Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____
I declare this is my own work.

GCSE
GEOGRAPHY

Paper 1 Living with the Physical Environment

Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
- a pencil
- a rubber
- a ruler.

You may use a calculator.

Instructions
- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.

Answer all questions in Section A and Section B.

Answer two questions in Section C from:
Question 3 (Coasts), Question 4 (Rivers), Question 5 (Glacial).

For Examiner's Use	
Question	Mark
1	
2	
3	
4	
5	
TOTAL	

- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- If you need additional extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The total number of marks available for this paper is 88.
- Spelling, punctuation, grammar and specialist terminology will be assessed in Question **01.10**.

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ANSWER IN THE SPACES PROVIDED

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For the multiple-choice questions, shade the circle next to the correct answer.

CORRECT METHOD ⬬ WRONG METHODS ⊗ ⦿ ≋ ✓

If you want to change your answer you must cross out your original answer as shown. ⬬

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown. ⬬

Section A The challenge of natural hazards

Answer **all** questions in this section.

Question 1 The challenge of natural hazards

0 1 . 1 Which **one** of the following events is **not** an example of a natural hazard?

Shade **one** circle only.

[1 mark]

A Tsunami ⬭

B Earthquake ⬭

C Volcanic eruption ⬭

D Oil spill ⬭

Question 1 continues on the next page

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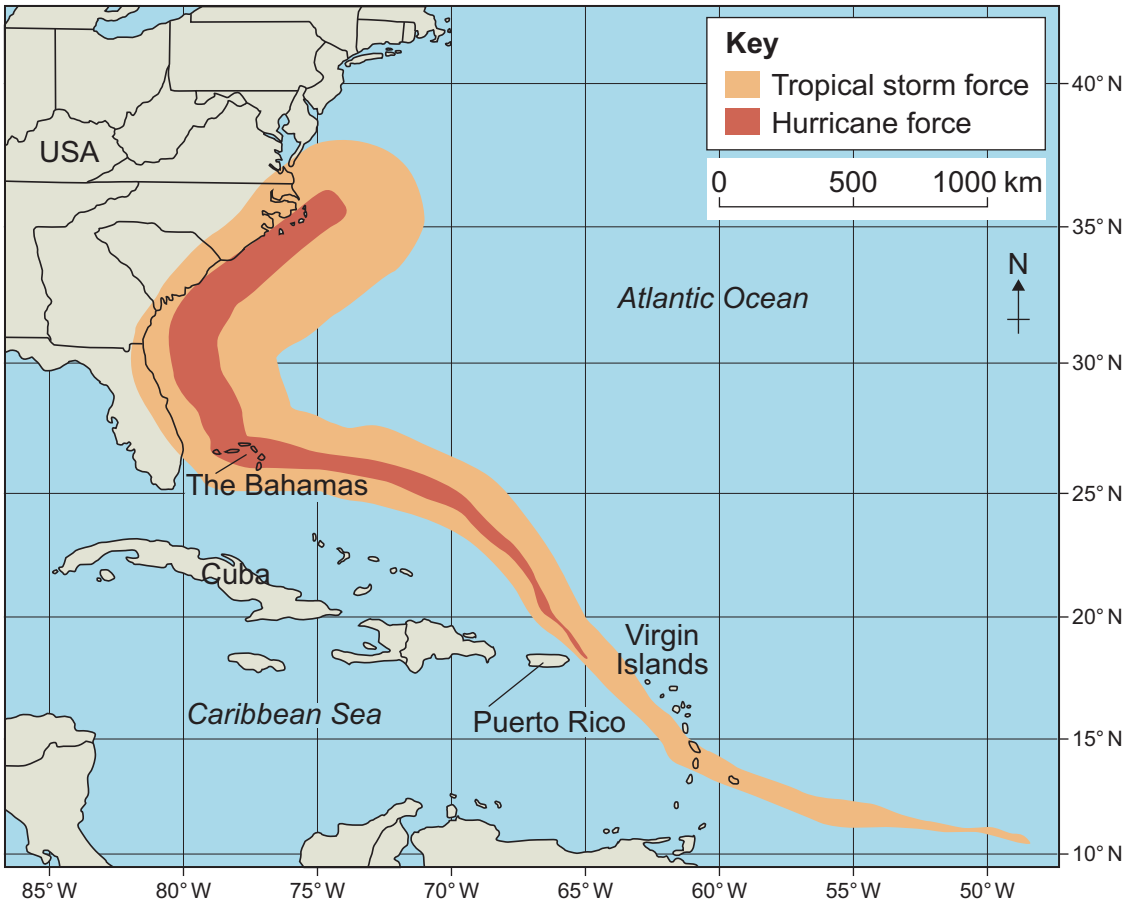
Study **Figure 1**, a map showing the track of Hurricane Dorian in August and September 2019.

Figure 1



0 1 . 2 Using **Figure 1**, which **one** of the following statements is true?

Shade **one** circle only.

[1 mark]

A Hurricane Dorian started south of the Equator. ⬭

B Hurricane Dorian passed to the west of Cuba. ⬭

C Hurricane Dorian passed close to the east coast of the USA. ⬭

D Hurricane Dorian reached 40° north. ⬭

Do not write outside the box

0 1 . 3 Using **Figure 1**, measure the distance travelled by Hurricane Dorian at hurricane force.

[2 marks]

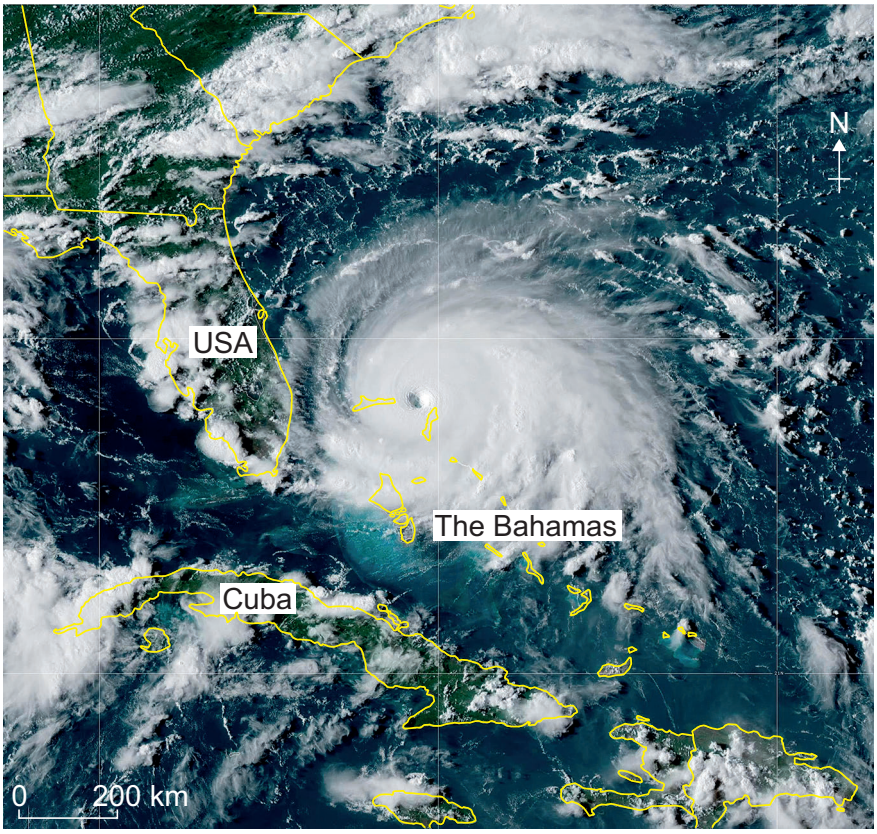
_____ km

Question 1 continues on the next page

Do not write outside the box

Study **Figure 2**, a satellite image showing Hurricane Dorian over The Bahamas on 1 September 2019.

Figure 2



0 1 . 4 Using **Figure 2**, identify **two** features of Hurricane Dorian.

[2 marks]

1 _____

_____

2 _____

_____

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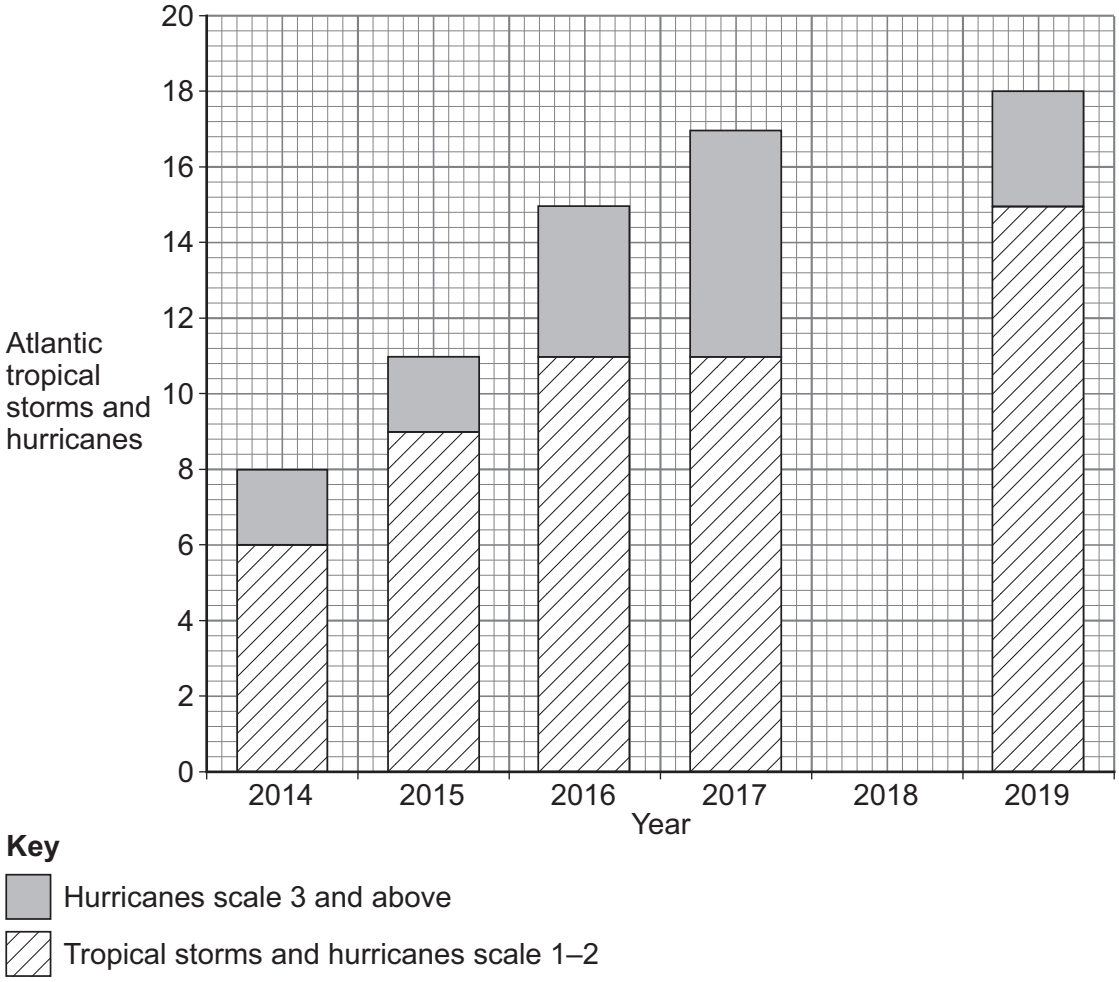
Study **Figure 3**, a divided bar graph showing the total number of Atlantic tropical storms and hurricanes between 2014–2019.

Figure 3



0 1 . 5 Use the data from the following table to complete **Figure 3**.

[2 marks]

Year	Number of tropical storms and hurricanes scale 1–2	Number of hurricanes scale 3 and above
2018	13	2

0 1 . 6 Suggest **one** reason for the increase in the total number of tropical storms and hurricanes shown in **Figure 3**.

[1 mark]

_____

_____

Turn over ▶

Do not write outside the box

0 1 . 7 Outline **one** way that planning can reduce the impact of tropical storms.

[2 marks]

Study **Figure 4**, photographs showing some of the impacts of extreme weather in the UK.

Figure 4

Higher summer temperatures and lower rainfall in some areas have increased the risk of moorland fires.

Higher rainfall and more storm events have increased the risk of flooding.

0 1 . 8 'UK weather is becoming more extreme.'

Do you agree?

Use **Figure 4** and your own understanding.

[6 marks]

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Question 1 continues on the next page

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0 1 . 9 Explain why earthquakes and volcanic eruptions take place along destructive plate margins.

[4 marks]

Extra space

0 1 . 1 0 To what extent do the effects of a tectonic hazard vary between areas of contrasting wealth?

Use **one or more** named examples in your answer.

[9 marks]
[+ 3 SPaG marks]

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33

End of Section A

Turn over for Section B

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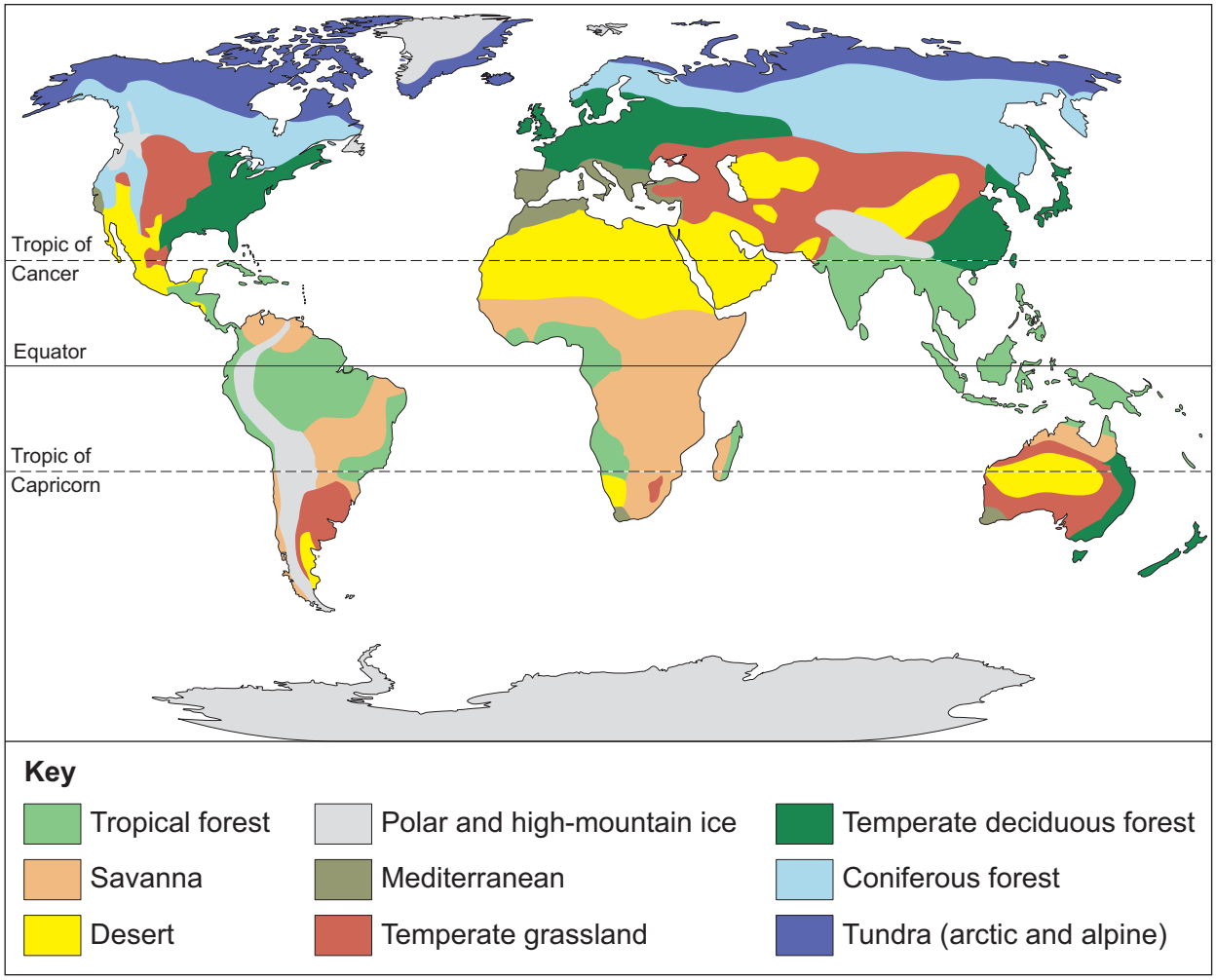
Section B The living world

Answer **all** questions in this section.

Question 2 The living world

Study **Figure 5**, a map showing the major world ecosystems.

Figure 5



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0 2 . 1 Using **Figure 5**, which **one** of the following statements is true?

Shade **one** circle only.

[1 mark]

A There are temperate grasslands in every continent. ⬭

B Deserts are only found in the middle of continents. ⬭

C Temperate deciduous forests are only found in the Northern hemisphere. ⬭

D Coniferous forests occur in large areas of North America, Europe and Asia. ⬭

0 2 . 2 Using **Figure 5**, name the continent with the largest area of savanna.

[1 mark]

_____

0 2 . 3 Which statement describes the characteristics of temperate deciduous forests?

Shade **one** circle only.

[1 mark]

A The vegetation is short because the growing season only lasts two months. ⬭

B The trees drop their dead leaves because of lower temperatures in winter. ⬭

C The vegetation is sparse because rainfall is low. ⬭

D The vegetation is evergreen because the climate is hot all year round. ⬭

Question 2 continues on the next page

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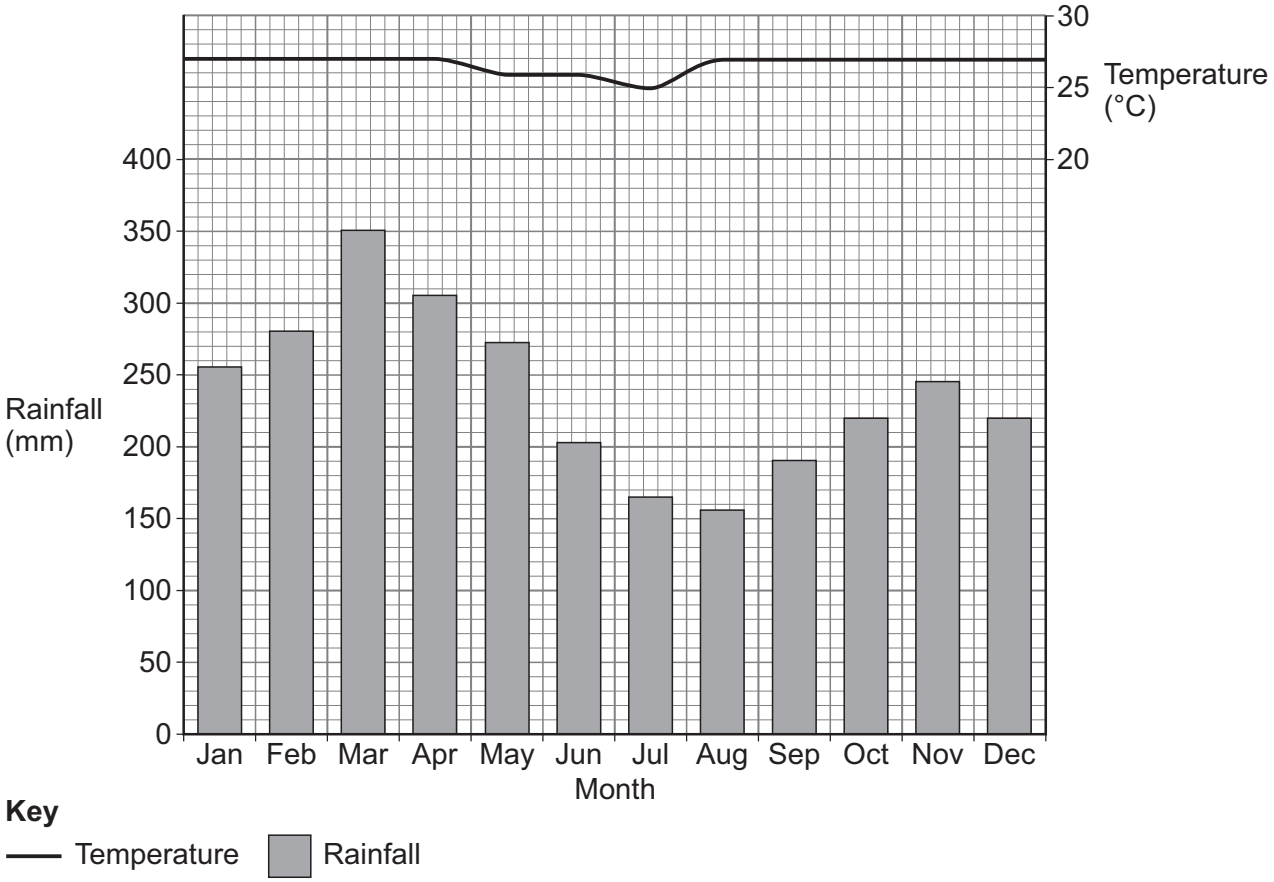
Study **Figure 6**, information about the climate and vegetation of tropical rainforests.

Figure 6

Climate graph for Iquitos, Peru



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0 2 . 4 Suggest how plants are adapted to the climate in tropical rainforests.

Use **Figure 6** and your own understanding.

[6 marks]

Extra space

Question 2 continues on the next page

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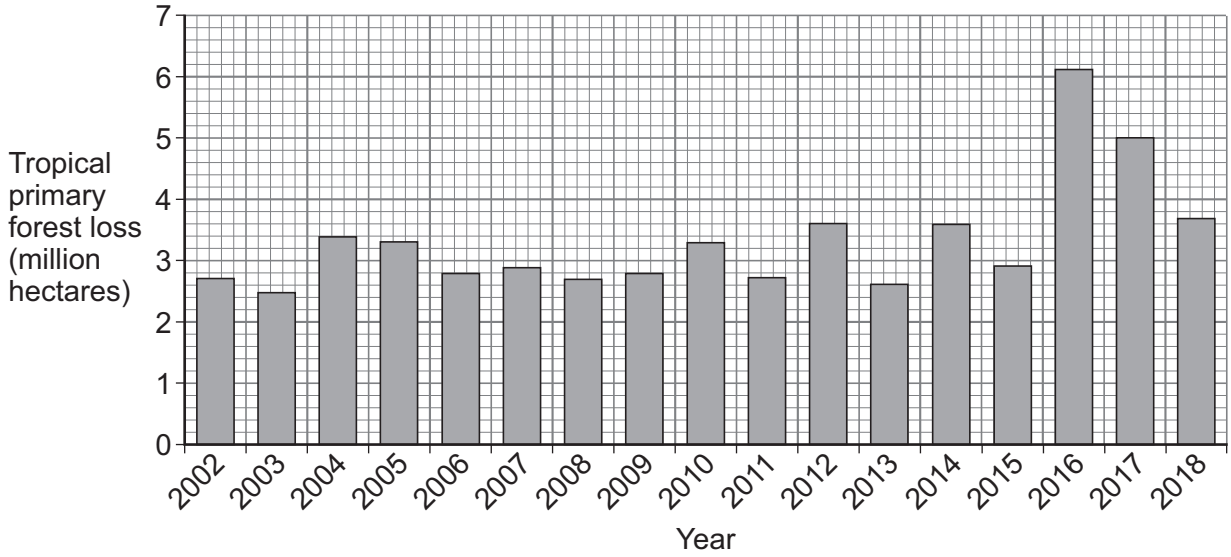
Study **Figure 7**, a graph showing tropical primary forest loss between 2002 and 2018.

Figure 7



0 2 . 5 Using **Figure 7**, describe changes in tropical primary forest loss between 2002 and 2018.

[2 marks]

_____

_____

_____

_____

0 2 . 6 Give **one** reason why deforestation has decreased in some countries.

[1 mark]

_____

_____

Do not write outside the box

Study **Figure 8**, a photograph showing an area of deforestation in Sumatra, Indonesia.

Figure 8

0 2 . 7 Using **Figure 8**, outline **one** environmental effect of deforestation.

[2 marks]

_____

_____

_____

_____

0 2 . 8 Explain how ecotourism can be a sustainable management strategy in tropical rainforests.

[2 marks]

_____

_____

_____

_____

Turn over ▶

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Study either **Figure 9** or **Figure 10**.

Figure 9 – Hot desert environment

A hot desert landscape

Gold mining in Western Australia

Figure 10 – Cold environment

A tundra and mountain landscape

Oil drilling in Alaska

0 2 . 9 Discuss the challenges and opportunities for development in **either** a hot desert environment **or** a cold environment.

Use either **Figure 9** or **Figure 10** and a case study.

Tick the box to show which environment you have chosen.

Hot desert environment (**Figure 9**) ☐

Cold environment (**Figure 10**) ☐

[9 marks]

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Extra space

25

End of Section B

Turn over for Section C

Do not write outside the box

Section C Physical landscapes in the UK

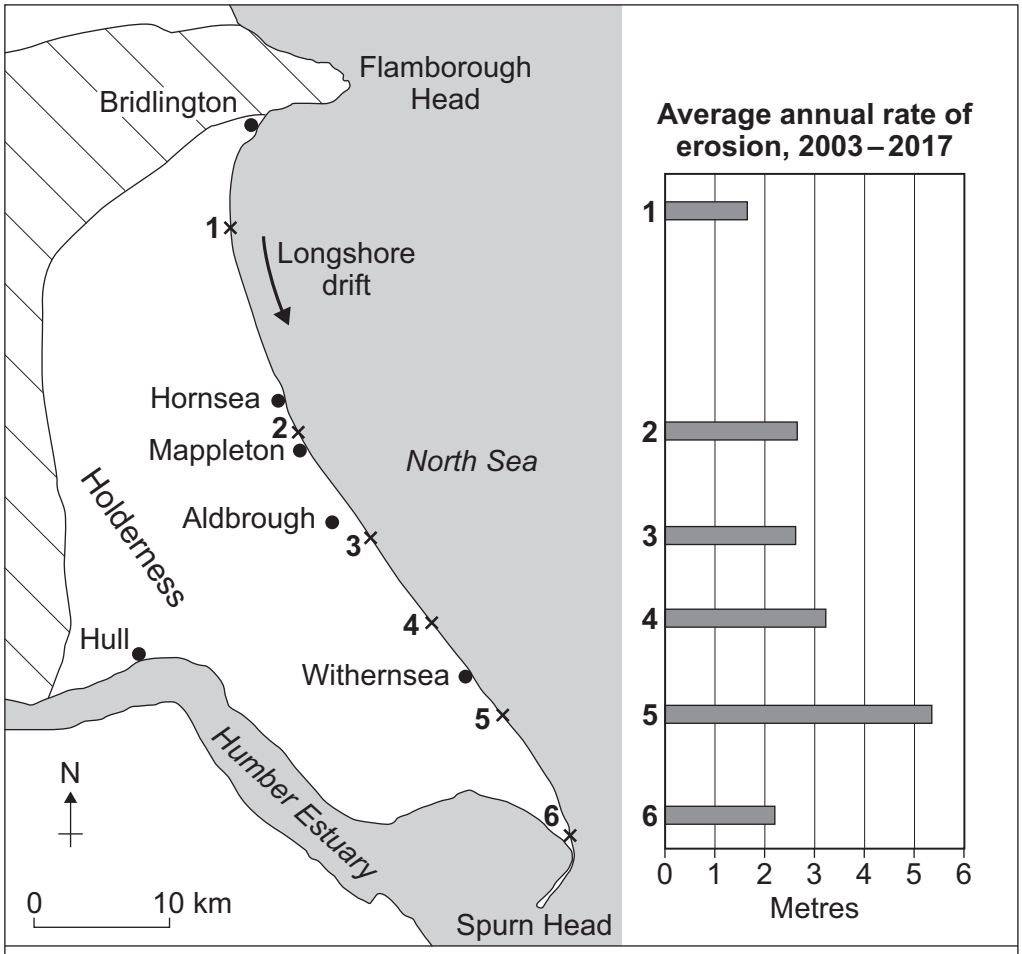
Answer **two** questions from the following:

Question 3 (Coasts), Question 4 (Rivers), Question 5 (Glacial).

Question 3 Coastal landscapes in the UK

Study **Figure 11**, a map showing the changing coastline of the Holderness area, Yorkshire.

Figure 11



Key

- ● Settlement
- × Site where erosion rate recorded
- Chalk

The Holderness coastline is made up of soft boulder clays (till) left behind after the ice sheets melted.

Do not write outside the box

0 3 . 1 Using **Figure 11**, what is the mode of annual rate of erosion along the Holderness coastline?

Shade **one** circle only.

[1 mark]

A 1.0 – 1.9 metres per year ⬭

B 2.0 – 2.9 metres per year ⬭

C 3.0 – 3.9 metres per year ⬭

D 4 metres and above per year ⬭

0 3 . 2 Using **Figure 11**, describe how the rate of erosion changes from north to south.

[1 mark]

_____

_____

0 3 . 3 Using **Figure 11**, what is the coastal landform that has formed at Spurn Head?

Shade **one** circle only.

[1 mark]

A Bar ⬭

B Stack ⬭

C Spit ⬭

D Cliff ⬭

0 3 . 4 Using **Figure 11**, suggest why there is a headland at Flamborough Head.

[1 mark]

_____

_____

Question 3 continues on the next page

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Study **Figure 12**, a photograph showing cliffs at Aldbrough on the Holderness coast.

Figure 12

0 3 . 5 Using **Figure 12**, give **one** reason why the rate of erosion of the Holderness coast is high.

[1 mark]

_____

_____

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0 3 . 6 Explain how a wave cut platform is formed as a cliff is eroded.

Use **one or more** diagrams to support your answer.

[4 marks]

Question 3 continues on the next page

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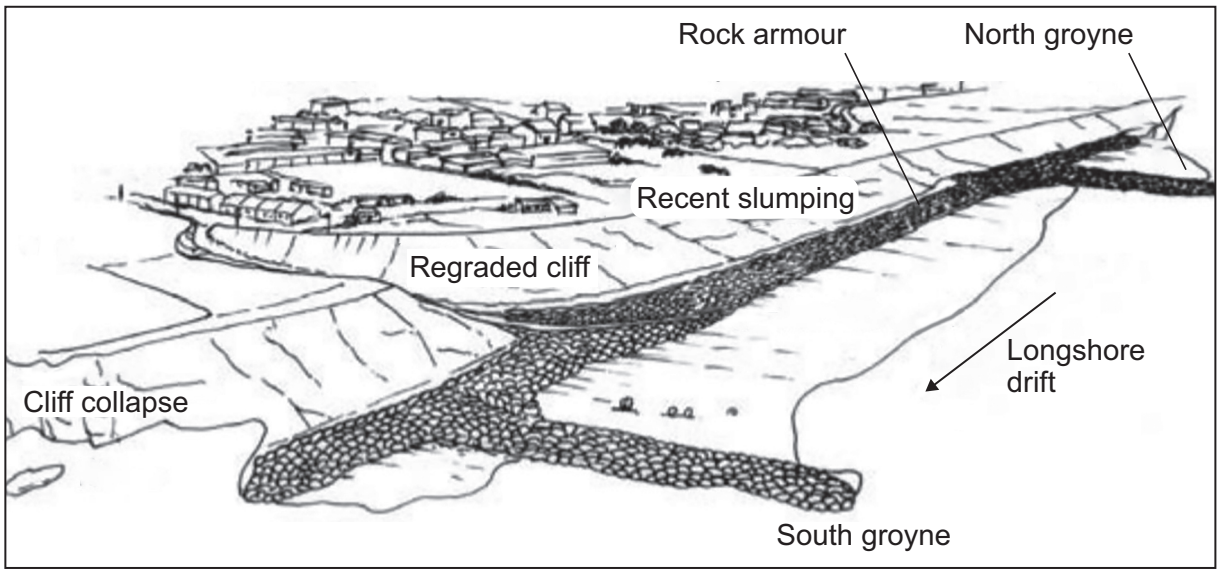
Study **Figure 13**, a diagram showing some coastal processes and coastal management strategies.

Figure 13



0 3 . 7 Assess the effectiveness of strategies used to protect coastlines against erosion.

Use **Figure 13** and your own understanding.

[6 marks]

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15

End of Question 3

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Question 4 River landscapes in the UK

Study **Figure 14**, a table of information about a river in north east England.

Figure 14

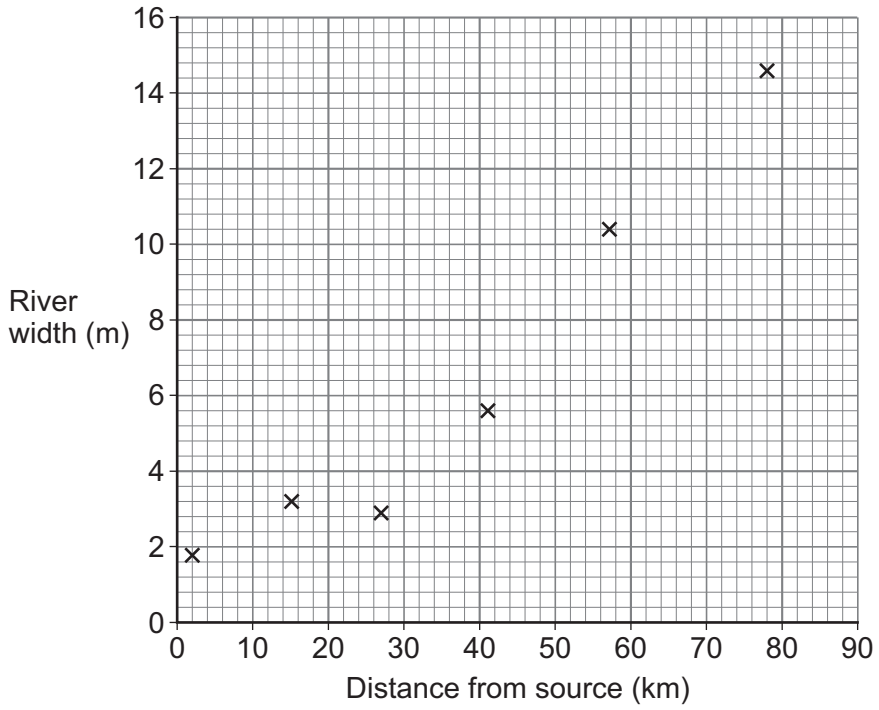
Site	1	2	3	4	5	6	7
Distance from source (km)	2	15	27	41	57	66	78
Width of river (m)	1.9	3.2	2.9	5.6	10.4	9.0	14.6
Median size of sediment (cm)	43	18	19	15	9	2	1

0 4 . 1 Plot the width of the river at Site 6 on to the graph below.

Use the following data.

Distance from source (km)	**Width of river (m)**
66	9.0

[1 mark]



0 4 . 2 Using **Figure 14**, describe the change in river width downstream from the source.

[1 mark]

_____

_____

Do not write outside the box

0 4 . 3 Give **one** reason why the median size of sediment tends to decrease downstream from the source of the river.

[1 mark]

_____

_____

Question 4 continues on the next page

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Study **Figure 15**, a photograph taken in the upper course of the river and its valley.

Figure 15

0 4 . 4 Identify the landform shown in **Figure 15**.

Shade **one** circle only.

[1 mark]

A Interlocking spurs ⬭

B Flood plain ⬭

C Gorge ⬭

D Levée ⬭

0 4 . 5 Using **Figure 15**, describe the shape of the valley sides.

[1 mark]

_____

_____

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0 4 . 6 Explain how a meander may be formed by both erosion and deposition.

Use **one or more** diagrams to support your answer.

[4 marks]

Question 4 continues on the next page

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Study **Figure 16**, different opinions expressed about hard engineering and soft engineering.

Figure 16

"I live in a house that is near to the river on a floodplain. I think that the government should pay for hard engineering projects such as dams and flood walls." Local resident	"Soft engineering is the way forward. Strategies such as planting trees and river restoration are kinder to the environment and cost less money, whilst reducing the risk of flooding." Environment Officer

0 4 . 7 Assess the benefits of using hard engineering and soft engineering to reduce the risk of river flooding.

Use **Figure 16** and your own understanding.

[6 marks]

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End of Question 4

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Question 5 Glacial landscapes in the UK

Study **Figure 17**, a map showing the depth and extent of ice during the last ice age in Europe.

Figure 17

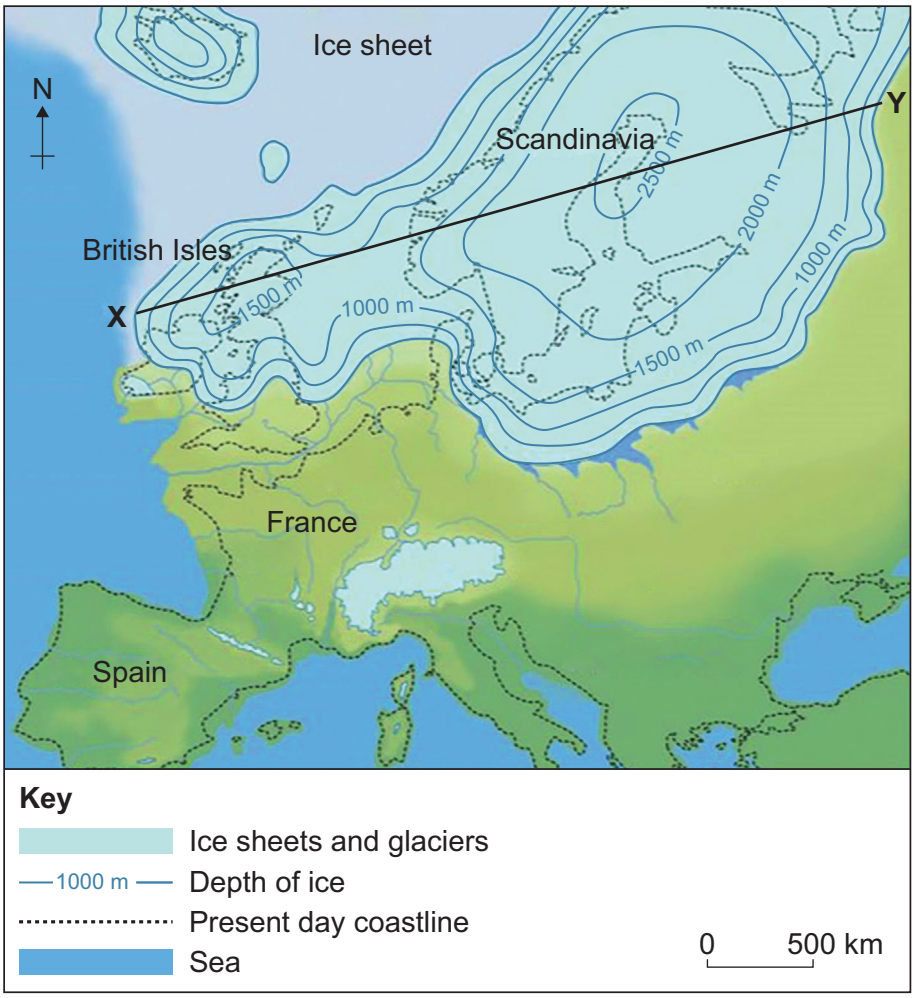
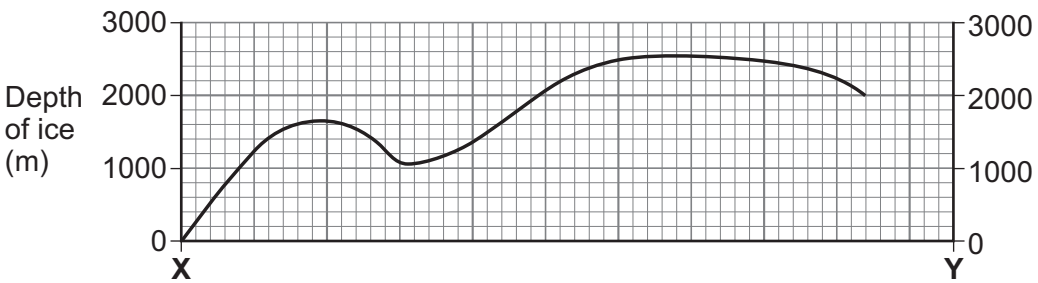


Figure 18 is a partly completed cross section of ice depth between **X** and **Y** shown on **Figure 17**.

Figure 18



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0 5 . 1 Using **Figure 17**, complete **Figure 18**, a cross section showing the depth of ice between **X** and **Y**.

[1 mark]

0 5 . 2 Using **Figure 17**, compare the maximum depth of ice over the British Isles with the maximum depth of ice over Scandinavia.

[1 mark]

_____

_____

0 5 . 3 Using **Figure 17**, which **one** of the following statements is true?

Shade **one** circle only.

[1 mark]

A Ice covered the whole of the British Isles during the last ice age. ⬭

B The main ice sheet was centred in southern Europe. ⬭

C The ice sheet extended westwards from Scandinavia to the British Isles. ⬭

D The shape of the coastline during the ice age was the same as the present day. ⬭

Question 5 continues on the next page

Do not write outside the box

Study **Figure 19**, a photograph showing a retreating glacier.

Figure 19

0 5 . 4 Identify the feature shown at **X**.

Shade **one** circle only.

[1 mark]

A Moraine ⬭

B Drumlin ⬭

C Truncated spur ⬭

D Arête ⬭

0 5 . 5 Suggest **one** reason why the material deposited by a glacier is mixed in size and shape.

[1 mark]

_____

_____

Do not write outside the box

0 5 . 6 Explain the formation of a glacial trough (U-shaped valley).

Use **one or more** diagrams to support your answer.

[4 marks]

Question 5 continues on the next page

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Study **Figure 20**, information about tourism in Snowdonia National Park, a glaciated area in the UK.

Figure 20

Do not write outside the box

0 5 . 7 Assess the economic and environmental impacts of tourism in a glaciated upland area of the UK.

Use **Figure 20** and your own understanding.

[6 marks]

Extra space

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END OF QUESTIONS

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ANSWER IN THE SPACES PROVIDED

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Question number	Additional page, if required. Write the question numbers in the left-hand margin.

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Question number	Additional page, if required. Write the question numbers in the left-hand margin.

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