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AQA

Please write clearly in block capitals.

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Forename(s) _____

Candidate signature _____
I declare this is my own work.

GCSE
GEOGRAPHY

Paper 1 Living with the physical environment

Friday 17 May 2024 Afternoon Time allowed: 1 hour 30 minutes

Materials
For this paper you must have:
- the OS map key insert (enclosed)
- 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.
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 **01.11**.

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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. ⊗

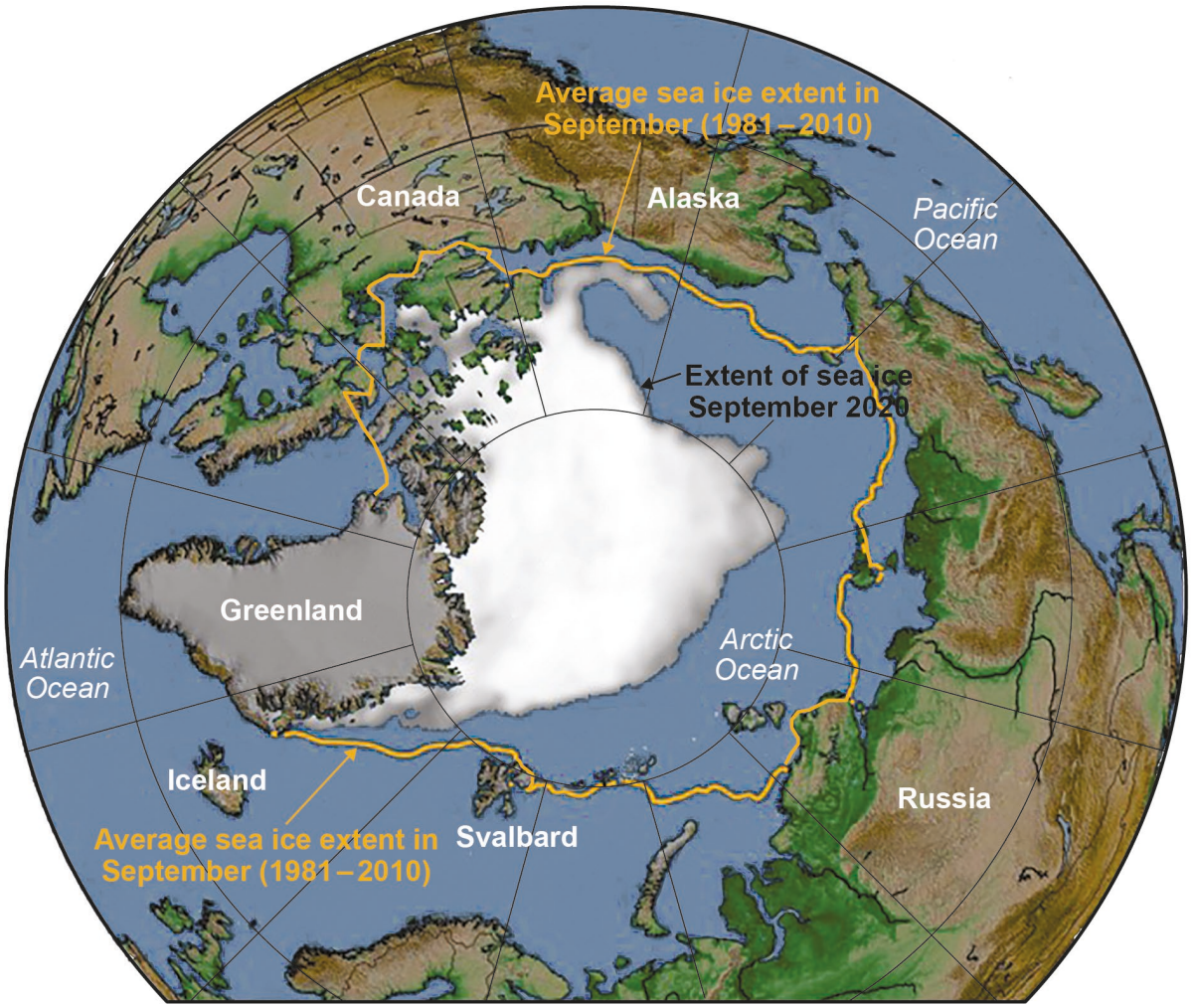
Section A The challenge of natural hazards

Answer **all** questions in this section.

Question 1 The challenge of natural hazards

Study **Figure 1**, a map showing the extent of Arctic sea ice in September 2020 and the average extent of Arctic sea ice in September from 1981 to 2010.

Figure 1



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0 1 . 1 Using **Figure 1**, compare the extent of Arctic sea ice in September 2020 with the average extent of Arctic sea ice in September from 1981 to 2010.

[2 marks]

Study **Figure 2**, data showing changes in the volume of Arctic sea ice from 1980 to 2020.

Figure 2

All figures are km^3

Year	**1980**	**1990**	**2000**	**2010**	**2020**
April	32 200	29 900	27 400	23 900	22 600
September	16 300	13 800	11 000	4 700	4 400

0 1 . 2 Using **Figure 2**, calculate the mean volume of Arctic sea ice in **April** from 1980 to 2020.

Shade **one** circle only.

[1 mark]

A 24 100 km^3 ⬭

B 25 400 km^3 ⬭

C 26 300 km^3 ⬭

D 27 200 km^3 ⬭

0 1 . 3 Using **Figure 2**, calculate the difference in the volume of Arctic sea ice from **September 1980** to **September 2020**.

[1 mark]

_____ km^3

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0 1 . 4 Suggest how changes in the extent of Arctic sea ice are evidence of climate change.

[2 marks]

Study **Figure 3**, a poster and some news headlines about the United Nations (UN) International Climate Change Conference held in Glasgow in November 2021.

Figure 3

'Urgent climate action by all countries needed to meet 1.5 °C target', says UN.

Agreement made to reduce use of fossil fuels.

Aid increased to poorest countries that are experiencing the worst impacts of climate change.

0 1 . 5 'International agreements are essential for managing climate change.'

Do you agree?

Explain your answer. Use **Figure 3** and your own understanding.

[4 marks]

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Question 1 continues on the next page

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Study **Figure 4**, a map showing tectonic plates and plate margins near South America.

Figure 4

Map not reproduced here due to third party copyright restrictions.

0 1 . 6 Using **Figure 4**, name the type of plate margin shown at **X**.

[1 mark]

_____

0 1 . 7 Using **Figure 4**, which statement describes the movement of plates at **X**?

Shade **one** circle only.

[1 mark]

A The Nazca Plate is moving away from the South American Plate. ⬭

B The Nazca Plate is moving under the South American Plate. ⬭

C The South American Plate is moving alongside the Nazca Plate. ⬭

D The South American Plate is moving under the Antarctic Plate. ⬭

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0 1 . 8 Using **Figure 4**, suggest **one** reason why new crust is formed at the location labelled **Y**.

[1 mark]

0 1 . 9 Explain why people continue to live in areas that are at risk from a tectonic hazard.

[6 marks]

Extra space

Question 1 continues on the next page

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Study either **Figure 5** or **Figure 6**.

Figure 5 – a photograph showing the effects of a recent volcanic eruption in La Palma

Figure 6 – a photograph showing the effects of a recent earthquake in the Philippines

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0 1 . 1 0 Using **Figure 5 or Figure 6**, give **two** primary effects of **either** volcanic eruptions **or** earthquakes.

[2 marks]

1 _____

_____

2 _____

_____

Question 1 continues on the next page

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Study **Figure 7**, showing some immediate and long-term responses to tropical storms.

Figure 7

Rescue people that are trapped	Provide medical support for injured people	Improve forecasting and early warning systems
Repair transport routes	Set up temporary shelters	Improve building regulations

0 1 . 1 1 'Both immediate and long-term responses are needed after a tropical storm.'

Discuss this statement.

Use **Figure 7** and an example of a tropical storm you have studied.

[9 marks]
[+ 3 SPaG marks]

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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

0 2 . 1 Outline **one** reason why there are high levels of biodiversity in the tropical rainforest.

[2 marks]

0 2 . 2 State **one** threat to biodiversity in the tropical rainforest.

[1 mark]

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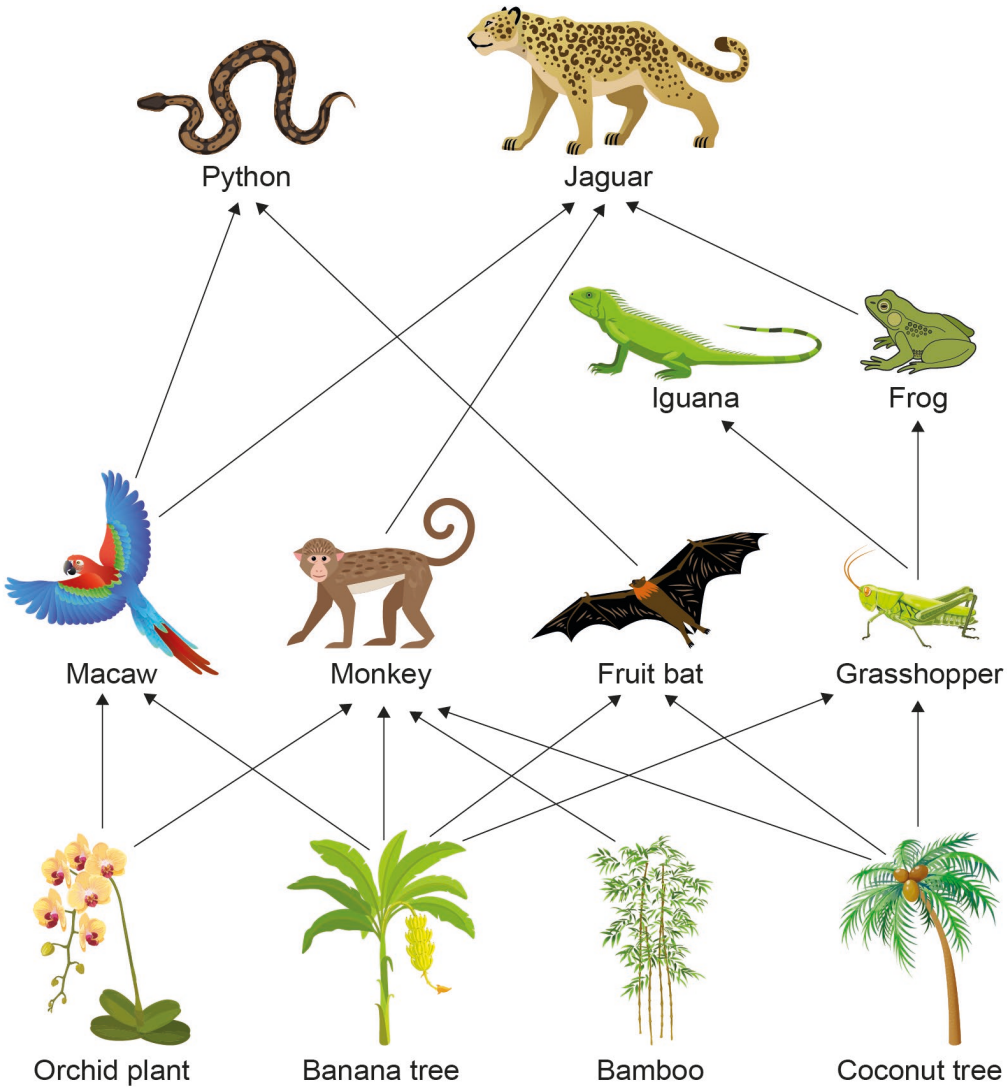
Study **Figure 8**, a diagram showing how different plants and animals rely on each other as sources of food in the tropical rainforest.

Figure 8



0 2 . 3 Complete the following paragraph by choosing the correct words from the list below.

chain **consumer** **increase** **producer** **reduce** **web**

Figure 8 is an example of a food _____. Orchid plants are an example of a _____. An increase in the number of jaguars is likely to _____ the number of monkeys.

[3 marks]

Turn over ►

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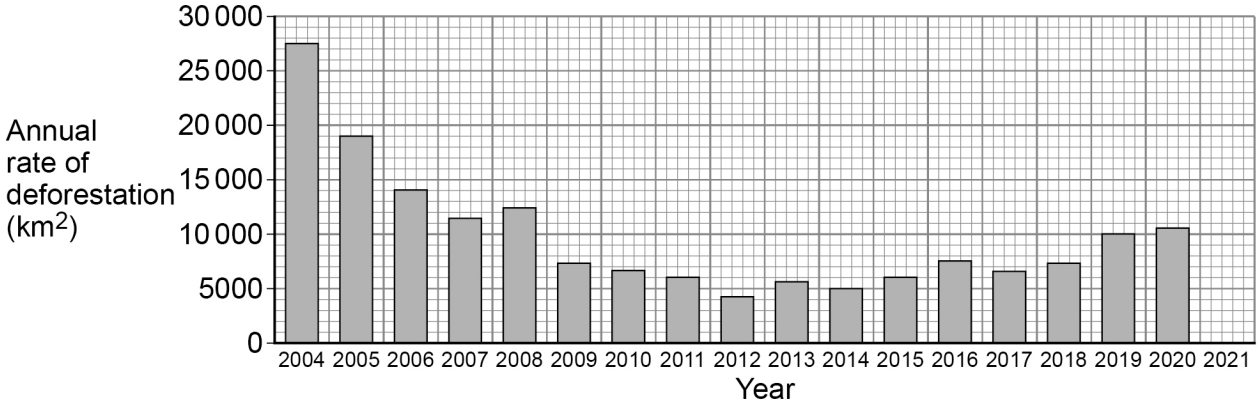
Figure 9 is a graph showing annual rates of deforestation in the Amazon rainforest, 2004–2021.

0 2 . 4 Complete **Figure 9** below using the following data.

[1 mark]

Year	**Annual rate of deforestation (km^2)**
2021	13 000

Figure 9



0 2 . 5 Using **Figure 9**, which of the following statements is true?

Shade **one** circle only.

[1 mark]

A Annual rate of deforestation has increased every year since 2010. ⬭

B Annual rate of deforestation was highest in 2020. ⬭

C Annual rate of deforestation was lowest in 2012. ⬭

D Annual rate of deforestation was twice as high in 2005 as it was in 2020. ⬭

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0 2 . 6 Suggest how deforestation in the tropical rainforest can be caused by a range of different activities. Use a case study.

[6 marks]

Extra space

0 2 . 7 Outline **one** way selective logging can be used to manage the rainforest sustainably.

[1 mark]

Question 2 continues on the next page

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Study either **Figure 10** or **Figure 11**, photographs showing soils in a hot desert and cold environment.

Figure 10 – hot desert

Figure 11 – cold environment

0 2 . 8 Using **either Figure 10** or **Figure 11**, suggest **one** way the soil can be affected by the climate in **either** a hot desert **or** a cold environment.

[1 mark]

Study **either Figure 12** or **Figure 13**, photographs showing plants and animals in hot desert and cold environments.

Figure 12 – hot desert

Figure 13 – cold environment

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0 2 . 9 'Plants and animals need to have special adaptations to cope with extreme environments.'

Discuss this statement.

Use either **Figure 12** or **Figure 13** and your own understanding.

[9 marks]

Tick (✓) the box to show which environment you have chosen.

Hot desert ☐ Cold environment ☐

Extra space

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End of Section B

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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

0 3 . 1 What does 'managed retreat' mean?

Shade **one** circle only.

[1 mark]

A Allowing the sea to flood or erode an area of low-value land. ⬭

B Building up dunes and increasing vegetation. ⬭

C Using concrete or artificial structures to defend against natural processes. ⬭

D Working with natural processes to restore beaches. ⬭

Question 3 continues on the next page

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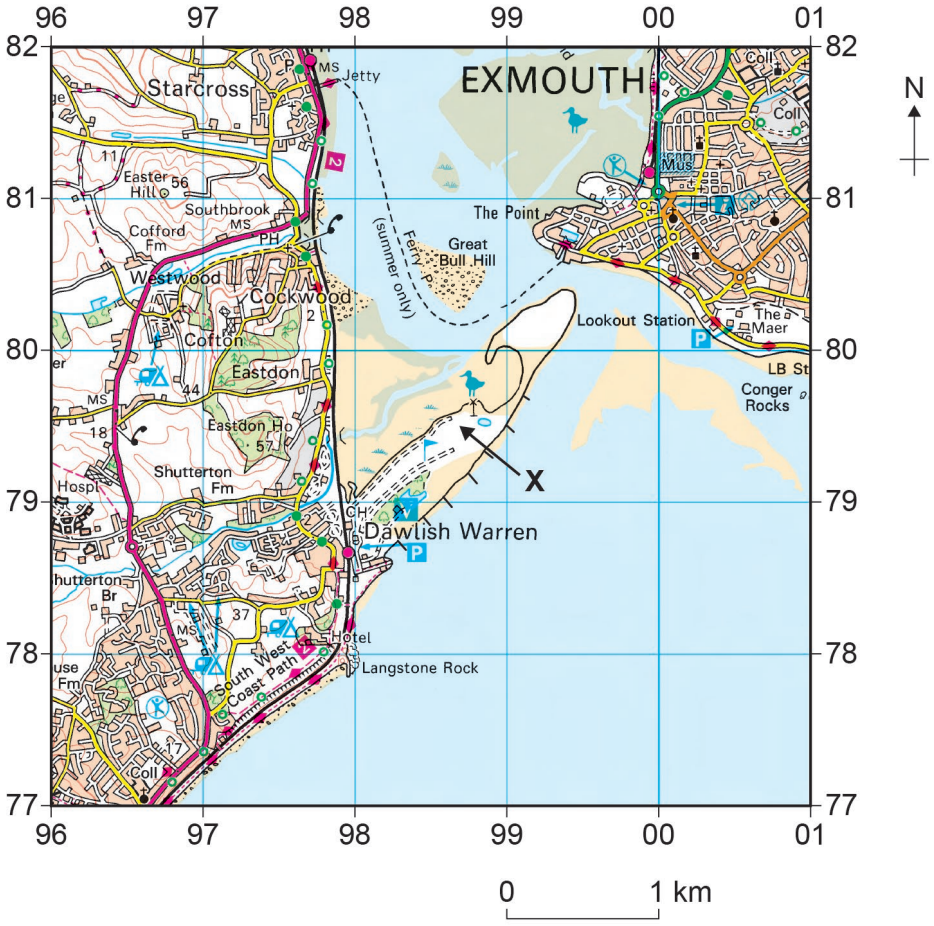
Study **Figure 14**, a 1:50 000 Ordnance Survey map of Dawlish Warren, Devon.

Figure 14



0 3 . 2 Using **Figure 14**, which **one** of the following grid squares shows a shingle beach?

Shade **one** circle only.

[1 mark]

A 9779 ⬭

B 0079 ⬭

C 9777 ⬭

D 9980 ⬭

0 3 . 3 Using **Figure 14**, identify **one** method of hard engineering shown in grid square 9879.

[1 mark]

_____

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0 3 . 4 The area labelled **X** shows a coastal spit.

Using **Figure 14**, describe the size and shape of the spit.

[2 marks]

Size _____

_____

Shape _____

_____

0 3 . 5 You have studied a coastal management scheme in the UK.

Explain the effects of the scheme.

[4 marks]

_____

_____

_____

_____

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Question 3 continues on the next page

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Study **Figure 15**, a photograph showing features of a coastal landscape.

Figure 15

0 3 . 6 Explain how coastal landscapes are formed by different processes.

Use **Figure 15** and your own understanding.

[6 marks]

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End of Question 3

Turn over for Question 4

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Question 4 River landscapes in the UK

0 4 . 1 Which **one** of the following factors is most likely to cause river levels to rise quickly after heavy rainfall?

Shade **one** circle only.

[1 mark]

A Gentle slopes

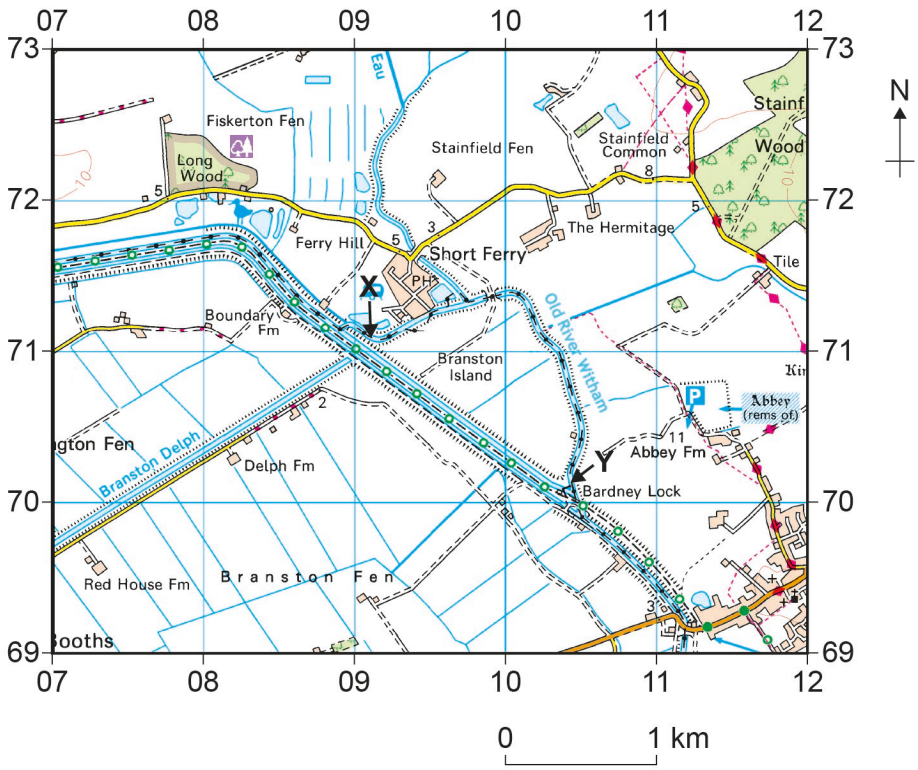
B Forested land

C Permeable rocks

D Steep slopes

Study **Figure 16**, a 1:50 000 Ordnance Survey map showing part of the River Witham in Lincolnshire.

Figure 16



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0 4 . 2 Using **Figure 16**, measure the distance **along the Old River Witham** between point **X** and point **Y**.

Shade **one** circle only.

[1 mark]

A 1.2 km ⬭

B 2.0 km ⬭

C 2.8 km ⬭

D 3.6 km ⬭

0 4 . 3 Using **Figure 16**, identify **one** method of hard engineering shown in grid square 0970.

[1 mark]

_____

_____

0 4 . 4 Using **Figure 16**, describe the relief and drainage shown in grid square 0870.

[2 marks]

Relief (height and shape of the land) _____

_____

Drainage (water features) _____

_____

Question 4 continues on the next page

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0 4 . 5 You have studied a flood management scheme in the UK.

Explain why the scheme was needed and how it works.

[4 marks]

Extra space

Study **Figure 17**, a photograph showing features of a floodplain.

Figure 17

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0 4 . 6 Explain how river features are created by erosion and deposition.

Use **Figure 17** and your own understanding.

[6 marks]

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End of Question 4

Turn over for Question 5

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Question 5 Glacial landscapes in the UK

0 5 . 1 What does abrasion mean?

Shade **one** circle only.

[1 mark]

A Glacial ice moves in a circular motion causing hollows to form in the landscape. ⬭

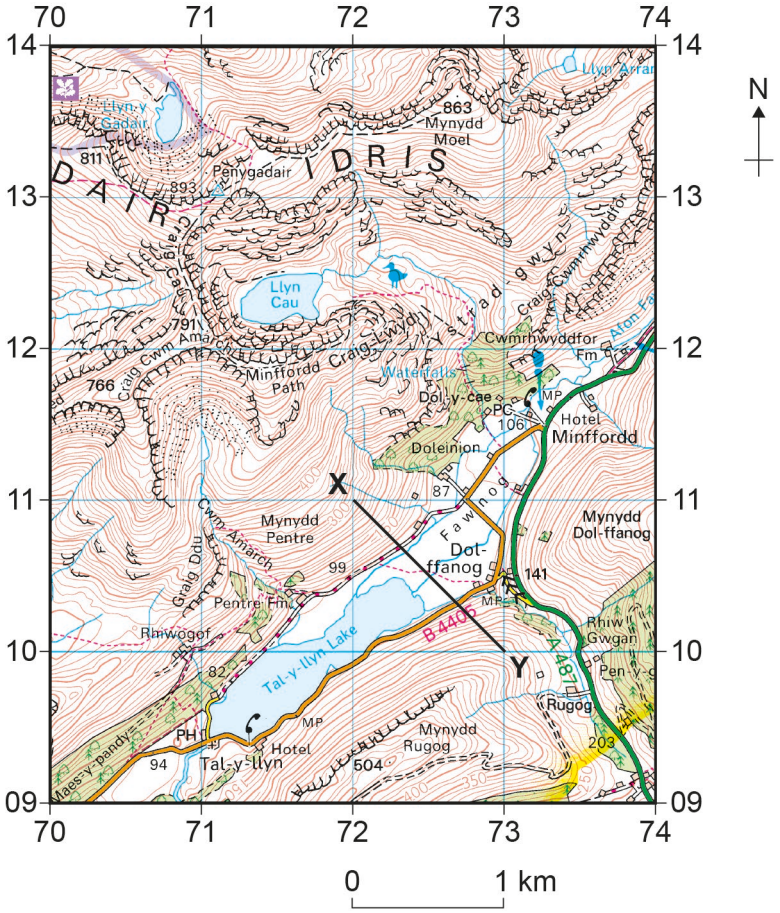
B Meltwater freezes beneath the ice and tears away pieces of loose rock. ⬭

C Rocks trapped beneath the glacier scratch and smooth the bedrock underneath. ⬭

D Water freezes in cracks and expands, causing the rock to break down. ⬭

Study **Figure 18**, a 1:50 000 Ordnance Survey map extract of part of Snowdonia.

Figure 18



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0 5 . 2 Using **Figure 18**, which grid square shows part of a ribbon lake?

Shade **one** circle only.

[1 mark]

A 7013 ⬭

B 7310 ⬭

C 7109 ⬭

D 7212 ⬭

0 5 . 3 Using **Figure 18**, name **one** landform of glacial erosion shown in grid square 7112.

[1 mark]

_____

0 5 . 4 Using **Figure 18**, describe the shape of the valley and measure the width of the valley floor between points **X** and **Y**.

[2 marks]

Shape of valley _____

_____

Width of valley floor _____ m

Question 5 continues on the next page

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0 5 . 5 You have studied a glaciated upland area in the UK.

Explain why this area attracts tourists.

[4 marks]

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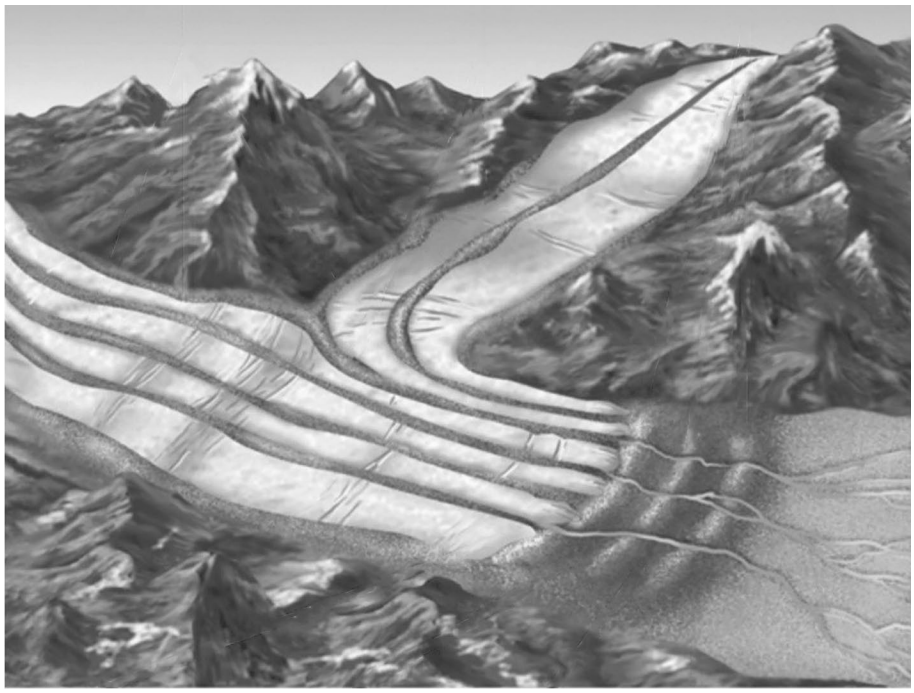
Study **Figure 19**, a diagram showing some features of glacial deposition.

Figure 19



0 5 . 6 Explain the different ways that glacial material is transported and deposited.

Use **Figure 19** and your own understanding.

[6 marks]

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END OF QUESTIONS

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