

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Secondary Education  
 Foundation Tier  
 Specimen Paper for Modular Specification 2013

# Geography (Specification A)

## 40301F

### Unit 1: Physical Geography

Date: Time:

<p><b>You will need no other materials:</b></p> <ul style="list-style-type: none"> <li>the insert ( enclosed)</li> <li>a ruler</li> </ul> <p>You may use a calculator.</p>
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For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
TOTAL	

**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** from **Section A**, **one** from **Section B**, and **one** further question from **either** Section.
- You must answer the questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Do all rough work in this book. Cross through any work you do not want to be marked.
- Use your case studies to support your answers where appropriate.

#### Information

- The maximum mark for this paper is 75.
- The marks for questions are shown in brackets
- You will be marked on your ability to:
  - use an appropriate form and style of writing
  - organise relevant information clearly and coherently
  - use specialist vocabulary where appropriate.



## SECTION A

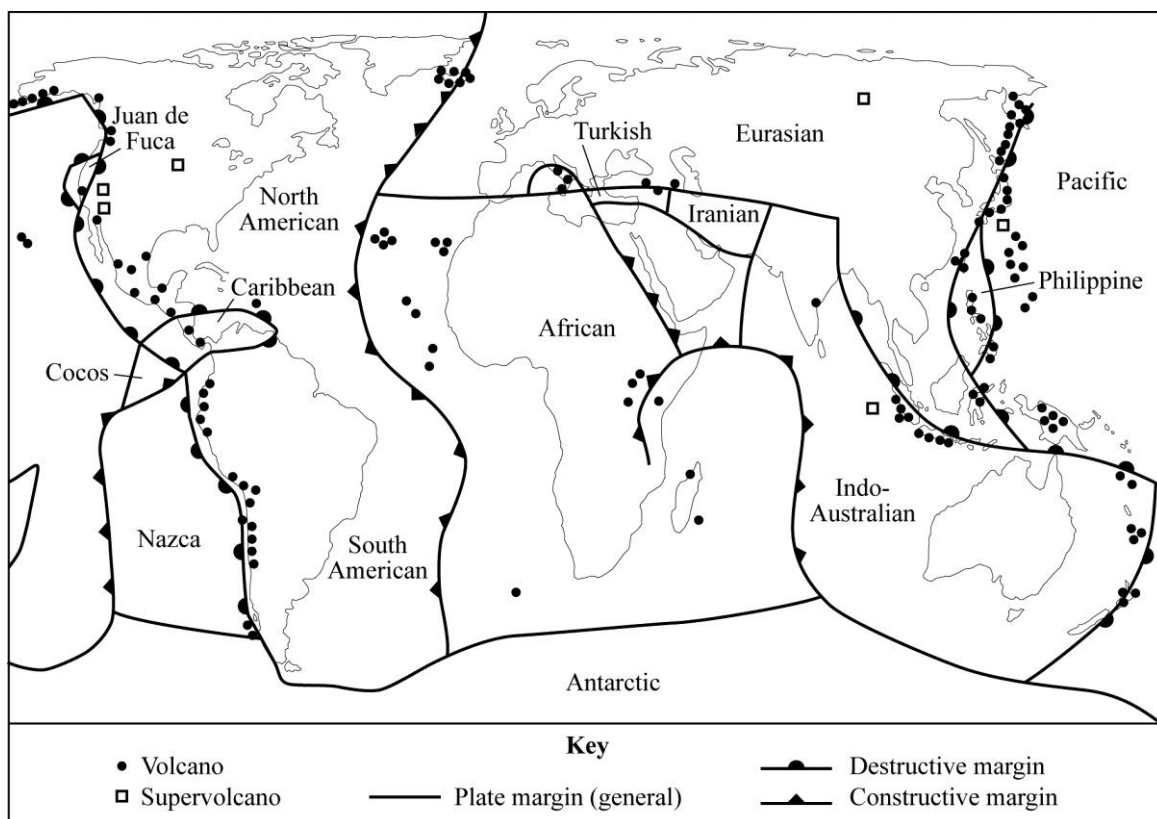
Answer at least **one** question, but **not more than two** questions in this section.  
Use your case studies to support your answers where appropriate.

### 1 The Restless Earth

**Total for this question: 25 marks**

- 1 (a) Study **Figure 1** which shows the earth's tectonic plates and the distribution of volcanoes and supervolcanoes.

**Figure 1**



- 1 (a) (i) Tick the correct box to show whether each of the following statements about the distribution of volcanoes and supervolcanoes is **True** or **False**.

	<b>True</b>	<b>False</b>
Volcanoes are only found on constructive plate boundaries.	<input type="checkbox"/>	<input type="checkbox"/>
There is a line of volcanoes on the west coast of North and South America.	<input type="checkbox"/>	<input type="checkbox"/>
The majority of supervolcanoes are to be found near destructive plate boundaries.	<input type="checkbox"/>	<input type="checkbox"/>
Both volcanoes and supervolcanoes are sometimes found away from plate boundaries.	<input type="checkbox"/>	<input type="checkbox"/>

*(4 marks)*

- 1 (a) (ii) Complete the paragraph below to explain why volcanoes occur at constructive plate boundaries. Choose the correct words from the following list.

**gentle**                      **magma**                      **apart**  
**together**                      **steep**                      **lava**

At constructive plate boundaries, the plates are moving .....

Hot, molten rock called ..... moves up from the mantle. This

builds up and a volcano with ..... sides is formed.

*(3 marks)*

**Question 1 continues on the next page**



- 1 (a) (iii) Give **one** difference between a volcano and a supervolcano for each of the following.

Shape .....

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Scale of eruption .....

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(4 marks)

- 1 (b) Study **Figure 2** which shows information about the six earthquakes that have caused most deaths in the last 100 years.

**Figure 2**

Year	Location	Level on Richter Scale	Number of deaths
1976	Tangshan, China	7.5	255 000
2004	Sumatra	9.1	227 900
1920	Haiyuan, China	7.8	200 000
1923	Kanto, Japan	7.9	142 000
1948	Ashgabat, USSR	7.3	110 000
2005	Pakistan	7.6	86 000

- 1 (b) (i) Give evidence that is either for or against the statement that ‘the higher the magnitude of the earthquake, the greater the number of deaths’. Circle either **For** or **Against**.

**For / Against** .....

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(2 marks)



- 1 (b) (ii) Suggest possible reasons why most deaths occurred in Tangshan, China, even though this earthquake measured 7.5 on the Richter scale.

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(2 marks)

- 1 (c) Describe a method, other than the Richter Scale, of measuring earthquakes.

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(4 marks)

(Extra space) .....

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**Question 1 continues on the next page**



- 1 (d) Describe the immediate and long-term responses to an earthquake that you have studied in a poor part of the world.

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(6 marks)

(Extra space) .....

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25



**2 Rocks, Resources and Scenery****Total for this question: 25 marks**

- 2 (a) Study **Figure 3**, on the insert, which shows the distribution of three different types of rock. Draw a line to link **each** of the statements to complete the sentences about the distribution of the three different rock types.

Igneous rocks are

found in a band from the south west  
through central England.

Sedimentary rocks are

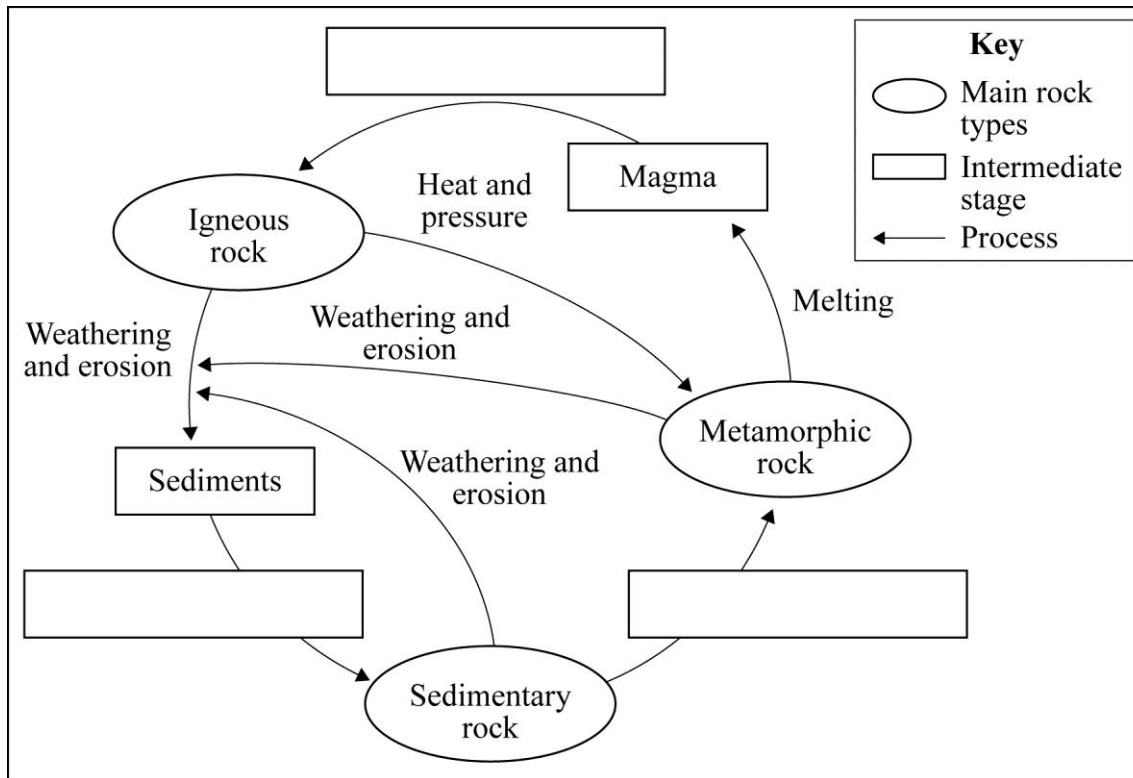
found in upland Britain.

Metamorphic rocks are

found in southern and eastern  
EnglandIgneous and metamorphic rocks  
arescattered areas of south west  
England*(3 marks)***Question 2 continues on the next page**

2 (b) Study **Figure 4** which partly shows 'the rock cycle'.

**Figure 4**



Reproduced with the permission of Nelson Thornes Ltd from Geoactive Online Series 18 (2006-2007).

2 (b) (i) Complete the boxes in **Figure 4** to show the missing labels. Choose the correct words from the list below.

- |                   |                          |                |
|-------------------|--------------------------|----------------|
| <b>expansion</b>  | <b>compaction</b>        | <b>cooling</b> |
| <b>deposition</b> | <b>heat and pressure</b> | <b>melting</b> |

(3 marks)

2 (b) (ii) What is meant by 'weathering'?

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(2 marks)





2 (b) (iii) How is weathering important to the rock cycle?

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(2 marks)

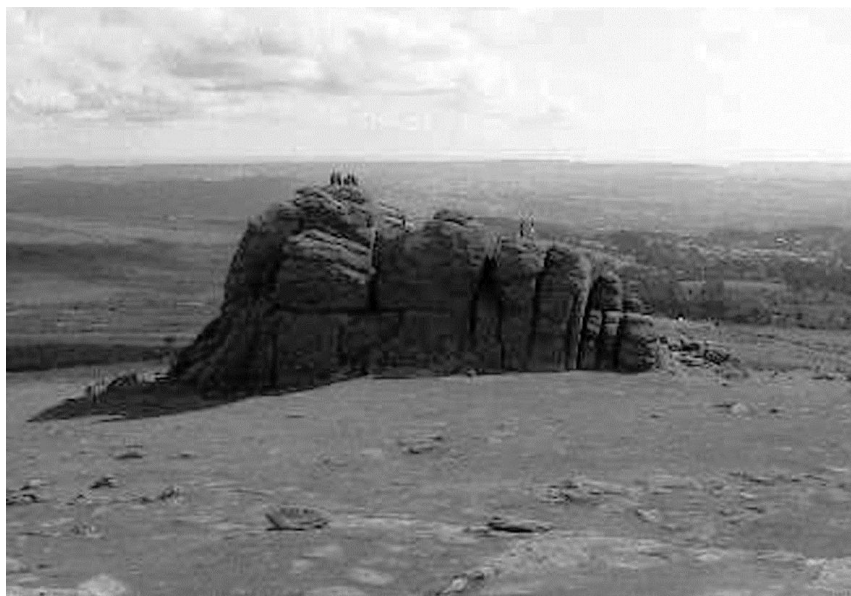
2 (c) **Figure 5**, on the insert, shows Haytor, Dartmoor. **Figure 6** is a black and white photocopy of **Figure 5**.

On **Figure 6**, mark with an arrow and label:

2 (c) (i) **three** characteristics of the tor; (3 marks)

2 (c) (ii) **two** features of the surrounding area. (2 marks)

**Figure 6**



2 (c) (iii) Explain the formation of granite tors.

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(4 marks)

(Extra space) .....

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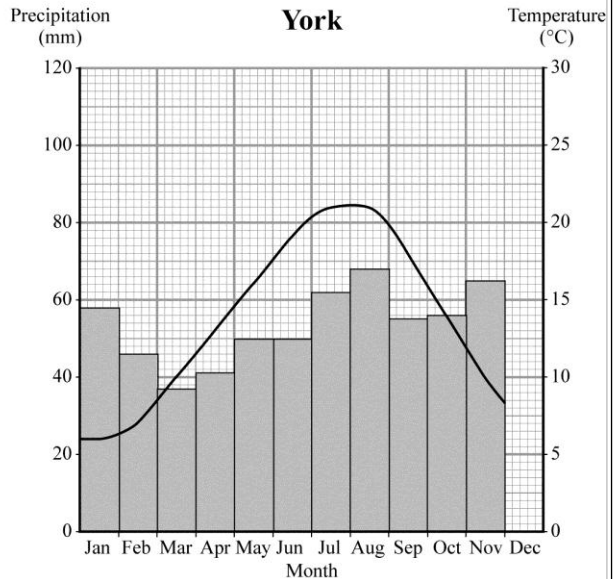
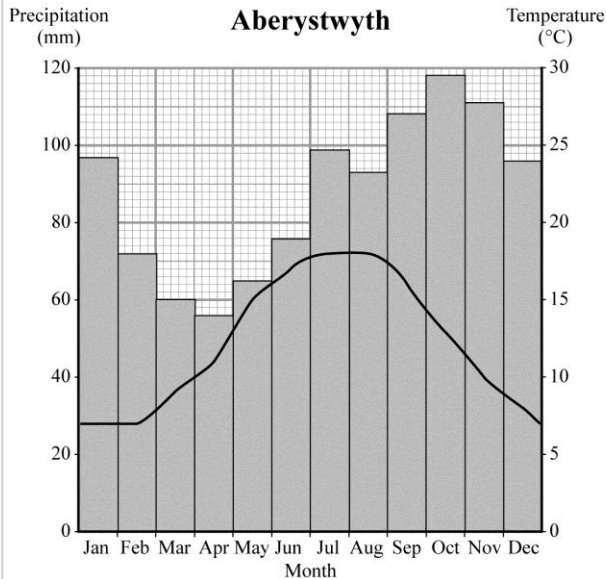
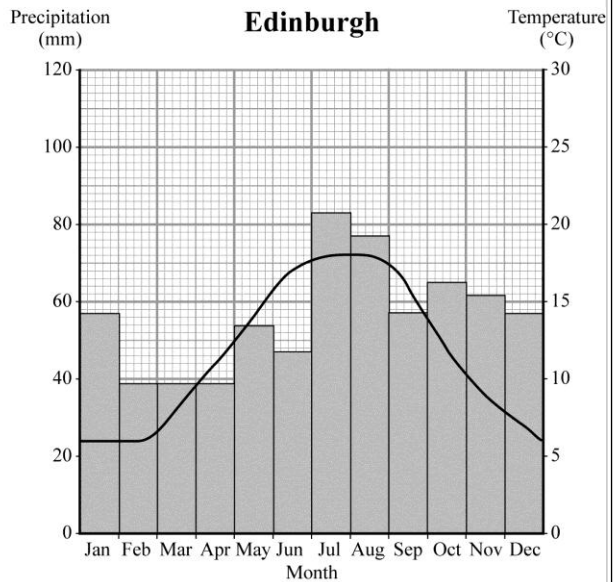


**3 Challenge of Weather and Climate**

**Total for this question: 25 marks**

**3 (a)** Study **Figure 7** which shows climate graphs for three cities in the United Kingdom.

**Figure 7**



3 (a) (i) Complete the climate graph for York by adding the following figures.

Month	Temperature (°C)	Precipitation (mm)
December	7	50

(2 marks)

3 (a) (ii) Complete the following sentences by adding the correct city. Choose the correct city from the list below.

**Aberystwyth                      Edinburgh                      York**

The wettest city in October is .....

The warmest city between June and August is .....

..... has the smallest temperature range.

(3 marks)

3 (a) (iii) Suggest why York's annual precipitation total is 529mm, whilst the total for Aberystwyth is 1051mm.

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(2 marks)

3 (a) (iv) Suggest why Edinburgh's temperature is 2° to 3°C lower than that of York between April and September.

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(2 marks)



3 (b) **Figure 8**, on the insert, is a newspaper extract describing floods in Sheffield in June 2007.

3 (b) (i) Give **two** pieces of evidence that suggest Sheffield experienced extreme weather conditions before the flood.

1 .....

2 .....

(2 marks)

3 (b) (ii) Describe the different ways in which people's lives were affected by the extreme weather in Sheffield in June 2007.

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(4 marks)

(Extra space) .....



3 (c) **Figure 9**, on the insert, is a satellite image of Hurricane Katrina in August 2005.

3 (c) (i) Complete the following statements by writing the correct word(s) in the spaces provided. Choose your answers from the list below.

**clockwise**            **eye**            **sea**            **north west**

**anticlockwise**    **land**            **eye wall**        **north east**

Feature **X** is the .....

Hurricane Katrina is over .....

Hurricane Katrina is spinning .....

Hurricane Katrina is moving in a ..... direction.

(4 marks)

**Question 3 continues on the next page**







**4 Living World**

**Total for this question: 25 marks**

- 4 (a)** Study **Figure 10** which shows a hedgerow, an example of a small-scale ecosystem.

**Figure 10**



- 4 (a) (i)** State a link between each of the following.

The bird and the hedgerow. ....

.....

The soil and the hedgerow. ....

.....

*(2 marks)*

**Question 4 continues on the next page**



4 (a) (ii) Suggest how this small-scale ecosystem would be affected by each of the following.

A really warm and wet summer. ....

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People. ....

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(4 marks)

4 (b) (i) Tick the correct box to show whether each of the following statements about the tropical rainforest is **True** or **False**.

	True	False
There are 5 layers of vegetation in the forest.	<input type="checkbox"/>	<input type="checkbox"/>
The tallest trees are called emergents.	<input type="checkbox"/>	<input type="checkbox"/>
Little vegetation grows on the forest floor.	<input type="checkbox"/>	<input type="checkbox"/>
The trees are evergreen.	<input type="checkbox"/>	<input type="checkbox"/>

(4 marks)



4 (b) (ii) **Figure 11**, on the insert, shows two ways, **A** and **B**, in which the vegetation of the tropical rainforest has adapted to its environment.

For **both A** and **B**, describe how the vegetation has adapted to its environment.

**A** .....

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**B** .....

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(4 marks)

4 (c) (i) Give **two** causes of deforestation.

1 .....

2 .....

(1 mark)

**Question 4 continues on the next page**



4 (c) (ii) Describe the effects of deforestation on the environment.

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(4 marks)

(Extra space).....

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**SECTION B**

Answer at least **one** question, but **not more than two** questions in this section.  
Use your case studies to support your answers where appropriate.

**5 Water on the Land**

**Total for this question: 25 marks**

**5 (a)** Study **Figure 12**, on the insert, a 1:50 000 Ordnance Survey map extract of Boscastle.

**5 (a) (i)** What happens at **X** along the course of the River Valency?

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*(1 mark)*

**5 (a) (ii)** A 'waterfall' is found at **Y**. Give the map evidence for this landform, apart from the label.

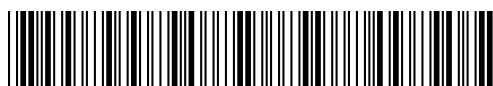
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*(2 marks)*

**5 (a) (iii)** Grid squares 1290 and 1291 are outlined on **Figure 12**. Describe the channel and the valley of the River Valency in these grid squares.

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*(3 marks)*

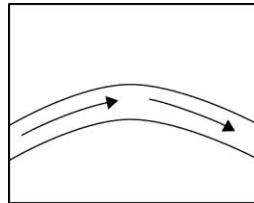


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5 (b) **Figure 13** shows the stages in the formation of a river landform in its lower course.

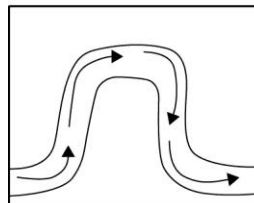
Add a sentence in each box to explain the formation of the landform.

**Figure 13**



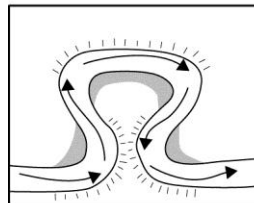
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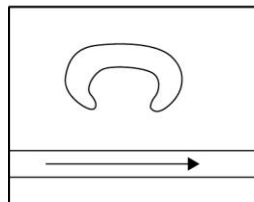
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<b>Key</b>	
River	Erosion
Direction of flow	Deposition

(4 marks)

Question 5 continues on the next page



5 (c) Study **Figure 12**, the Ordnance Survey map extract of Boscastle.

5 (c) (i) Boscastle experienced a flash flood on 16 August 2004.

Give the meaning of the term 'flash flood'.

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(2 marks)

5 (c) (ii) Using **Figure 12**, the Ordnance Survey map of Boscastle, describe how each of the following contributed to the flooding.

The relief (height and shape of the land) in the Valency valley in grid square (1091).

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The settlement of Boscastle in grid square (0990).

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(4 marks)



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6 (b) (i) **Figure 16** on the insert is a photograph of a glacial landform.

Using **Figure 16**, state what the landform is and describe its main characteristics by describing what arrows **X** and **Y** point to.

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(3 marks)

6 (b) (ii) Complete the paragraph below to explain how the landform in **Figure 16** was formed. Choose the correct words from the list below.

- |                       |                     |                     |                     |
|-----------------------|---------------------|---------------------|---------------------|
| <b>truncated</b>      | <b>valley floor</b> | <b>whole valley</b> | <b>interlocking</b> |
| <b>glacial trough</b> | <b>abrasion</b>     | <b>weathering</b>   | <b>corrie</b>       |

Before the Ice Age, a river flowed along the valley. As it got colder, ice occupied the ..... It eroded the ..... spurs by plucking and ..... The V shape of the river valley is changed into a U shaped .....

(4 marks)

**Question 6 continues on the next page**



6 (c) Study **Figure 17**, on the insert, a photo of the Athabasca Glacier in Banff National Park in Canada.

6 (c) (i) Tick the correct box to show whether each of the following statements about the glacier is **True** or **False**.

	<b>True</b>	<b>False</b>
The glacier has retreated during the twentieth century/since 1992.	<input type="checkbox"/>	<input type="checkbox"/>
Snow is being added faster than it is melting.	<input type="checkbox"/>	<input type="checkbox"/>
Ground moraine is shown on the photograph.	<input type="checkbox"/>	<input type="checkbox"/>

(3 marks)

6 (c) (ii) Describe **two** different attractions of a landscape that is covered by snow and ice for tourists.

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(2 marks)



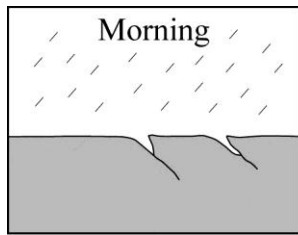


**7 The Coastal Zone**

**Total for this question: 25 marks**

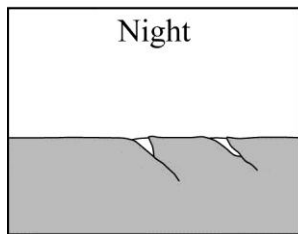
- 7 (a) Figure 18** shows how freeze thaw weathering occurs.  
Add a sentence in each box to explain freeze thaw weathering.

**Figure 18**



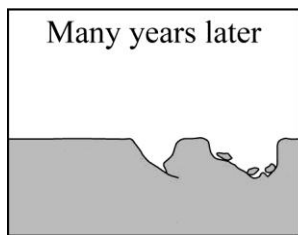
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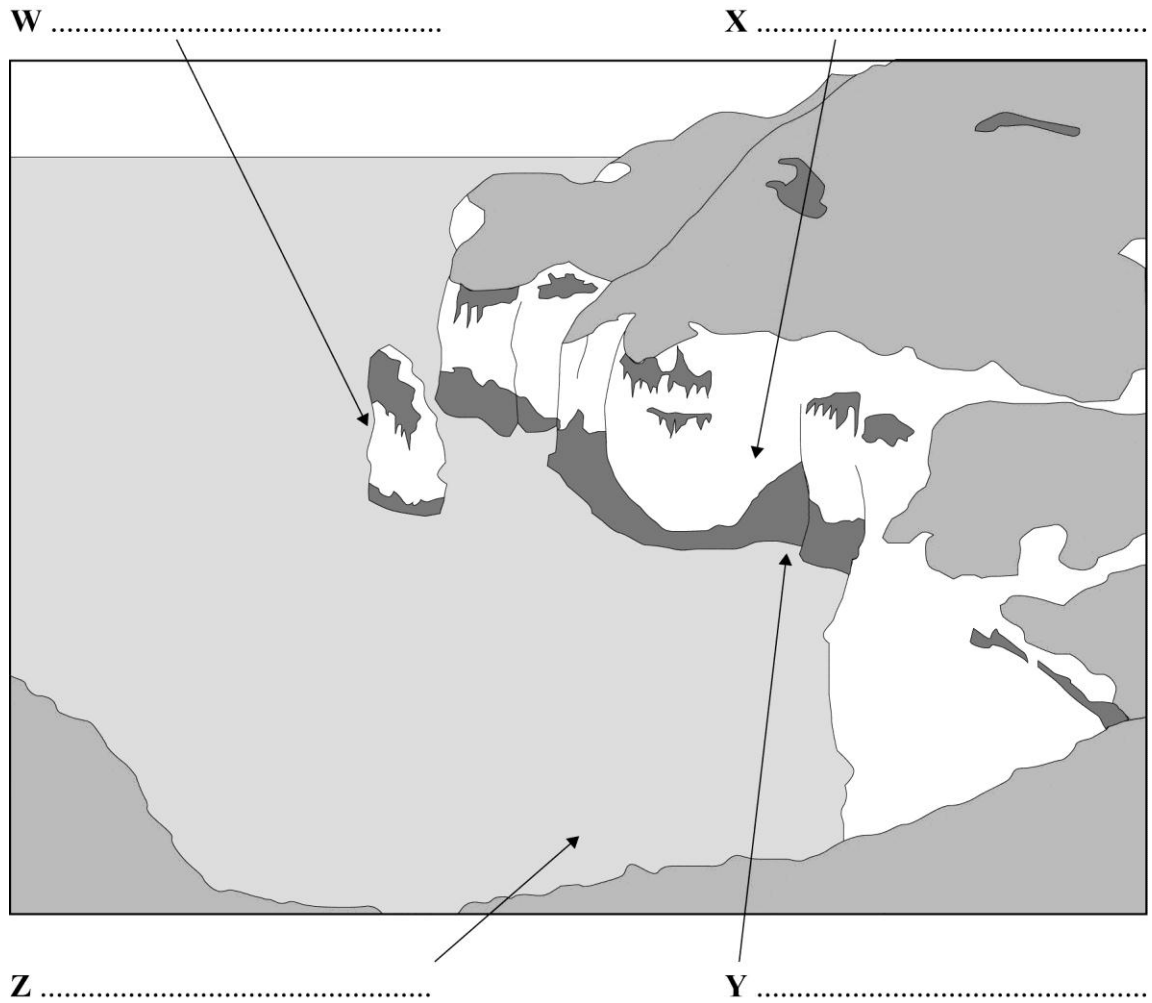
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*(3 marks)*



- 7 (b) (i) Study **Figure 19**, on the insert, which shows the coastal zone at Flamborough, North Yorkshire. **Figure 20** is a sketch of **Figure 19**. On **Figure 20**, label features **W**, **X**, **Y** and **Z**.

**Figure 20**



(4 marks)

- 7 (b) (ii) Mass movement is common in the area shown in **Figure 19**. What is meant by the term mass movement?

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(2 marks)



7 (c) Study **Figure 21**, on the insert, a 1:50 000 Ordnance Survey map extract of Mappleton on the Holderness coast in Yorkshire.

7 (c) (i) **X** shows the position of the coastline in 1910.  
How much land has been lost since then?

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(1 mark)

7 (c) (ii) Grid squares 2243 and 2244 are outlined on **Figure 21**.

Describe the physical and human features of the coastline in these grid squares.

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(3 marks)



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7 (c) (iii) Using **Figure 21**, describe the effects of continued coastal erosion on the settlement and residents of Mappleton.

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(4 marks)

(Extra space).....

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7 (c) (iv) A rock groyne has been built at **Y** on **Figure 21**. Longshore drift occurs mainly south eastwards.

How will the groyne affect the process of longshore drift in this area?

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(2 marks)

**Question 7 continues on the next page**





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Question 1	Figure 2	United States Geological Survey, Earthquake Hazards Program.
Question 2	Figure 3	<i>Collins Longman Student Atlas (New Edition)</i> , Pearson Education Ltd.
Question 2	Figure 5	<a href="http://www.strattons-cottage.co.uk">www.strattons-cottage.co.uk</a>
	Figure 6	<a href="http://www.strattons-cottage.co.uk">www.strattons-cottage.co.uk</a>
Question 3	Figure 7	<a href="http://www.bbc.co.uk">www.bbc.co.uk</a>
Question 3	Figure 8	<i>The Star</i> , Sheffield, June 2007
Question 3	Figure 9	NOAA Satellite and Information Service, USA.
Question 4	Figure 11	Rhett A. Butler / <a href="http://mongabay.com">mongabay.com</a>
Question 5	Figure 12	Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright (2008). All rights reserved. Ordnance Survey Licence number 41328.
Question 5	Figure 14	<a href="http://www.bbc.co.uk">www.bbc.co.uk</a>
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