Candidate Marks Report

Series : 6 2018

This candidate's script has been assessed using On-Screen Marking. The marks are therefore not shown on the script itself, but are summarised in the table below.

Centre No :	Assessment Code : J384
Candidate No :	Component Code : 03
Candidate Name :	

Total Marks : **56 / 60**

In the table below 'Total Mark' records the mark scored by this candidate.
'Max Mark' records the Maximum Mark available for the question.

Paper:	J384/03	
Paper Total:	**56 / 60**	
Question	Total / Mark	Max Mark
1ai	1 / 1	
1aii	1 / 1	
1aiii	0 / 1	
1aiv	3 / 3	
1b	2 / 2	
1ci	1 / 1	
1cii	2 / 2	
1d	12 / 12	
2ai	2 / 2	
2aii	1 / 1	
2b	3 / 4	
2c	6 / 6	
3ai	1 / 1	
3aii	2 / 2	
3b	4 / 6	
4	12 / 12	
4SPAG	3 / 3	

Answer **all** the questions.

1   (a)   Study **Fig. 1** in the separate Resource Booklet, a GIS map of Rio de Janeiro.

(i)   Identify **one** human feature of Rio de Janeiro shown on **Fig. 1**.

~~It is largely built up with motorways and main roads (such as the 101)~~
There is an airport ✓ at the ~~Illha~~ (Ilha da Governador) .... [1]

(ii)   Identify **one** physical feature of Rio de Janeiro shown on **Fig. 1**.

It is coastal (with lagoons and islands) ✓

.... [1]

(iii)   The city boundaries of Rio de Janeiro in 1900 and 2015 are outlined on **Fig. 1**.

Estimate the area of Rio de Janeiro in **1900** in km².

.... 10 .... km²   ✗   [1]

(iv)   Using **Fig. 1**, describe the location of Copacabana Beach.

Copacabana beach is located in South-East Rio de Janeiro, on
the south coast. ✓ It was part of ~~the~~ Rio de Janeiro back in 1900 ✓
and is situated in the Copacabana area, ~~just~~ roughly 5km south
of the centre of Rio de Janeiro (i.e around Santa Teresa). The beach
is just east of the Parque Nacional da Tijuca.

.... [3]

(b)   Study **Fig. 2** in the separate Resource Booklet, photographs and reviews of three coastal areas in Rio de Janeiro.

State **two** human uses of Rio de Janeiro's coastal areas seen in **Fig. 2**.

1 They are used for leisure activities (such as beach football) ✓

2 They are used for mooring yachts ✓

[2]

(c) Study **Fig. 3** in the separate Resource Booklet, beach management strategies used in Brazil.

450 metres of Copacabana Beach, in Rio de Janeiro, needs coastal management to avoid widespread coastal erosion.

(i) Calculate the cost of rock armour for Copacabana Beach.

£ 45000 ✓ [1]

(ii) Using your own understanding, suggest whether beach nourishment or rock armour would be most appropriate for coastlines with high levels of erosion by hydraulic action.

Rock armour
~~Beach nourishment~~ ✓ would be most appropriate. This is because the high levels of hydraulic action would ~~regularly d~~ cause erosion to remain happening even with beach nourishment, whereas rock armour is effective at absorbing wave en DEV, so [2] could effectively stop the effects of hydraulic action, and is longer lasting.
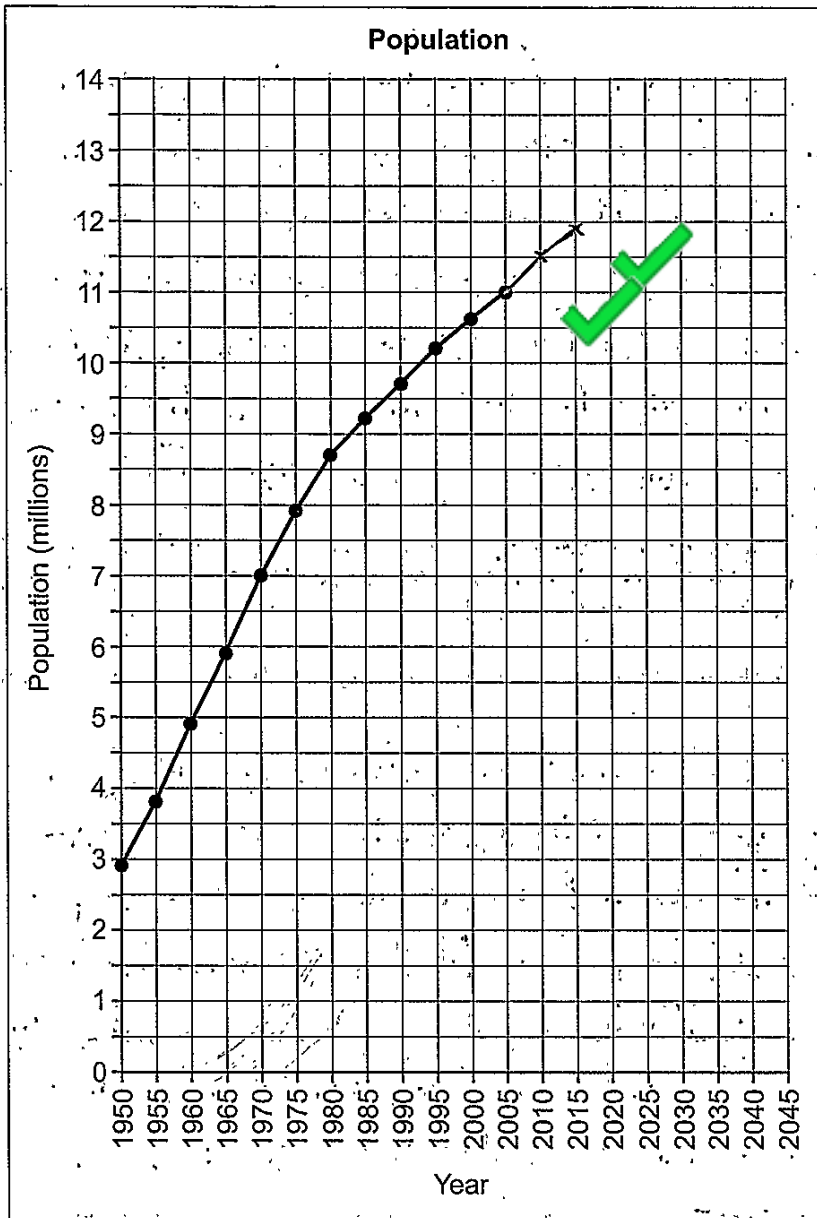
(d)* Study **Figs 3 and 4** in the separate Resource Booklet, beach management strategies used in Brazil and a sketch showing impacts of beach nourishment (beach replenishment) at Copacabana Beach.

Using **Figs 1, 2, 3 and 4** and your own understanding, explain how challenges in the city of Rio de Janeiro affect the coastal landscape.

Inadequate sewage disposal systems is negatively affecting coastal landscapes. Coastal areas such as the Marapendi Lagoon are polluted by sewage from the city's favelas (squatter settlements DEV) These settlements lack proper sanitation and sewage infrastructure, ~~so the sewage~~ largely due to a lack of wealth, planning and government interference in these predominantly poor areas DEV This challenge causes waste to be drained straight down into local coastal areas, causing issues such as eutrophication, ~~and~~ which kill aquatic life and pollute the water DEV ~~etc~~ Similarly, ~~inadequate~~ inadequate access to rubbish disposal is also leading to lots of rubbish from particularly favelas ending up in beaches, such as ~~a~~ in Botafogo beach DEV The substantially increasing size of Rio, with the city now stretching roughly 60km West-to-East, is putting pressure on services DEV helping to cause the aforementioned challenges. The accumulation of rubbish affects the coastal landscape by making it very unappealing, and causing bio-accumulation in ~~fish~~ aquatic food chains, to high trophic levels which is harmful. Nevertheless, the DEV high popularity of Rio as a tourist destination, and the challenge of providing enough accommodation, particularly along popular beaches, has affected Rio's coastal landscape through encouraging the creation of new high-rise hotels/apartments along the shore and the positioning of businesses on the beach, ~~which~~ such as along the Copacabana beach. This creates a more urban feel along some beaches, thus affecting the coastal landscape. Finally, the challenges of ~~processes such as~~ longshore drift and hydraulic action along Rio's coastal areas [12] (continues on overleaf)

2 (a) The graph and table below show the population of Rio de Janeiro.

Year	Population (millions)
1950	2.9
1955	3.8
1960	4.9
1965	5.9
1970	7
1975	7.9
1980	8.7
1985	9.2
1990	9.7
1995	10.2
2000	10.6
2005	11
2010	11.5
2015	11.9

Population

(i) Complete the line graph for 2010 and 2015 using the table of data provided. [2]

(ii) Predict the population of Rio de Janeiro in 2040, based on the current growth rate.

14 Million [1]

(b) Rio de Janeiro can be considered a world city.

Explain the characteristics of a world city.

A world city ~~is a city that is a seaport or~~ tends to have a very large population. They are often (but not always) the capital city of their country. World cities are normally located on coasts or, rivers or another body of water. They tend to have a powerful financial sector and ~~easier~~ have high levels of tourism, both national and international. World cities tend to have well-established further-education / research networks. They are often home to a major sports team, and have a diverse population. Their population is often largely consisting of young adults.

[4]

(c) Study **Fig. 5** in the separate Resource Booklet, statistics for Rio de Janeiro and Brazil.

Using **Fig. 5** and your own understanding, explain why Rio de Janeiro has experienced rapid urban growth.

Firstly, Rio has experienced rapid urban growth because it has a better quality of life than the majority of Brazil, encouraging ~~people~~ lots of Brazilians to ~~not~~ migrate there. The average monthly income per person in Rio is $563, compared to $375 for Brazil. DEV Unemployment is at 6.8%, compared to 12.6% for the rest of the country. Rio has 2.56 doctors per 1000 people compared to Brazil's 1.89. All of these factors lead to an improved quality of life in Rio than the rest of Brazil, as ~~people~~ those in Rio have more money, better healthcare, etc. This then encourages rapid urbanisation to Rio, from people (particularly in poorer rural areas) seeking employment and better living standards / access to service DEV Rio has also experienced rapid urban growth because ~~mechan~~ increasing mechanisation in rural areas is leading to many becoming unemployed (the country has a high 12.6% unemployment rate, which would DEV likely be higher in poor rural areas). This

[6]

(continues in extension booklet)

3 Study **Fig. 6** in the separate Resource Booklet, a map of Botafogo, a suburb of Rio de Janeiro, and **Fig. 7**, photographs taken in the Santa Marta squatter settlement (favela).

(a) (i) Use **Fig. 6** to calculate the distance in km from (A) Santa Marta to (B) Botafogo beach.

1.2 .... ✓ .... km [1]

(ii) Santa Marta is one of the squatter settlements found in Rio de Janeiro. Using **Figs 6 and 7**, briefly explain **one** challenge people living in Santa Marta may face.

People living in Santa Marta face the challenge that is living on very steep land. This makes it difficult to construct buildings, likely being very ✓ with buildings ✓ vulnerable to landslides. It also isolates the area as from the rest of the city, and travelling in steep areas is [2] difficult, or alongside making it harder to install water/road infrastructure, due to the uneven land.

(b) Using **Figs 2, 6 and 7** in the separate Resource Booklet, and your own understanding, assess the contemporary challenges created by the inequality within Botafogo.

Inequality within Botafogo has caused the challenge of a deep divide between access to services, which is a major challenge. Wealthier parts of Botafogo are situated on the flat land by the beach. This is a more ideal area for housing, but has pushed poorer citizens into living on steeper land, such as how Santa Marta is on a hillside. These poorer citizens have less money, and so their hillside houses are vulnerable to landslide. This also causes sufficient transport infrastructure (which is hard to build on hills) and poorer areas to lack access to public spaces, with a large park in the wealthier part of Botafogo, alongside lacking high quality sanitation and water accessibility. This causes communities to have to share a water tap, and leads to water pollution of the coast due to inadequate waste disposal. Providing [6] favellas with better infrastructure and reducing the all water's pollution (along the coast) are major challenges caused by wealth inequality in Botafogo. To conclude, the contemporary challenges in Botafogo (created by inequality) are very serious.

access to public spaces

4*

RIO DE JANEIRO IS BANKRUPT FOLLOWING 2016 OLYMPIC GAMES

Rio de Janeiro warns other Olympic host cities of the hidden costs of hosting the games as they struggle to pay for public services in the city. One resident said, "We hosted a fantastic party but now it's a desperate situation. We simply do not have enough money to pay all of our bills and this means that we are facing huge cuts".

Rio de Janeiro is facing many challenges, both physical and human, and, as outlined in the article above, the city now has a very limited budget.

Using the information in the separate Resource Booklet and your own understanding:

1. Examine whether you think that Rio de Janeiro should prioritise coastal management **or** improving the squatter settlements (favelas) over the next 10 years?

2. Suggest how your decision could lead to long-term sustainability for the city.

Rio de Janeiro should prioritise improving favelas over the next 10 years, over coastal management. ~~Coastal management~~ Rio's favelas are home to a large proportion of the city's population, and with rapid population rise, these squatter settlements are likely to expand. These areas, however, lack services, with communities (such as in Santa Marta) having to share water taps, limiting its availability, and — due to their geographical position on steep hills — are often isolated from the city due to poor transport infrastructure. ~~Moreover~~ These issues need to be addressed. By prioritising the improvement of its squatter settlements, those living in these areas will become more integrated into society and will experience better qualities of life. Although coastal management is important, as the beaches are a major leisure/tourist attraction, bringing money into the city, problems such as

polluted water in Marapendi Lagoon and Botafogo beach, and ~~crime~~ in Copacabana Beach, which discourage tourism, largely stem from a lack of wealth / ~~sanitation~~ sewage infrastructure in ~~favel~~ favelas. Thus, the government should prioritise improving favelas.

Improving favelas will lead to long-term sustainability for Rio for a variety ~~of~~ of reasons. Firstly, it will help tackle crime, among the main factors limiting tourism (which brings in money, as tourists spend in local businesses), and a major social issue in Rio. The city suffers from high levels of crime, but [12]

(continues in extension pages).

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

END OF QUESTION PAPER

ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

1d have caused the government to use beach nourishment in popular beaches (such as Copacabana beach) and wider the coastal road (to act as a barrier). This has ~~caused~~ protected coastal areas, keeping ~~them~~ beaches large and full of sand, and has helped protect sea-side buildings during storms/very high tides.

L4

2c causes many rural workers to have little choice but move to cities DEV such as Rio, in search of employment, as employment opportunities in rural areas are limited. This increases Rio's population. Finally, the fact that many younger people move/have moved to Rio in search of a better life leads to high birth rates, as these young adults have families, helping to contribute to rapid population growth. SHEW

L3

4 This predominantly stems from those in the favelas. By improving the favelas, they will yield a better work quality of life and will provide better opportunities to the residents, so fewer people will commit crimes, reducing this gave social issue, ensuring long-term social (and economic) sustainability. Next, by improving favelas (and thus their sewage infrastructure), less sewage will be pumped into the city's beaches. This will improve the water

quality (achieving environmental sustainability), will encourage tourism (achieving economic sustainability) (this will happen because tourists like unpolluted water sources) and will help beaches become nicer leisure spaces (achieving social sustainability). Finally, improving favelas will lead to a more educated population of Rio (as more people from favelas will have received a good education$*^1$), so these people will be more likely to take part in higher skilled jobs, which generate more money for the Rio government, thus ensuring economic sustainability$*^2$. Therefore, improving favelas is important.

$*^1$ (noting currently a school day in favelas is often only four hours, so improving these areas will lead to an improvement in the quality and duration of education)

$*^2$ Furthermore, in Medellin (Colombia) the government has recently invested in improving poorer areas, such as by creating new bus links, and this has yielded lower crime rates and an improvement in the quality of life.

L4

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Oxford Cambridge and RSA

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Off Page Comments

Item Name	Comment
3aii	The candidate has also made a second valid point about transport in steep areas but has already reached full marks.
2b	'Major sports team' ,'Large population' and 'capital city' are not credit worthy.
1d	This candidate reaches L4 12/12 when they make the second developed point ending 'High trophic levels'. This candidate has also provided further challenges. If a candidate provides more than two challenges, credit their best 2.
4	The candidate has responded to all 3 parts of the question and each are well developed, therefore, top of L4.
2c	L3 6 Marks. Two well developed answers. (This contains a third point, developed to L2 as there is no link to figure 5)
3b	Several level 2 points made but none developed enough to access L3
1cii	No credit for repetition of the question
1aiv	All 3 marks have been gained in the first 2 lines. However, there are other creditable responses eg 5km, South of the centre, East of Parque Nacional.
1b	Beach football is also creditable