

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
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6	
7	
TOTAL	



General Certificate of Secondary Education
Foundation Tier
June 2012

Geography (Specification A)

40301F

F

Unit 1 Physical Geography

Thursday 14 June 2012 9.00 am to 10.30 am

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 will be marked on your ability to:
 - use good English;
 - organise information clearly;
 - use specialist vocabulary where appropriate.

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.



J U N 1 2 4 0 3 0 1 F 0 1

Section A

You must 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) Study **Figure 1** on the insert, a map showing the locations of young fold mountains and ocean trenches.

1 (a) (i) The following statements describe the locations of young fold mountains and ocean trenches.

Tick the **three** correct statements.

There are ocean trenches in the Pacific Ocean.	
There are young fold mountains in Australia.	
There are young fold mountains on the west coast of the Americas.	
There are young fold mountains in Southern Europe.	
There are ocean trenches around the African coast.	
There are always ocean trenches next to young fold mountains.	

(3 marks)

1 (a) (ii) Give **two** characteristics of an ocean trench.

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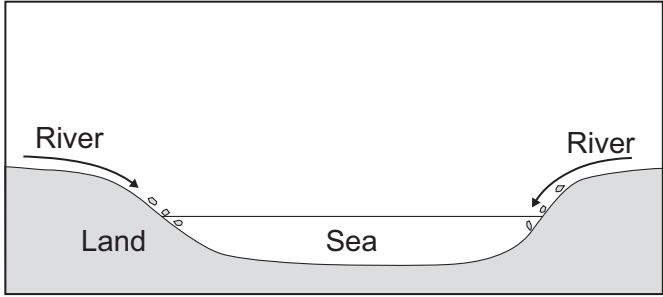
(2 marks)



1 (a) (iii) Figure 2 shows the formation of young fold mountains.

Complete the sentence in **each** box to explain the formation of young fold mountains.

Figure 2

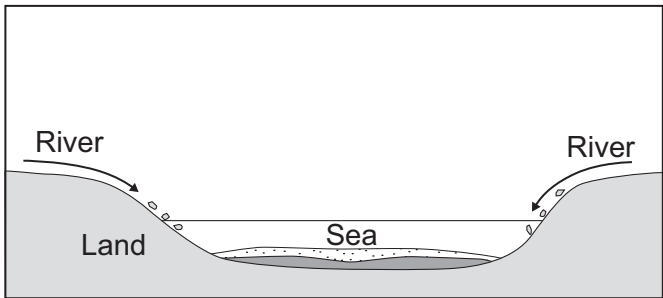


Rivers

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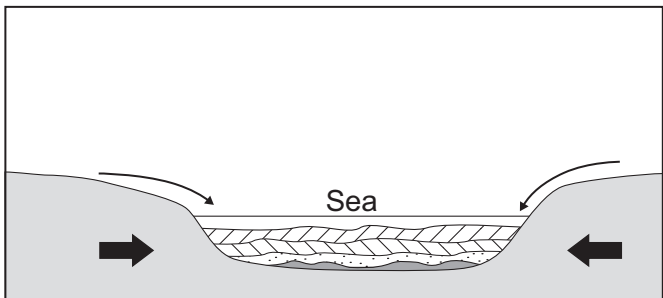


Sediment

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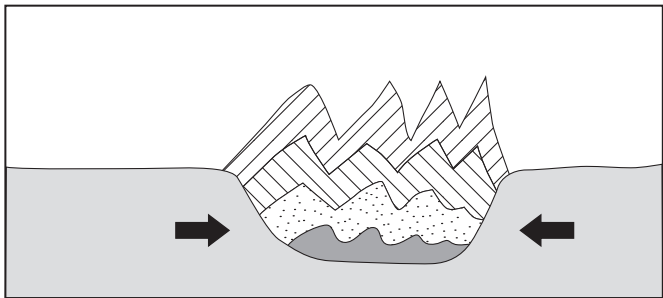


Plates

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Rocks

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(4 marks)

Question 1 continues on the next page

Turn over ►



1 (b) Study **Figure 3** on the insert, which shows characteristics of the L'Aquila, Italy earthquake in April 2009 and the Haiti earthquake in January 2010.

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

Characteristic	L'Aquila	Haiti
Epicentre	Near/about 7 km from L'Aquila	
Area affected by shockwaves		Southern half of country
Fault(s)	Two faults cross over each other	

(3 marks)

1 (b) (ii) With the help of **Figure 3**, outline the differences in the magnitude of the two earthquakes.

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(3 marks)



1 (c) Describe how earthquakes are measured using the Mercalli Scale.

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(4 marks)

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Question 1 continues on the next page

Turn over ►



1 (d) Describe how the effects of an earthquake in a richer area of the world are different from the effects of an earthquake in a poorer area of the world.

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(6 marks)

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25



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

- 2 (a)** Study **Figure 4** on the insert, which shows the distribution of four different types of rock in the United Kingdom (UK).

Are the following statements about the distribution of these four different rock types **true** or **false**?

Tick the correct boxes.

Statement	True	False
Chalk and clay are located together in southern and eastern areas of England.		
Carboniferous limestone is located in central northern England.		
Granite is scattered across south-eastern England.		

(3 marks)

- 2 (b)** What type of rock is Carboniferous limestone?

Circle the correct type from the following list.

metamorphic**sedimentary****igneous**

Give **one** reason why Carboniferous limestone is this rock type.

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(2 marks)

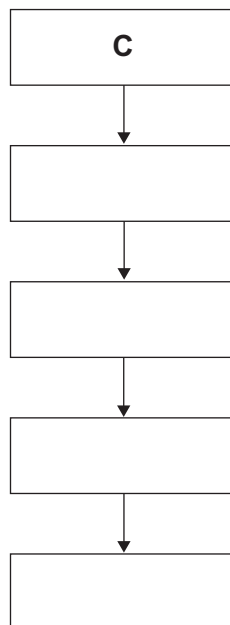
Question 2 continues on the next page

Turn over ►

- 2 (c)** The following is a list of stages in the chemical weathering process of carbonation. The stages are not in the correct order.

A	Limestone dissolves
B	Carbonic acid reacts with the calcium carbonate in limestone
C	Rain falls
D	Rain becomes a weak carbonic acid
E	Rain absorbs carbon dioxide from the air

Complete the boxes below to show the stages in the process of carbonation in the correct order. The first one has been done for you.



(3 marks)

- 2 (d)** Study **Figure 5** on the insert, which shows a chalk and clay landscape.

- 2 (d) (i)** Describe the landforms shown in **Figure 5**.

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(3 marks)



2 (d) (ii) Complete the paragraph below to explain the formation of an escarpment/cuesta. Circle the correct word(s) in each set of brackets.

Layers of chalk and clay are [**horizontal / dipped at an angle**] due to earth movement. The chalk is [**more / less**] resistant than clay. The clay erodes [**faster / slower**] than the chalk. The chalk stands [**above / below**] the clay to form an escarpment or cuesta.

(4 marks)

2 (e) Use a case study to describe the location of a quarry.

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(4 marks)

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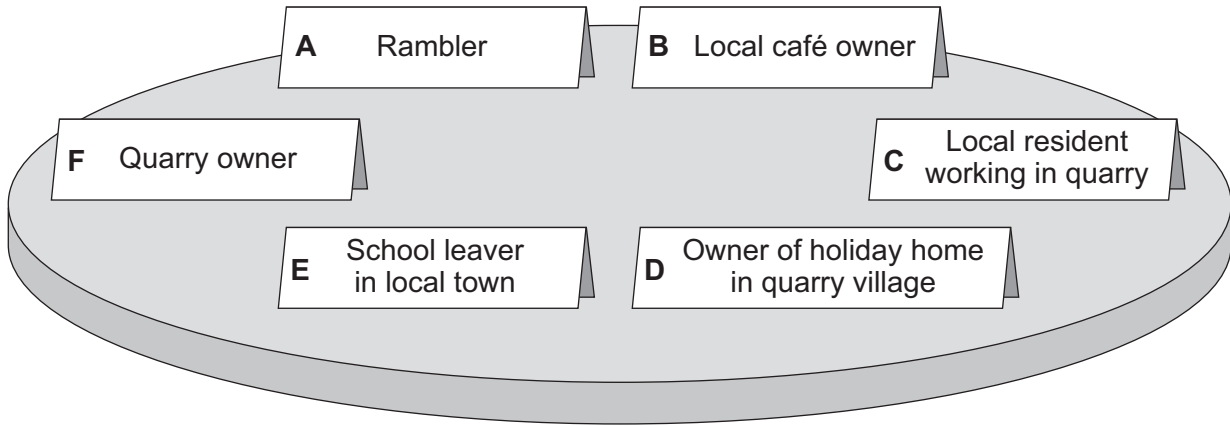
Question 2 continues on the next page

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2 (f) **Figure 6** shows a variety of people who have different opinions about the development of a new quarry.

Figure 6



Select **one** person in favour of the new quarry and **one** person against the new quarry and outline their different opinions.

Person in favour of new quarry (letter)

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Person against new quarry (letter)

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(6 marks)



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Turn over for the next question

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Total for this question: 25 marks

3 Challenge of Weather and Climate

3 (a) Study **Figure 7a** on the insert, a climate graph for Tenby.

3 (a) (i) Complete the sentences below to describe the climate of Tenby.

The maximum temperature is °C

The temperature range is °C

The three wettest months are

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(3 marks)

3 (a) (ii) Study **Figure 7b** on the insert, which shows information about the climate at four weather stations in the United Kingdom (UK).

Complete the paragraph below to explain why Tenby is wetter than Cambridge. Choose the correct words from this list.

Atlantic

nearer to

north easterly

less

further from

Pacific

more

south westerly

Tenby is wetter than Cambridge because it is the sea.

The prevailing winds hit Tenby first. The winds have

crossed the Ocean. By the time the winds get to

Cambridge, the air is moist.

(4 marks)

3 (a) (iii) Using **Figure 7b**, explain why Princetown is wetter than St Mawgan.

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(2 marks)



3 (b) Describe the weather during an anticyclone in the summer in the UK.

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(4 marks)

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3 (c) Describe the conditions that lead to the formation of tropical revolving storms.

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(3 marks)

Question 3 continues on the next page

Turn over ►

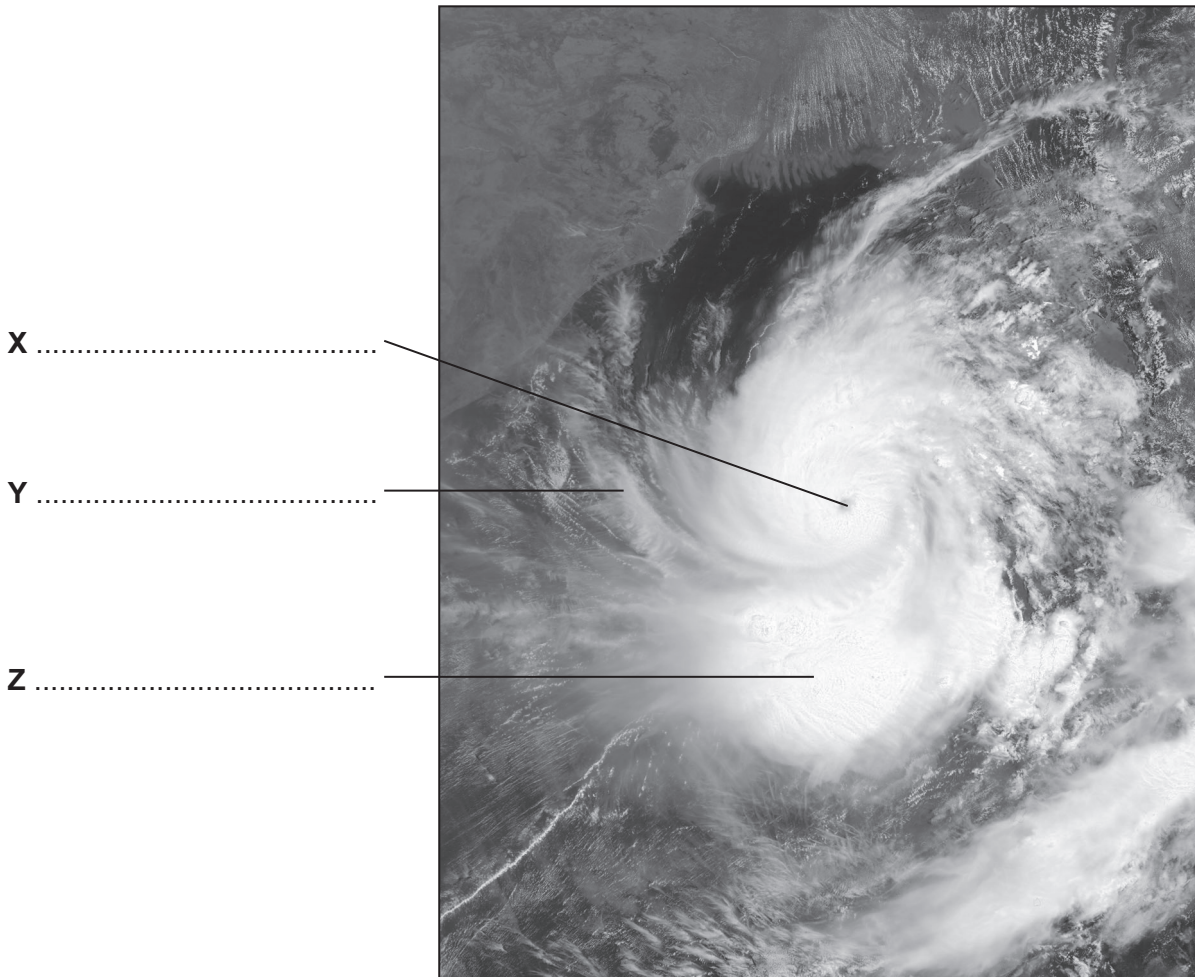


3 (d) (i) Study **Figure 8** on the insert, which shows Cyclone Nargis, a tropical revolving storm over the Bay of Bengal.

Figure 9 is a black and white copy of **Figure 8**.

On **Figure 9**, label features **X**, **Y** and **Z** of Cyclone Nargis.

Figure 9



(3 marks)

3 (d) (ii) Use a case study to describe the responses to a tropical revolving storm.

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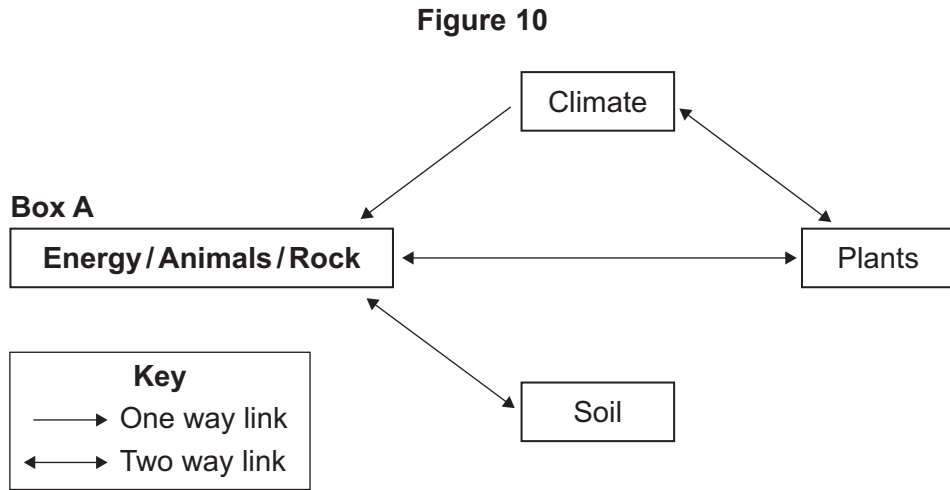
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Total for this question: 25 marks

4 Living World

4 (a) Study Figure 10 which shows the parts of an ecosystem and some of the links between them.



4 (a) (i) Complete Figure 10 by:

- circling the correct word in **Box A**;
- drawing an arrow to show the correct link between soil and plants;
- drawing an arrow to show the correct link between climate and soil.

(3 marks)

4 (a) (ii) Study Figure 11 on the insert, which shows a food chain.

Outline the role of the decomposers.

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(3 marks)



4 (a) (iii) Drought will have an impact on the ecosystem and the food chain.

Complete the following sentences to describe this impact.

Drought will mean that plants

Herbivores will be affected because

Carnivores will also be affected because

The soil will not have as much water, so

(4 marks)

4 (b) (i) Study **Figure 12** on the insert, a photograph of a temperate deciduous woodland.

Describe the features of the vegetation at **X**, **Y** and **Z**.

X – Leaves

Y – Trunks

Z – Layer(s)

(3 marks)

Question 4 continues on the next page

Turn over ►



4 (b) (ii) Describe the climate of temperate deciduous woodland areas.

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(4 marks)

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4 (c) (i) Outline **one** reason why tropical rainforest is cleared.

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(2 marks)



4 (c) (ii) Describe how selective logging and replanting are examples of sustainable management in tropical rainforests.

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End of Section A
Turn over for Section B

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Section B

You must answer **one** question from Section A and **one** question from Section B and **one** other question from **either** Section A **or** Section B.

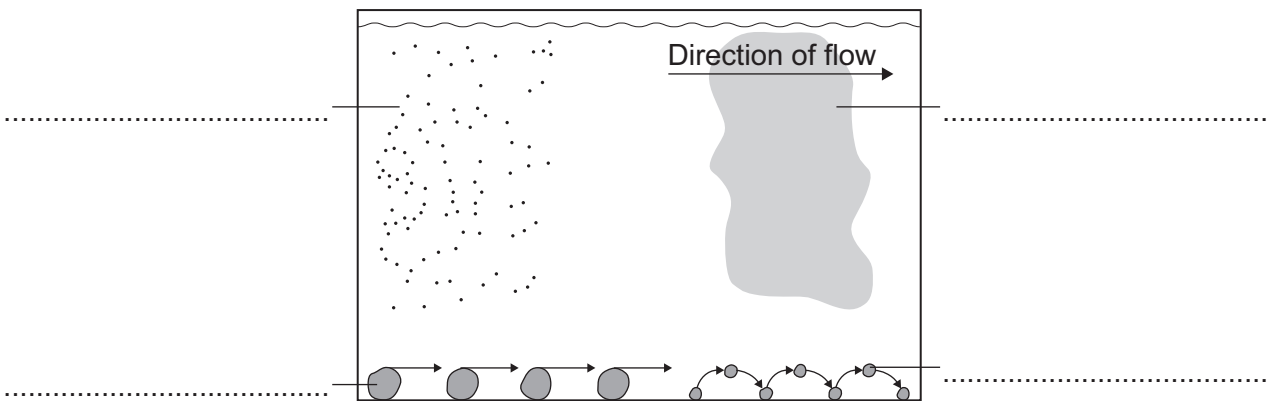
Use case studies to support your answers where appropriate.

Total for this question: 25 marks

5 Water on the Land

5 (a) Figure 13 shows **four** ways in which a river transports its load.

Figure 13



On **Figure 13**, label each process in the space provided.

Choose the correct labels from the following list.

- saltation
- suspension
- solution
- abrasion
- attrition
- traction

(4 marks)

5 (b) Explain why a river deposits its load.

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(2 marks)



5 (c) Study **Figure 14** on the insert, a 1:50 000 Ordnance Survey map extract of the River Eden in Cumbria.

5 (c) (i) What is the approximate height of the River Eden in grid square 4257?

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(1 mark)

5 (c) (ii) What happens to the River Eden at 411564?

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(1 mark)

5 (c) (iii) What is the straight line distance along the line **X – Y** on the map?

..... km

(1 mark)

5 (c) (iv) Grid squares 4357 and 4358 are outlined on **Figure 14**.

Describe the landform(s) found in these squares.

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(3 marks)

Question 5 continues on the next page

Turn over ►



5 (d) Explain the formation of a flood plain.

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(4 marks)

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5 (e) (i) Study **Figure 15** on the insert, which shows the locations of flood events in England between 2000 and 2007.

Are the following statements about the locations of these flood events **true** or **false**?

Tick the correct boxes.

Statement	True	False
Only the longest rivers flooded.		
Flooding in 2000 affected only areas in northern England.		
Flooding affected more places in 2007.		

(3 marks)



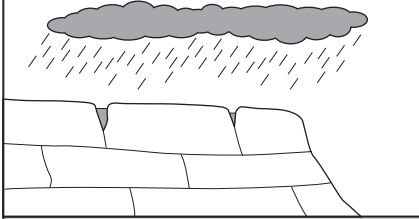
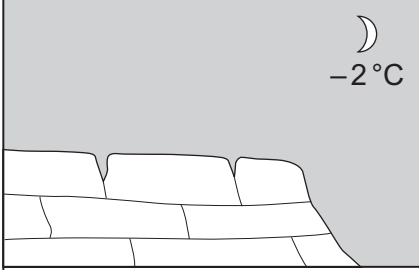
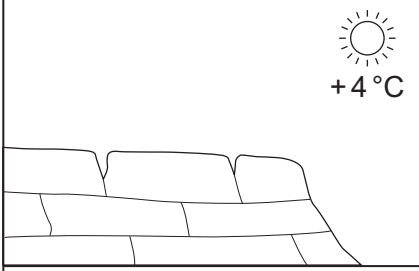
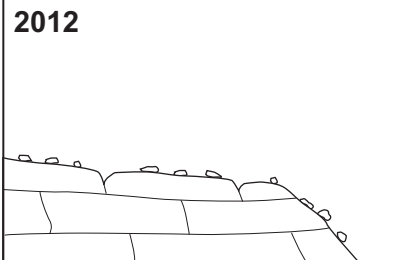
Total for this question: 25 marks

6 Ice on the Land

6 (a) Figure 16 shows stages in the process of freeze-thaw weathering.

Write a sentence in **each** box to describe the process of freeze-thaw weathering.

Figure 16

<p>1912</p> 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
 <p>-2°C</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
 <p>+4°C</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>2012</p> 	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

(4 marks)

6 (b) Study **Figure 17** on the insert, a 1:50 000 Ordnance Survey map extract of the area around Cadair Idris in Wales.

6 (b) (i) Llyn Cau in grid square 7112 is in a corrie.

What direction does the corrie face?

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(1 mark)



6 (b) (ii) Describe the relief (height and slope) of the land surrounding Llyn Cau (in 7112).

Height

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Slope

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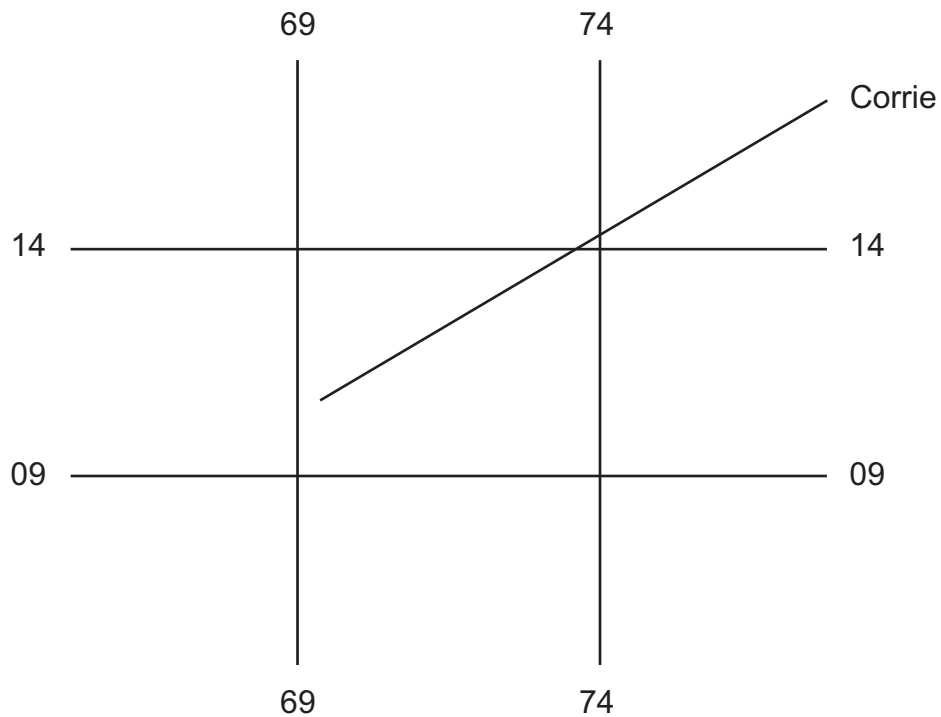
(2 marks)

6 (b) (iii) Figure 18 is a black and white copy of Figure 17.

A corrie is labelled on Figure 18. Mark with an arrow and label three other landforms resulting from glacial erosion.

Figure 18

We are unable to reproduce the OS map extract of Cadair Idris here due to third-party copyright constraints.



Extracted from OS Landranger Map 124, Porthmadog & Dolgellau

(3 marks)

Question 6 continues on the next page

Turn over ►



6 (b) (iv) Explain the formation of a corrie.

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(4 marks)

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6 (c) (i) Study **Figure 19** on the insert, a photograph of Wengen, an Alpine tourist area in Switzerland.

Describe the attractions at **X**, **Y** and **Z** on **Figure 19**.

X

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Y

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Z

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(3 marks)



Total for this question: 25 marks

7 The Coastal Zone

7 (a) The sea erodes the coast in a variety of ways.

Draw a line to link each process to the correct definition.

Process	Definition
Erosion is	sand and pebbles being thrown against the coast.
Hydraulic power is	the dissolving of some rocks by sea water.
Abrasion is	the wearing away of the land.
Attrition is	the force of the water against the coast.
Solution is	the colliding of rock fragments into each other.

(4 marks)

7 (b) Study **Figure 20** on the insert, a 1:50 000 Ordnance Survey map extract of the area around Spurn Head in East Yorkshire.

7 (b) (i) Name the feature at 415128.

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(1 mark)

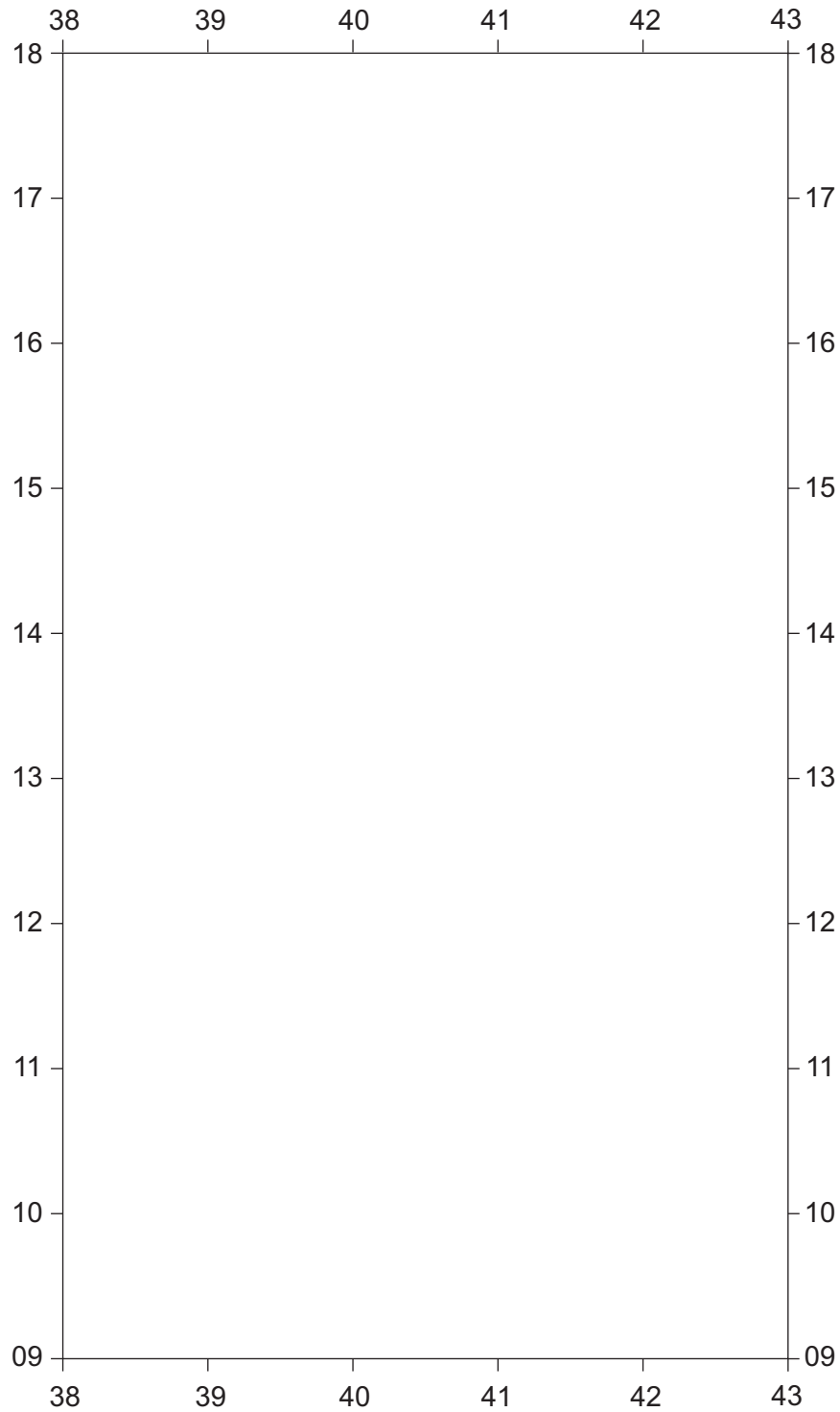
7 (b) (ii) Measure the distance **along** the spit from **X** (421150) to **Y** (397105).

..... km

(2 marks)



7 (b) (iii) Use **Figure 20** to draw a labelled sketch map in the grid below to show the features of the spit.



(3 marks)

Question 7 continues on the next page

Turn over ►



7 (b) (iv) Explain the formation of a spit.

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(4 marks)

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7 (c) Outline how a bar is different from a spit.

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(2 marks)



7 (d) Study **Figure 21** on the insert, photographs of dunes at Studland in Dorset.

Describe the vegetation of the coastal habitat shown at **X**, **Y** and **Z**.

X

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Y

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Z

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(3 marks)

7 (e) Use a case study to describe the strategies used to conserve a coastal habitat.

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(6 marks)

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25

END OF QUESTIONS



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