

Centre Number						Candidate Number				
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For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
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General Certificate of Secondary Education  
Higher Tier  
June 2015

# Geography (Specification A)

90301H

H

## Unit 1 Physical Geography

Tuesday 19 May 2015 1.30 pm to 3.00 pm

### For this paper you must have:

- the colour insert (enclosed)
- a pencil
- a rubber
- a ruler.

You may use a calculator.

### Time allowed

- 1 hour 30 minutes

### Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- **Answer THREE questions:**
  - **one** question from **Section A (Questions 1 – 4)**
  - **one** question from **Section B (Questions 5 – 7)**
  - **one** other question from **either** Section A **or** Section B.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- Use case studies to support your answers where appropriate.

### Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 75.
- You are reminded of the need for good English and clear presentation in your answers. Where applicable, questions should be answered in continuous prose. Quality of written communication will be assessed in all answers.

### Advice

- Where appropriate, credit will be given for the use of diagrams to illustrate answers and where reference is made to your personal investigative work. You are advised to allocate your time carefully.



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**Section A**

Answer **one** question from Section A and **one** question from Section B and **one** other question from **either** Section A **or** Section B.

Use case studies to support your answers where appropriate.

**Total for this question: 25 marks**

**1 The Restless Earth**

**1 (a)** Describe the characteristics of oceanic crust.

**[3 marks]**

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**1 (b)** Study **Figure 1** on the insert, a map showing the world distribution of volcanoes.

Describe the world distribution of volcanoes.

**[3 marks]**

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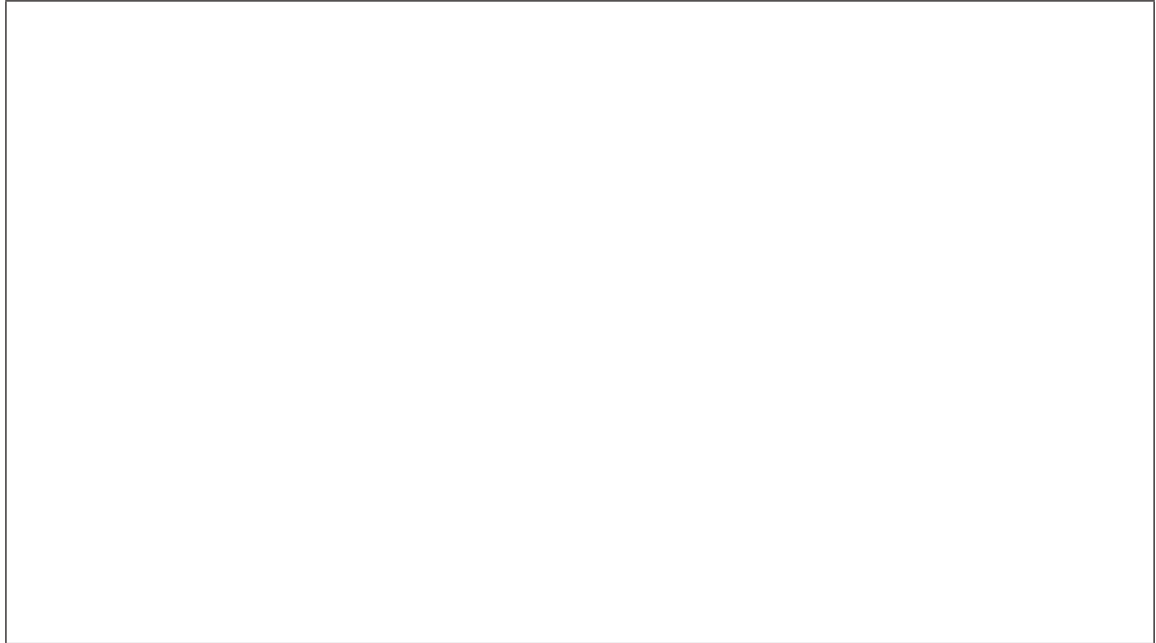
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**1 (c)** Study **Figure 2** on the insert, a photograph of Eyjafjallajökull, a volcano in Iceland.

**1 (c) (i)** Draw a labelled sketch cross section to show the characteristics of this volcano.

**[3 marks]**



**Question 1 continues on the next page**

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1 (d) Study **Figure 3** on the insert, a map showing the Yellowstone supervolcano in the USA.

1 (d) (i) Use information in **Figure 3** to complete the table below.

[2 marks]

Distance along line A–B	..... km
Shape of the supervolcano (caldera)	..... .....

1 (d) (ii) How is a supervolcano different from a volcano?

[2 marks]

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1 (d) (iii) Describe the likely global consequences of a supervolcano eruption.

[4 marks]

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**Total for this question: 25 marks**

**2 Rocks, Resources and Scenery**

**2 (a)** Study **Figure 4** on the insert, a diagram showing the geological timescale.

**2 (a) (i)** Use **Figure 4** to complete the following sentences.

**[2 marks]**

Some granite formed 280 million years ago in the ..... Period.

The Carboniferous period lasted for ..... million years.

**2 (a) (ii)** With the help of **Figure 4**, outline what is meant by an 'era'.

**[2 marks]**

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**2 (b)** Describe the characteristics of igneous rock.

**[3 marks]**

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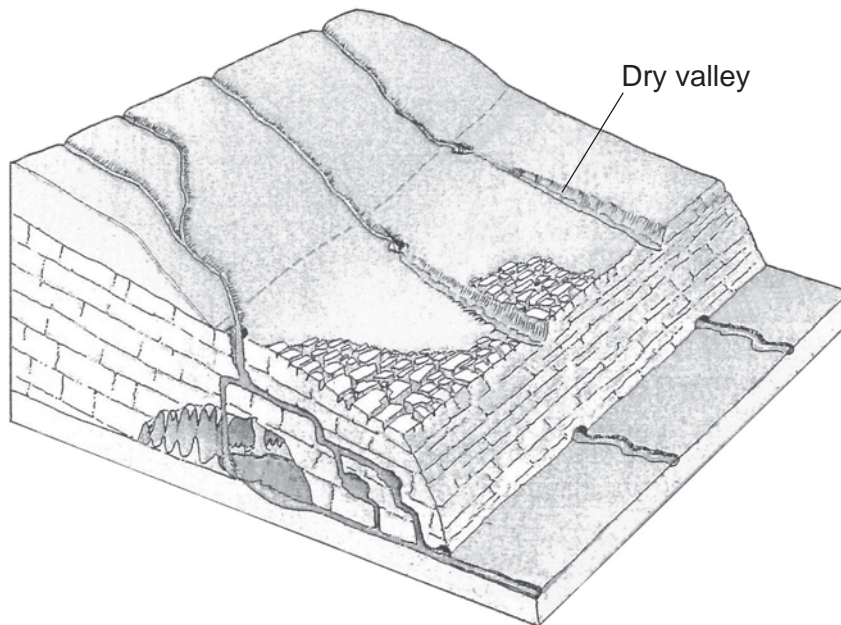
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2 (c) Study **Figure 5**, a block diagram showing limestone features.

**Figure 5**



2 (c) (i) A dry valley is shown on **Figure 5**.

On **Figure 5**, mark with an arrow and label **three other surface** features shown.

**[3 marks]**





**2 (c) (ii)** With the help of **Figure 5**, explain the formation of a dry valley.

**[4 marks]**

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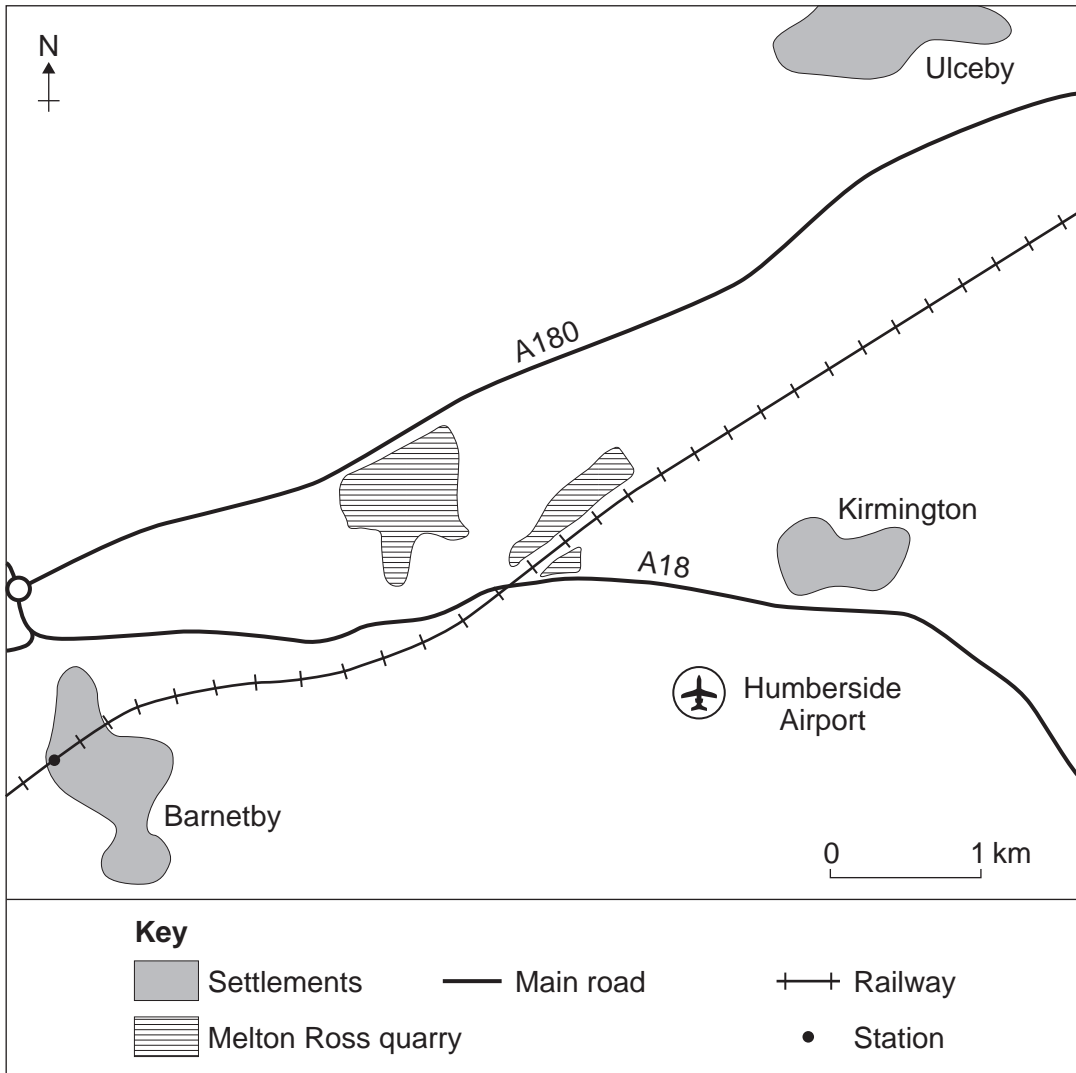
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2 (d) Study **Figure 6**, a sketch map showing the location of Melton Ross quarry.

**Figure 6**



2 (d) (i) Describe the location of Melton Ross quarry.

[3 marks]

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**Total for this question: 25 marks**

**3 Challenge of Weather and Climate**

**3 (a)** Study **Figure 7** on the insert, a map showing the average maximum monthly temperature at four weather stations in the UK from 1981 to 2010.

**3 (a) (i)** Use **Figure 7** to describe how temperature varies in the UK.

**[3 marks]**

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**3 (a) (ii)** How does **latitude** explain the difference in temperature between London and Edinburgh?

**[2 marks]**

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**3 (a) (iii)** How does **altitude** explain the difference in temperature between Llanbedr and Lake Vyrnwy?

**[2 marks]**

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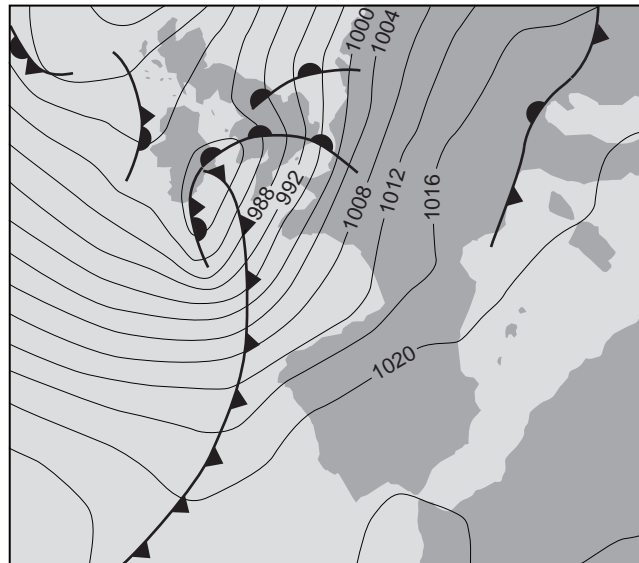
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**3 (b)** Study **Figure 8**, a synoptic chart showing the St Jude storm over the British Isles on 28 October 2013.

**Figure 8**



**3 (b) (i)** On **Figure 8**, mark with an arrow and label:

- the centre of the low pressure
- the warm sector
- a location with high wind speed.

**[3 marks]**

**3 (b) (ii)** Describe the weather associated with the passage of a warm front of a depression.

**[3 marks]**

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**3 (c)** Study **Figures 9a** and **9b** on the insert, photographs taken after the Philippines were hit by Typhoon Haiyan (a tropical revolving storm) on 8 November 2013.

**Figure 9a** shows Tacloban Airport.

**Figure 9b** shows the Tacloban coast near the airport.

Describe the effects of Typhoon Haiyan shown in **Figures 9a** and **9b**.

**[4 marks]**

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**Total for this question: 25 marks**

**4 Living World**

**4 (a)** Study **Figure 10** on the insert, a diagram of a simple ecosystem.

**4 (a) (i)** Outline how the soil is affected by the vegetation.

**[2 marks]**

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**4 (a) (ii)** Outline how the vegetation is affected by the soil.

**[2 marks]**

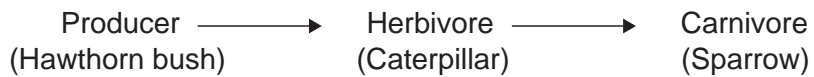
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**4 (b) (i)** A food chain is shown below.



Explain the links between the different levels in a food chain.

**[3 marks]**

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**4 (b) (ii)** Explain the role of decomposers in an ecosystem.

**[3 marks]**

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**4 (c)** Study **Figure 11** on the insert, a map showing the location of temperate deciduous forest.

Use **Figure 11** to describe the distribution of temperate deciduous forest.

**[3 marks]**

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**4 (d)** Study **Figure 12** on the insert, a photograph of part of Epping Forest, a temperate deciduous woodland in the south of England.

Use **Figure 12** to describe the characteristics of this temperate deciduous woodland.

**[4 marks]**

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**Section B**

Answer **one** question from Section A and **one** question from Section B and **one** other question from **either** Section A **or** Section B.

Use case studies to support your answers where appropriate.

**Total for this question: 25 marks**

**5 Water on the Land**

**5 (a)** Study **Figure 13** on the insert, a 1:25 000 Ordnance Survey map extract of part of the Peak District.

Damflask Reservoir is named in grid square 2790. The dam is in grid square 2890.

**5 (a) (i)** What is the length of the dam along the line **X–Y** on the map?

**[1 mark]**

..... km

**5 (a) (ii)** What shape is Damflask Reservoir?

**[1 mark]**

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**5 (a) (iii)** Describe the relief (height and slope of the land) around Damflask Reservoir.

**[2 marks]**

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**5 (b)** Study **Figures 14a** and **14b** on the insert, maps showing rainfall (2012) and population density (2011) in England and Wales.

Explain how **Figures 14a** and **14b** show that there are likely to be areas of water surplus and areas of water deficit in England and Wales.

**[6 marks]**

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- 5 (c)** Study **Figure 15** on the insert, a photograph of High Force waterfall on the River Tees in the north of England.

**Figure 16** is a black and white copy of **Figure 15**.

**Figure 16**



**5 (c) (i)** On **Figure 16**, mark with an arrow and label **three** characteristics of the waterfall. **[3 marks]**

**5 (c) (ii)** Explain the formation of a waterfall. **[4 marks]**

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**5 (d)** Describe how river processes of transportation and deposition change downstream.

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**Total for this question: 25 marks**

**6 Ice on the Land**

**6 (a)** Study **Figures 17a** and **17b** on the insert, graphs showing information about the Solheimajökull glacier in Iceland in the years 1931–2012.

**Figure 17a** shows the advance and retreat of the glacier.  
**Figure 17b** shows the change in the position of the snout of the glacier.

Describe the trends shown in **Figures 17a** and **17b**.

**[4 marks]**

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**6 (b)** Study **Figure 18** on the insert, a 1:50 000 Ordnance Survey map extract of the Helvellyn area of the Lake District.

**6 (b) (i)** Red Tarn (grid square 3415) is in a corrie.

In what direction does the corrie face?

[1 mark]

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**6 (b) (ii)** What is the height of Helvellyn at grid reference 342151?

[1 mark]

..... m

**6 (b) (iii)** A corrie is labelled on **Figure 18**.

**Figure 19** (opposite) is a black and white copy of **Figure 18**.

On **Figure 19**, mark with an arrow and label **two other** landforms resulting from glacial erosion.

[2 marks]



Figure 19



Question 6 continues on the next page

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**6 (c)** 'Distinctive landforms result from different glacial processes.' Illustrate this statement with reference to **one** landform of erosion and **one** landform of deposition.

**[8 marks]**

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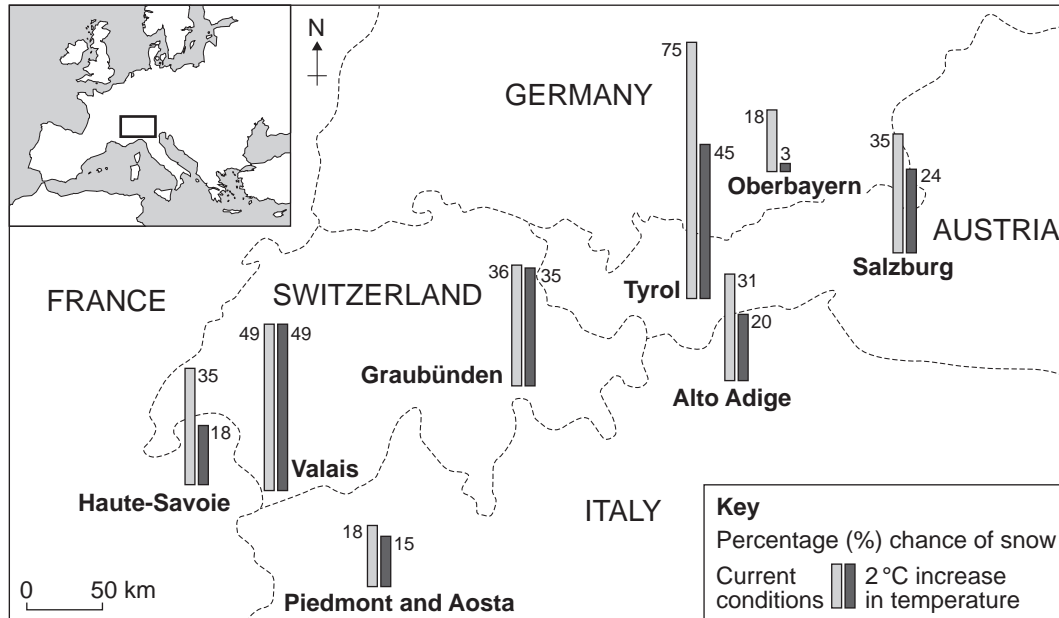
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- 6 (d) Study **Figure 20**, a located bars map showing the chance of snow in selected regions of the Alps under current conditions and the chance of snow if there is a 2 °C increase in temperature.

**Figure 20**



- 6 (d) (i) Describe how the percentage chance of snow may change if there is a 2 °C increase in temperature.

[3 marks]

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**6 (d) (ii)** Describe the economic and social impacts of unreliable snowfall on some resorts.

**[6 marks]**

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**Total for this question: 25 marks**

**7 The Coastal Zone**

**7 (a)** Study **Figure 21** on the insert, a photograph of Happisburgh, Norfolk.

Outline the evidence from **Figure 21** that suggests erosion is taking place on this coast. **[3 marks]**

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**7 (b)** Explain the formation of a wave-cut platform.

**[4 marks]**

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**7 (d)** Study **Figure 23** on the insert, a 1:50 000 Ordnance Survey map extract of Walton-on-the-Naze.

**7 (d) (i)** What is the **four figure** grid reference of the Nature Reserve marked **X**?

**[1 mark]**

.....

**7 (d) (ii)** What is the distance along the line from the coast at point **Y** to the island at point **Z**?

**[1 mark]**

..... km

**7 (d) (iii)** Grid squares 2223 and 2323 are outlined on the map.

Describe the coastal environment shown in these grid squares.

**[2 marks]**

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Figure 5: Block diagram of a Carboniferous limestone landscape taken from David Waugh and Tony Bushell's 'New Key Geography for GCSE 2nd Edition' (ISBN 978-0-7487-8133-1), first published in 2002. Permission granted by Oxford University Press.

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