	2015 rainforest area (km^2)	% loss of rainforest area
Bolivia	58 734	54 764	6.8
Brazil	506 734	493 538	2.6
Colombia	60 201	58 502	
Ecuador	13 335	12 548	5.9
Peru	75 528	73 973	2.1

(i) Calculate the percentage loss of rainforest area for Colombia.

Give your answer to one decimal place. ..... **[1]**

The 'NR' annotation is used by examiners to show that the candidate did not attempt the question. The third highest occurrence of this was for Question 1ci), with ten percent of candidates not providing an answer.

Just over half of those who did gained the mark for '2.8%'. Some were close with '2.9%' having not rounded their answer to the correct decimal point. Other answers showed that candidates did not understand how to calculate the percentage loss of rainforest from the data given. It was also noted that some candidates showed their working out as part of their response, a time consuming exercise for no reward.

The use of a calculator is clearly stated on the front cover of the question paper booklet.

Question 1 (c) (ii)

(ii) How might sustainable use and management explain why some countries have lower rates of rainforest loss?

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..... **[3]**

The use of Specification specific wording in Question 1cii) made the question challenging for a lot of candidates with about one third unable to achieve any marks. These answers reworded the question without any reference to actual methods of sustainable use or management of rainforests. Basic ideas mentioned national parks, nature reserves, controlled deforestation through permits and replanting. A few mentioned conservation of rainforest for ecotourism as a sustainable source of revenue. Some understanding was supported by reference to the Purus-Manu Conservation Corridor from the GCSE A textbook, although knowledge recall was not an assessment objective for this question.

Question 1 (d)

(d) Study **Fig. 2**, which shows the water cycle in a tropical rainforest.

Using **Fig. 2**, explain **two** ways in which cutting down trees changes the water cycle.

1 .....

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2 .....

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..... **[4]**

Most candidates made good use of Fig. 2 to gain marks for Question 1d). Lower ability candidates were able to correctly identify one or two changes to the rainforest water cycle, while the more able explained how this was caused by the cutting down of trees. The most common ideas were less interception and evapotranspiration and increased run-off. Successful explanations linked this to the absence of tree cover to slow down the transfer of water. Some answers were muddled but examiners took care to discern and credit any valid development. Time was wasted by some candidates who wrote about nutrient loss, soil erosion and flooding. Some also did not notice that there was reduced rainfall and evapotranspiration in the deforested section of Fig. 2 and could not be given credit for stating that these two processes had stopped.

Question 1 (e)

(e) CASE STUDY – Coral reef interdependence

For **one** named coral reef, explain the interdependence of climate, plants and animals.

Coral reef studied: .....

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..... **[6]**

Question 1e) saw the focus move to coral reefs. This was the most successfully answered of the three higher tariff questions. However, one fifth of candidates did not score marks including those who omitted the question. The Andros Barrier Reef was the most common example, followed by the Great Barrier Reef. Other interesting examples were the Menjangan Reef in Indonesia and the Coral Triangle. The best responses gave clear accounts of the symbiotic relationships between coral and algae with detail about the role played by the zooxanthellae and the interchange of nitrogen. These ideas were also linked to photosynthesis which in turn was linked to water temperatures and clear, shallow waters. More basic answers focused on the links between fish and coral with the former providing nutrients and the latter providing shelter.

Examiners noted a surprising lack of place specific detail from able candidates which prevented them from gaining full marks. Some did refer to specific fish species such as clownfish and parrotfish, while information about the location and size of the chosen reef was also credited. Some candidates decided to focus on threats to the coral reef, with coral bleaching, overfishing and tourism being the most common. These responses were only given credit if they provided a clear link between the threat and disruption of the coral reef's interdependence.

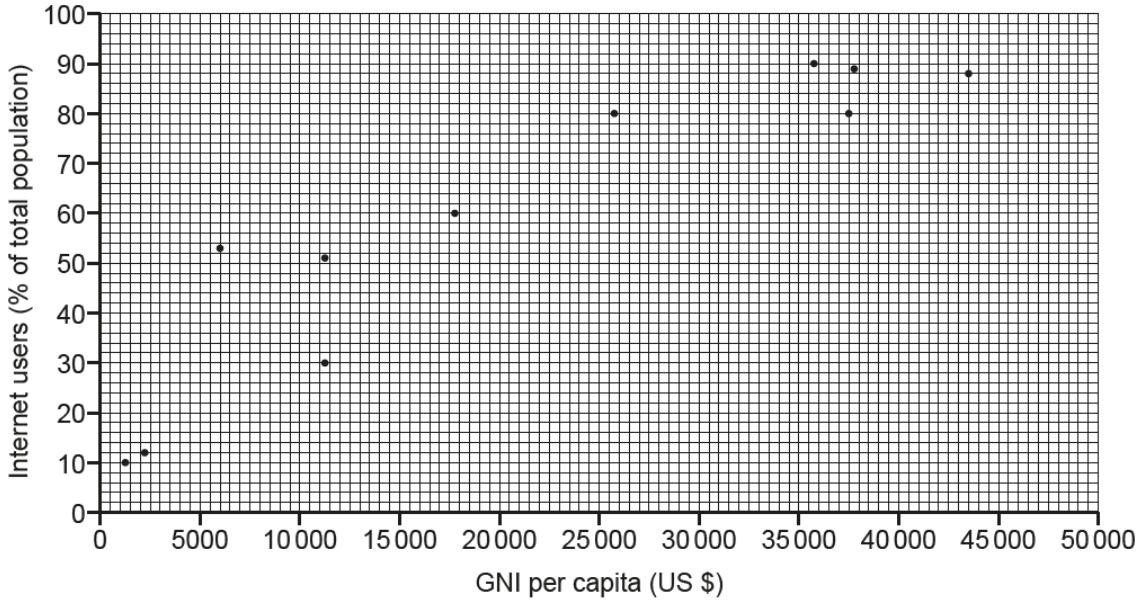
	AfL	Pausing to read the question and highlight key elements such as 'explain' 'interdependence' and 'climate, plants and animals' would have helped these candidates use their time more productively.

Question 2 (a) (i)

People of the Planet

2 **(a)** Study the scatter graph below which shows the relationship between GNI per capita and internet users for selected countries.

GNI per capita and internet users for selected countries



(i) Use the following data for the country of Jamaica to add a point to the scatter graph.

GNI per capita = $8,500 **Internet users = 45%.** **[1]**

Question items 2a) i) and ii) assessed numerical and statistical skills and yielded a wide range of candidate performance. Just over three quarters of candidates were able to use data to plot a point for Jamaica onto the scatter graph. No margin of error was given for this question. Only forty percent of candidates were able to accurately add a best fit line to the pattern of points on the completed scatter graph. Some were close but their line did not bisect the points accurately enough. Others showed the line as a curve, some chose to join up the dots and five percent did not attempt the question.

Question 2 (a) (iii)

(iii) Study the completed scatter graph.

Which one of the following statements describes the relationship between GNI per capita and internet users?

A The higher the GNI per capita the higher the % of internet users
B The higher the GNI per capita the lower the % of internet users
C The lower the GNI per capita the higher the % of internet users
D There is no clear relationship between the GNI per capita and the % of internet users

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

Eighty percent were able to select option A for Question 2aiii) to show that the points revealed a positive correlation. The most common error was to choose option D, no clear relationship, this was often linked to inaccurate best fit lines for the previous question.

Question 2 (a) (iv)

(iv) Explain how development indicators show evidence of economic development.

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..... **[3]**

The wording of Question 2aiv) inhibited the success of many candidates. Successful answers made use of the indicators shown in the scatter graph. They were able to explain how high levels were linked to economic development in terms of wealth for GNI per capita or infrastructure provision for internet users. These two development indicators are in the content section of Specification Theme 2.2.1, and it was expected that more candidates would use them to show their understanding. Some candidates also made reference to GDP, employment and trade to gain marks for their explanations. Many chose social development indicators such as life expectancy and literacy rates and struggled to link their explanations to economic development. Credit was given to responses which linked investment in education and health care as a consequence of economic development.

	AfL	Underlining the key word 'economic' in the question would have helped to focus candidates' ideas.

Question 2 (b)

(b)* CASE STUDY – Sustainable strategies in an LIDC or EDC city

To what extent have sustainable strategies overcome **one** of the city's challenges?

LIDC or EDC city studied: .....

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..... **[12]**

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

Question 2b was the most challenging question due to its complexity and coverage of a range of assessment objectives. Candidates needed to select a relevant named LIDC or EDC city and show knowledge of one of the city's challenges and the strategies used to overcome the challenge. They also had to show understanding of the sustainability of the strategies in tackling the city challenge. An evaluation of the strategies was also needed including a judgement as to the extent to which the challenge had been overcome. For the top of Level 2 and beyond place specific detail was also required. Given all of this it is encouraging to note the high quality from about fifteen percent of candidates who gained Level 3 or higher marks.

The most common case study example was based on the Rosario case study in the GCSE A textbook. Successful responses gave accurate detail about the Rosario Habitat Programme as a response to the challenge of unemployment or crime or social inequality or poor living conditions. Candidates who had noted the 'one' challenge in the question were able to apply their detailed understanding of a strategy or strategies to the 'one' challenge they had selected. Accurate information and data were often given to support explanations and evaluations. Some answers referred to the Pro Huerta in Rosario programme as a response to the challenge of poor diet for low income families. It was encouraging to note detail about food recycling and food banks which went beyond the coverage given in the textbook. Some candidates used their knowledge and understanding of Lagos and how the challenge of the Makoko slum area has been tackled.. Other valid case study examples were Mumbai, Bangalore, Sao Paulo, Rio de Janeiro, Nairobi, Cairo and Vilnius. The success of these examples varied but some contained relevant information and valid place detail which was checked by examiners. The Vision Mumbai strategy and its impact on slums areas such as Dharavi was an example of this. As expected there were a range of AC city examples, from large cities like London and Leeds to smaller settlements like Lancaster and Hunstanton. Incorrect case study examples were capped at mid-Level 2, provided there were valid ideas about a city challenge and related strategies. This ruling also applied to responses which did not name a valid EDC or LIDC city.

Naming a valid example was not a guaranteed key to success. Many candidates listed several challenges and then struggled to coherently link the strategies and to evaluate their success. For such answers examiners would highlight the first challenge given and then assess the validity of ideas for the strategies offered.. Those answers which did not score, ignored all the question requirements to write about a case study linked to the economic development content of Specification A Theme 2.2.3. The most common of these were detailed accounts of goat aid in Ethiopia with no links to any of the question requirements. Ethiopia's trade, its path to development and the role of MNCs were also offered as valid case study examples. Examiners scoured these responses for any links to a city challenge to award a mark. A non-response or a zero mark also meant that the answer could not be given a mark for spelling punctuation and grammar.

Question 3 (a) (i) and (ii)

Environmental threats to our Planet

3 (a) (i) Which of the following statements describes the circulation of air at the North Pole?

A Rising cool, dry air

B Rising warm air

C Sinking cold, dry air

D Sinking warm, moist air

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

(ii) Which of the following statements describes the circulation of air at the Equator?

A Cool, dry air descends

B Cool, dry air rises

C Warm, moist air rises

D Warm, moist air sinks

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

About two thirds of candidates chose the correct option C for question items 3ai) and ii) to show a basic knowledge of global air circulation. Unfortunately many were unable to apply this to the question which followed.

Question 3 (a) (iii)

(iii) Explain how the global circulation of the atmosphere is controlled by the movement of air between the poles and the Equator.

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..... **[3]**

Nearly seventy percent of candidates did not gain any marks for Question 3aiii) including the sixteen percent who gave no response.

Some candidates did give basic ideas about warm air rising at the Equator and cool air sinking at the poles to gain two out of three marks. About ten percent scored all three marks as they provided correct ideas about the circulation of air from the Equator to the poles with reference to the Hadley, Ferrel and Polar cells. Other candidates knew of these cells but were unable to given any correct information about air circulation.

Question 3 (b)

(b) Outline **two** theories of natural causes of climate change.

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2 .....

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[4]

Question 3b) provided evidence of a casual reading of the question as candidates did not always include relevant information. They wrote about human causes of climate change such as burning fossil fuels. Cows and methane are a cause of climate change however, this is not a theory. Successful answers made reference to sun spots, volcanic activity and features of the Milankovitch cycles. Lower ability candidates stated the theory in simple terms but were not able to offer a coherent outline. A common misconception was about greenhouse gas emissions from volcanic eruptions causing global warming. Some candidates referred to the Milankovitch cycles without specifying whether this was eccentricity, obliquity or precession. One fifth of candidates were able to explain at least one theory correctly to score three or four marks.

Exemplar 4

1 The Milankovitch cycles ~~can cause~~ change the Earth's orbit around the Sun, so during elpetical orbits it is colder as we are further away from the Sun.

2 Sunspots are intense solar radiation, which brings more heat to the Earth. The amount of sunspots can change the climate.

[4]

Exemplar 5

1 The volcano emuptions are known that the ash from the emuption creates a layer on earth, and is known to cool down the earth.

2 The wobble of the earth is ~~ma~~ known to normally wobble between 20°-24°, when wobbles closer to 20° it is normally colder, when wobbles to 24° ~~ta~~ it is warmer.

[4]

Exemplar 6

1 One theory of natural causes of climate change is the effect of methane produced by decomposing waste and dead and live animals. This contributes to the greenhouse gasses and causes climate change.

2 Another ~~theory~~ theory is that the greenhouse gases surround the earth and reflect heat from the each back to the earth, causing ~~et rima~~ the earth to heat up, causing climate change.

[4]

Exemplar 4 gained full marks, the Milankovitch cycle is specified as changes to the Earth's orbit with a correct outline including further detail. Sunspots is the second theory with further correct development. Exemplar 5 has two valid theories. The explanation for volcanic eruptions needed to include 'ash', the development for 'wobble' or precession is incorrect, so two marks were given. Exemplar 6 was from a high scoring able candidate who has misread the question. No credit given for the production of methane as this is not a theory and no credit for the ideas about greenhouse gases.

Question 3 (c)

(c) Study **Fig. 3**, a cartoon about climate change.

Using evidence from **Fig. 3**, explain **one** way that climate change may affect people's lives.

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..... **[3]**

Question 3c) required a relatively straightforward use of evidence from the cartoon (Fig. 3). Flooding was the obvious effect on people's lives for one mark, development marks were for further ideas about the impact of flooding with loss of property, evacuation and impact on business being the most common. Forty percent of candidates achieved full marks. Some candidates ignored the focus of the question and filled the answer space with ideas to explain how climate change caused the flooding shown in Fig. 3. A few did not read the question or use Fig. 3 as they wrote, some with detail, about drought and its effects on people's lives.

Question 3 (d)

(d)* Assess which evidence of global climate change is considered to be the most reliable.

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..... **[8]**

Question 3d) did not require a case study example. Reasonable and thorough understanding of evidence of global climate change were needed for Level 2 and 3 marks. This included information about the nature of the evidence and how it is used to show climate change. The additional challenge lay in analysing the reliability of the evidence. This question had the highest omission rate for the 2019 examination with thirteen percent not attempting to answer. This suggests exam fatigue, running out of time or perhaps the challenge of this question was too much for candidates..

Level 1 responses were able to give simple ideas about evidence but did not comment on its reliability. The best answers were closely linked to the evidence covered in the Specification textbook and most common were ice cores, tree rings, paintings and diaries with some less convincing coverage of global temperature data. Consideration of time span, scientific objectivity and human bias were features of higher level answers which tackled the issue of reliability. The highest level answers also offered a conclusion as to which evidence was the most reliable. Other evidence was given with some good accounts of polar bear weight loss. References to ice caps melting, sea level rising, glacial retreat and changes in extreme weather events were less secure with often muddled explanations. Misreading or ignoring the requirements of the question meant that some candidates wrote at length but did not gain any marks. These responses focused on the causes or consequences of climate change. Some tried to present the consequences as evidence of climate change but struggled to do this is in a convincing or credible way.

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