OCR
Oxford Cambridge and RSA

Wednesday 1 December 2021 – Morning
GCSE (9–1) Geography A (Geographical Themes)

J383/03 Geographical Skills

Time allowed: 1 hour 20 minutes

You must have:
• the Resource Booklet (inside this document)

You can use:
• a scientific or graphical calculator
• a ruler (cm/mm)

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number [ ][ ][ ][ ][ ]   Candidate number [ ][ ][ ][ ]
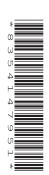
First name(s) _____

Last name _____

INSTRUCTIONS
• Use black ink. You can use an HB pencil, but only for graphs and diagrams.
• Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
• Answer **all** the questions.

INFORMATION
• The total mark for this paper is **65**.
• The marks for each question are shown in brackets **[ ]**.
• Quality of extended response will be assessed in questions marked with an asterisk (*).
• Spelling, punctuation and grammar (SPaG) and the use of specialist terminology will be assessed in questions marked with a pencil (✏).
• This document has **16** pages.

ADVICE
• Read each question carefully before you start your answer.

Section A – Geographical Skills

Answer **all** the questions.

1 Study **Fig. 1** in the separate Resource Booklet, an article about the El Niño weather event.

   (a) **(i)** State the percentage chance of an El Niño event as a decimal.

.... **[1]**

     (ii) Identify how the UK winter weather is likely to be affected by this El Niño event.

      A increased wind and rain
      B increased wind and snow
      C less wind and drier conditions
      D less wind and more snow

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

     (iii) Identify **two** environmental impacts of El Niño weather events according to **Fig. 1**.

      1 ....

      2 ....
      [2]

   (b) Study **Fig. 2** in the separate Resource Booklet, which shows the effect of El Niño on global weather patterns.

     (i) Suggest **one** way to improve how the information in **Fig. 2** is presented. Explain your answer.

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      .... **[2]**

     (ii) Which two world regions does **Fig. 2** suggest will have **dry and warm** conditions due to El Niño?

      A Central Africa and Southern India
      B Europe and Northern Africa
      C Indonesia and South-East Africa
      D South America and Japan

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

(c) Study **Fig. 3** in the separate Resource Booklet, which shows river flow in locations across the UK.

(i) Describe the pattern of river flow shown in **Fig. 3**.

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.... **[3]**

(ii) The table below shows the peak river flow for December of selected rivers in the UK.

Region	Size of river catchment (sq. km)	Peak river flow (cumecs)
Eden	2286	1700
Ribble	1145	1130
Tees	818	614
Tweed	4390	1361
Tyne	2176	1730
Wharfe	759	581

Calculate the mean value for peak river flow from the data shown. You must show your working out.

.... cumecs **[2]**

(iii) Suggest **two** potential reasons for the differences in peak river flow shown in the table above.

1 ....

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2 ....

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[2]

(d)* Study the table below, which compares the effects of extreme weather events.

1. UK Flood Event – December 2015	2. El Niño in Somalia – June 2016
• Many homes across the North West suffered from power cuts. • 5200 homes were affected by flooding. • About 40 schools closed in Cumbria. • Rail and road services were disrupted. • Many businesses suffered through damage to property and stock. • The estimated cost was £500 million across the county of Cumbria. • Heavy rain washed nutrients from soil. • Vegetation was flooded causing habitat loss.	• Many animals died of thirst and starvation. • Many crops died. • 144 000 people in Somalia were forced to move from their homes. • Severe water shortages resulted in the use of polluted water sources. • Fires caused by drought destroyed vegetation and animals' habitats. • Rivers dried up causing fish to die or migrate. • Increased soil erosion destroyed vegetation. • Droughts harmed the quality of the soil affecting farming for years to come.

'Extreme weather events have a greater impact on LIDCs such as Somalia than they do on the UK.'

To what extent do you agree with this statement?

Use the table above and your own understanding to answer.

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.... **[8]**

2 Study **Fig. 4** in the separate Resource Booklet, a map of exports from Heathrow Airport.

(a) Which city received the highest amount of exports from Heathrow?

    A Hong Kong
    B Lagos
    C Melbourne
    D Shanghai

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

(b) Read the article below.

> Air freight through Heathrow alone accounts for almost a quarter of UK trade with non-EU countries by value. The airport is the UK's key hub airport for cargo, as well as passengers. It serves at least 79 destinations directly with cargo operations and has links to over one thousand others. 2 million tonnes of air cargo passes through the airport each year, in addition to the 60 million passengers, accounting for 474 000 air transport movements per year.

Express the ratio of cargo to passengers at Heathrow Airport in its simplest form.

Show your working out.

.... **[2]**

(c) Explain how **Fig. 4** uses flow lines to display the data.

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.... **[2]**

(d) Using information from **Fig. 4**, describe the pattern of exports from Heathrow Airport.

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.... **[3]**

(e) Suggest **one** alternative way that the data in **Fig. 4** might be displayed. Justify your choice.

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.... **[3]**

3 Study **Fig. 5** in the separate Resource Booklet, which shows a climate graph for a region of Canada.

(a) Estimate the mean precipitation in the month of May.

.... **[1]**

(b) What would be the most likely temperature in the month of November?

   A   −28 °C
   B   −2 °C
   C   2 °C
   D   28 °C

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

(c) Using **Fig. 5**, suggest how the climate shown would lead to the distinctive characteristics of a polar ecosystem.

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.... **[3]**

(d) Study **Fig. 6** in the separate Resource Booklet, a diagram and report on climate change.

   (i) State **one** abiotic component of the ecosystem shown in **Fig. 6**.

   .... **[1]**

   (ii) Identify **two** reasons for the decline in polar bear populations.

   1 ....

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   2 ....

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   [2]

Turn over

(iii) Assess how far climate change has a greater impact on polar ecosystems than any other ecosystem worldwide.

Use **Fig. 6** and your own understanding to answer.

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.... **[6]**

Section B – Geographical Fieldwork

Answer **all** the questions.

4 Some geography students have been conducting **human geography** fieldwork in a town centre. They have focused on urban regeneration. Urban regeneration is the attempt to improve both the economic and social spaces within an urban area in order to reverse its decline.

As part of their study, the students carried out an environmental quality survey, which is shown in the table below.

	–2	–1	0	1	2	
High levels of graffiti				✓		**No signs of graffiti**
Much litter		✓				**No sign of litter**
Evidence of vandalism (e.g. broken windows)					✓	**No evidence of vandalism**
Buildings in poor condition					✓	**Buildings kept in good order**

(a) (i) What is the total environmental quality score for the area shown in the table above?

.... **[1]**

(ii) Explain how the total environmental score and environmental quality survey for this area suggests it has benefited from regeneration.

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.... **[2]**

(b) Select **one** data presentation technique that might be used to present the information in the environmental quality survey.

.... **[1]**

Turn over

(c) Study **Fig. 7** in the separate Resource Booklet, which shows a photograph of the location studied. A black and white reproduction of **Fig. 7** is below.

Add **three** annotations to the photograph below of the location studied to explain the features of regeneration.

[3]

5* Some students took part in fieldwork on the Devon coast for their **physical geography** fieldwork.

They studied the effectiveness of coastal management after a new sea wall and groynes were built in 2014.

Study **Fig. 8** in the separate Resource Booklet, which shows the results of their coastal fieldwork.

The conclusion they reached was that '*Coastal management has been highly effective in reducing the damage to properties from storms*.'

Using **Fig. 8**, analyse the evidence from the information provided to explain whether you agree with their conclusion.

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.... **[8]**

    🖉 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).

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