OCR
Oxford Cambridge and RSA

GCSE (9–1) Geography B (Geography for Enquiring Minds)

J384/01 Our Natural World

Tuesday 22 May 2018 – Afternoon

Time allowed: 1 hour 15 minutes

You must have:
- the Resource Booklet (inserted)

You may use:
- a scientific or graphical calculator
- a ruler (cm/mm)

First name	
Last name	
Centre number	Candidate number

INSTRUCTIONS
- The separate Resource Booklet will be found inside this document.
- Use black ink. You may use an HB pencil for graphs and diagrams.
- Complete the boxes above with your name, centre number and candidate number.
- Answer **all** the questions.
- Write your answer to each question in the space provided. If additional space is required, use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.

INFORMATION
- The total mark for this paper is **70**.
- The marks for each question are shown in brackets **[ ]**.
- Quality of extended responses will be assessed in questions marked with an asterisk (*).
- Spelling, punctuation and grammar and the use of specialist terminology (SPaG) will be assessed in questions marked with a pencil (✎).
- This document consists of **16** pages.

SECTION A

Answer **all** the questions.

Global Hazards

1 **(a)** Define the term extreme weather.

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..... **[1]**

(b) Study **Fig. 1** in the separate Resource Booklet, maps showing atmospheric and ocean circulation in the Pacific during a normal year and an El Niño year.

Using **Fig. 1**, suggest how South America may be affected during an El Niño year.

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(c) Study the table below showing the frequency of some hazard events between 1980 and 2015.

	Number of events per year		
Year	**Earthquakes**	**Tropical Storms**	**Floods**
1980	25	41	38
1985	21	55	52
1990	30	70	70
1995	26	69	78
2000	37	72	160
2005	40	130	182
2010	50	81	185
2015	33	90	152

Select the most suitable graphical technique for presenting the number of flood events column.

A Bar graph

B Climate graph

C Line graph

D Pie chart

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

(d)* Assess the technological developments used to mitigate the impacts of a tectonic hazard.

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Changing Climate

2 **(a)** Choose the correct definition of climate change.

A Global warming.

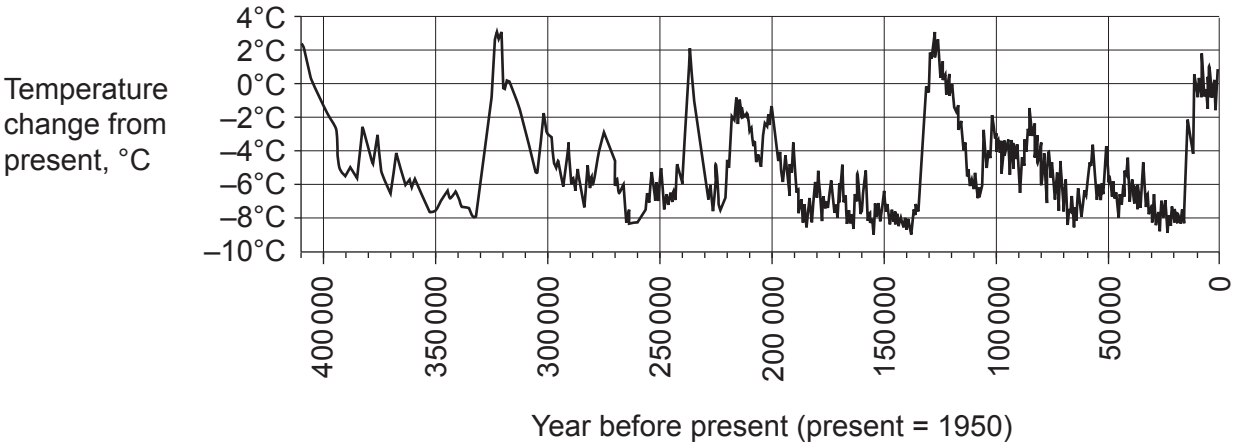
B Large-scale, long-term changes in average temperatures and weather patterns.

C The difference in temperature and weather during different seasons.

D The short-term warming of the Earth.

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

(b) The graph below shows the changes in global temperature over the last 400 000 years.



Using data from the graph, describe the trend shown.

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(c) Study **Fig. 2** in the separate Resource Booklet, a painting from 1677 of the frozen River Thames.

Explain how this painting could be used as evidence for climate change.

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(d) Suggest why climate change is considered to be a global issue.

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Distinctive Landscapes

3 **(a)** Study **Fig. 3** in the separate Resource Booklet, a relief map of the UK.

What type of map is this?

A Choropleth

B Flow line

C Isoline

D Thematic

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

(b) Using **Fig. 3**, suggest which type of natural landscape is likely to be found at X.

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(c) Using **Fig. 3**, describe the distribution of upland areas in the UK.

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(d) Select which graphical technique best suits the data listed below. One has been done for you.

The rate at which different rock types erode	Rose chart
The rate of erosion of rocks at one place over time	Pie chart
The orientation of pebbles on a river bed	Bar graph
The different rock types found in a river deposit	Line graph

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(e) Case study – the landscape of a UK river basin.

Discuss the influence of geology in the formation of river landforms within your chosen river basin.

Name of chosen river basin in the UK: .....

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Sustaining Ecosystems

4 **(a)** Select the correct definition of an ecosystem.

A A type of tourism that protects the environment.

B The interconnectedness of environments.

C The interdependence of plants and animals with the environment they live in.

D The place where animals and plants live.

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

(b) Name **two** features of Arctic flora.

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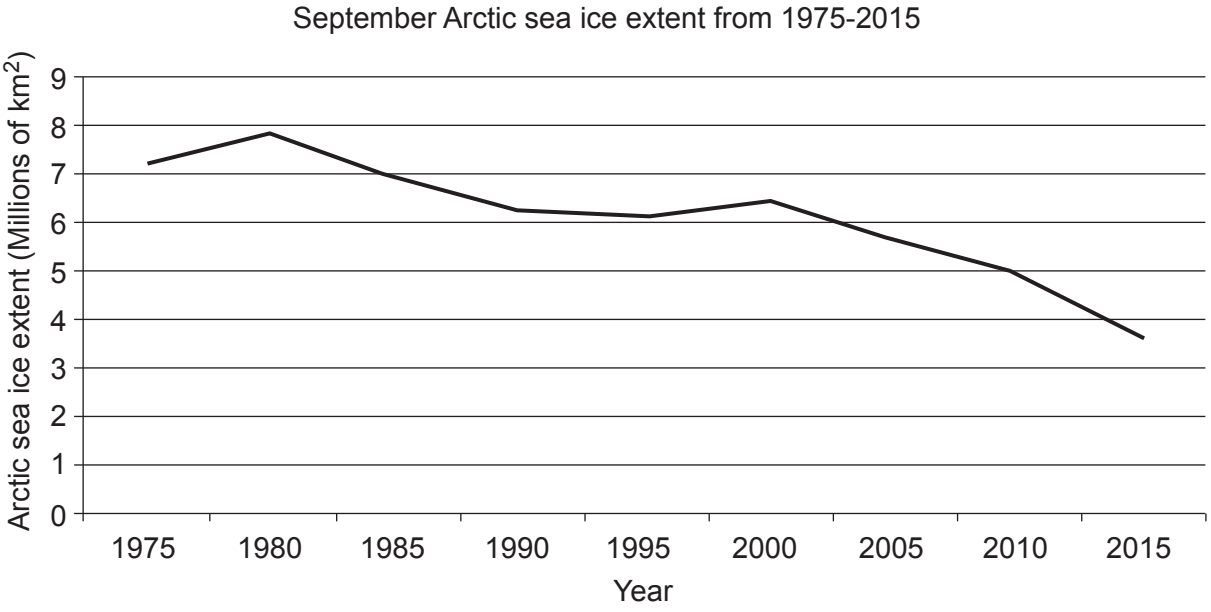
(c) The graph and table below show the average September Arctic sea ice extent between 1975 and 2015.



Year	1975	1980	1985	1990	1995	2000	2005	2010	2015
Arctic sea ice extent (1 000 000 sq km)	7.2	7.8	6.9	6.2	6.1	6.4	5.6	4.9	3.6

Which of these statements describing the trend shown on this graph is true?

A The sea ice extent in 1975 and 1985 was the same.

B The sea ice has decreased most rapidly between 1985 and 2000.

C The sea ice has decreased most rapidly between 2000 and 2015.

D The sea ice has rapidly increased from 2000 to 2015.

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

(d) Why are tropical rainforest soils considered to be amongst the poorest in the world?

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(e) Case study – Sustainable management of an area of tropical rainforest.

Evaluate the effectiveness of **one** way in which an area of tropical rainforest you have studied is being sustainably managed.

Name of tropical rainforest area studied: .....

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SECTION B

Answer **all** the questions.

Physical Geography Fieldwork

5 **(a)** Study the table below, which shows the results of an investigation into longshore drift.

Groyne Number	Drop North side (cm)	Drop South side (cm)	Difference
1	27	41	14
2	31	51	20
3	28	44	16
4	25	39	14
5	32	54	22

Using data from the table, describe the pattern in the longshore drift data collected.

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(b) Study **Fig. 4** in the separate Resource Booklet, students' data presentation from physical geography fieldwork data.

A student has used GIS to present their findings on changes in beach sediment size.

Suggest what **Fig. 4** indicates about the pattern of beach sediment size along the shore.

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(c) State **one** way you could adapt **Fig. 4** to make it more informative.

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(d)* You will have carried out some physical geography fieldwork as part of your GCSE Geography course.

Name the fieldwork .....

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To what extent was your primary data collection successful?

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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).