

Centre Number						Candidate Number				
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Other Names										
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For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
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TOTAL	



General Certificate of Secondary Education  
Higher Tier  
June 2012

# Geography (Specification A)

40301H

H

## 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 H 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)** Describe the location of ocean trenches.

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*(2 marks)*

**1 (a) (ii)** With the help of a diagram(s), explain the formation of young fold mountains and ocean trenches.

[Large empty box for drawing a diagram]

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1 (b) Outline how the Richter scale is used to measure earthquakes.

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(3 marks)

1 (c) What is the difference between the focus and the epicentre of an earthquake?

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(2 marks)

1 (d) Study **Figure 2** on the insert, which shows characteristics of the L'Aquila, Italy earthquake in April 2009, and the Haiti earthquake in January 2010.

Compare **and/or** contrast the characteristics of the two earthquakes.

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(4 marks)





**Total for this question: 25 marks**

**2 Rocks, Resources and Scenery**

**2 (a)** Describe the formation of igneous rocks.

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*(2 marks)*

**2 (b)** Study **Figure 3** on the insert, which shows the distribution of four different types of rock in the United Kingdom (UK).

Describe the distribution of granite shown in **Figure 3**.

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*(2 marks)*

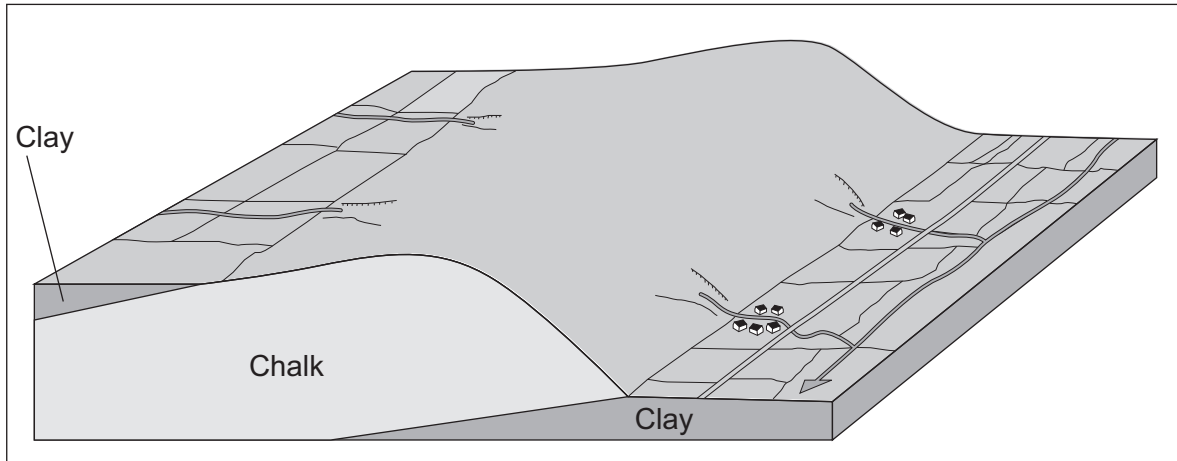


2 (c) (i) Study **Figure 4** on the insert, which shows a chalk and clay landscape.

**Figure 5** is a black and white copy of **Figure 4**.

On **Figure 5**, mark with an arrow and label **three** landforms.

**Figure 5**



(3 marks)

Question 2 continues on the next page

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**2 (c) (ii)** Explain the formation of an escarpment/cuesta and vale. You should refer to rock types and earth movements.

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**2 (d)** Draw a labelled sketch map to show the location of a quarry that you have studied.



(4 marks)

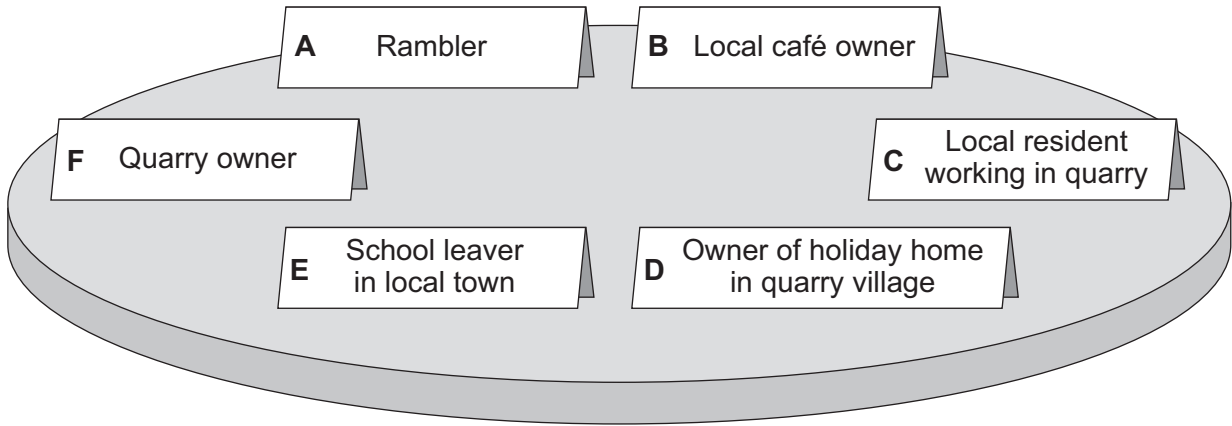
**Question 2 continues on the next page**

**Turn over ►**



2 (e) 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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<b>25</b>

**Turn over for the next question**

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**Total for this question: 25 marks**

**3 The Challenge of Weather and Climate**

**3 (a)** What is the difference between weather and climate?

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*(2 marks)*

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

**3 (b) (i)** Describe annual temperature change in Tenby.

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*(2 marks)*

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

Explain the variation in rainfall shown in **Figure 7b**. You should refer to reasons such as altitude, winds and distance from the sea.

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**3 (c)** Compare **and/or** contrast the weather during a *summer* anticyclone with that of a *winter* anticyclone.

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**Question 3 continues on the next page**

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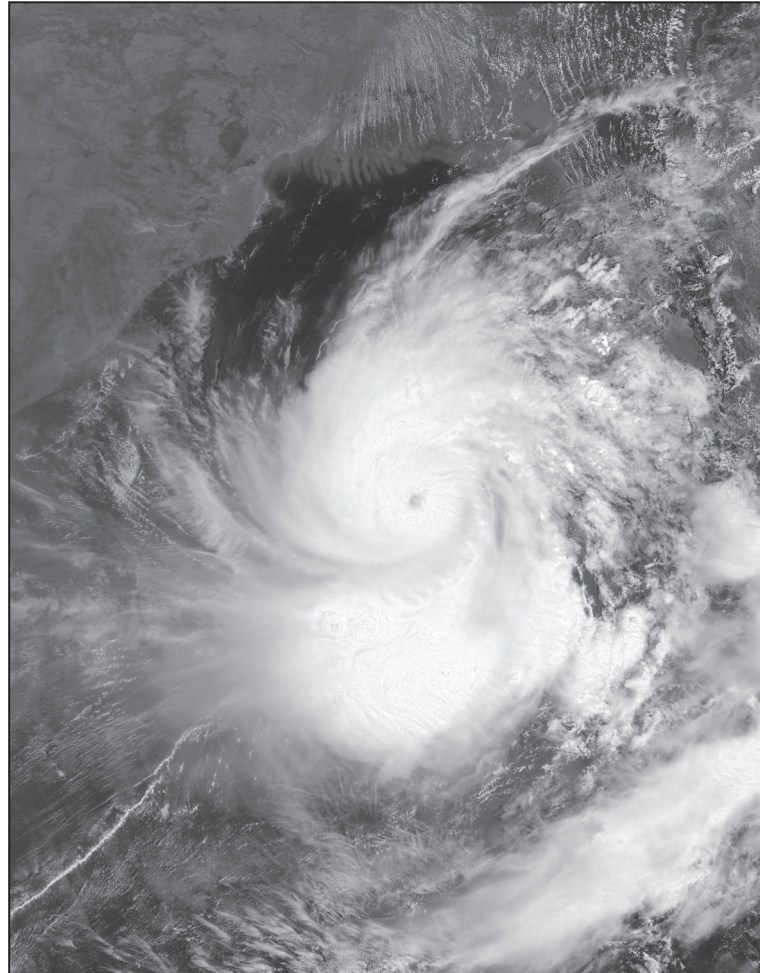


- 3 (d) (i)** Study **Figure 8** on the insert, which shows Cyclone Nargis, a tropical revolving storm over the Bay of Bengal.

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

On **Figure 9**, mark with an arrow and label **three** features 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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**Turn over for the next question**

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**Total for this question: 25 marks**

**4 Living World**

**4 (a) (i)** What is the difference between a food chain and a food web?

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*(2 marks)*

**4 (a) (ii)** Study **Figure 10** on the insert, which shows a food web.

Describe how the food web shows that different parts of the ecosystem are linked to each other.

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*(3 marks)*

**4 (a) (iii)** Outline the likely effects on the ecosystem of a reduction in the number of insects.

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*(2 marks)*





4 (b) Explain how vegetation in a temperate deciduous woodland adapts to the climate and soils and is in harmony with them.

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Question 4 continues on the next page

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4 (c) Study **Figure 11**, an extract from a geographical publication about an ecolodge in the tropical rainforest in Costa Rica, a country in Central America.

**Figure 11**

On the Caribbean coast, the Selva Bananito lodge provides holiday accommodation and associated activities. The lodge was built from wood discarded by loggers and the number of guests is limited. There is no electricity; solar energy is used to heat the water.

Biodegradable soaps are used for washing. Glass and plastic are recycled. Water used for drinking and cooking is purified using bacteria, enzymes and water lilies. The owners have set up a charitable trust to educate people about the rainforest and to provide activities such as jungle hikes and birdwatching.

Explain why this lodge is attractive to ecotourists.

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**4 (d)** 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**

**Turn over ►**



**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)** Describe how a river transports its load.

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*(3 marks)*

**5 (b)** Study **Figure 12** on the insert, a 1:50 000 Ordnance Survey map extract of the River Eden in Cumbria.

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

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*(1 mark)*

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

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*(1 mark)*

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

..... km

*(1 mark)*



**5 (b) (iv)** Grid squares 4357 and 4358 are outlined on **Figure 12**.

Describe the landform(s) found in these squares.

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(3 marks)

**5 (c)** Explain the formation of a flood plain.

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(4 marks)

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**Question 5 continues on the next page**

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**5 (d)** Study **Figure 13** on the insert, which shows the locations of flood events in England between 2000 and 2007.

**5 (d) (i)** Describe the locations of the flood events shown in **Figure 13**.

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**5 (d) (ii)** Use a case study to describe responses to river flooding.

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(8 marks)

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<b>25</b>

**Turn over for the next question**

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**Total for this question: 25 marks**

**6 Ice on the Land**

**6 (a)** Describe the process of freeze-thaw weathering.

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*(3 marks)*

**6 (b)** Study **Figure 14** 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)*



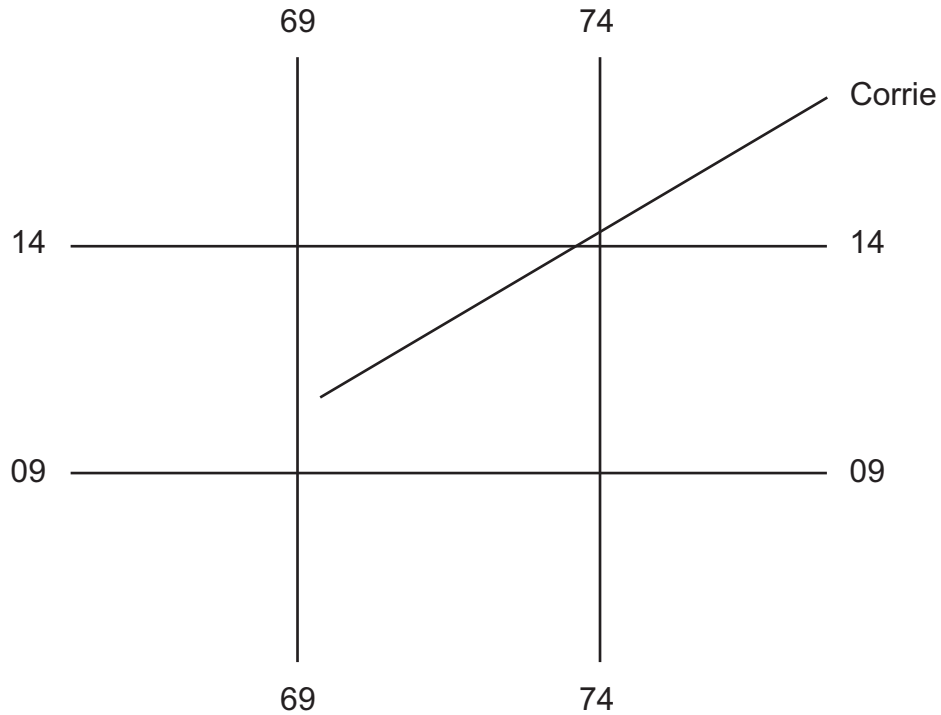


6 (b) (iii) Figure 15 is a black and white copy of Figure 14.

A corrie is labelled on Figure 15. Mark with an arrow and label three other landforms resulting from glacial erosion.

Figure 15

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)

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

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(4 marks)

Question 6 continues on the next page

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**6 (c)** Study **Figure 16** on the insert, a photograph of Wengen, an Alpine tourist area in Switzerland.

Describe the attractions for tourists in this Alpine area.

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*(4 marks)*

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**Total for this question: 25 marks**

**7 The Coastal Zone**

**7 (a)** Describe how the sea erodes the coast.

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*(3 marks)*

**7 (b)** Study **Figure 17** 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)*

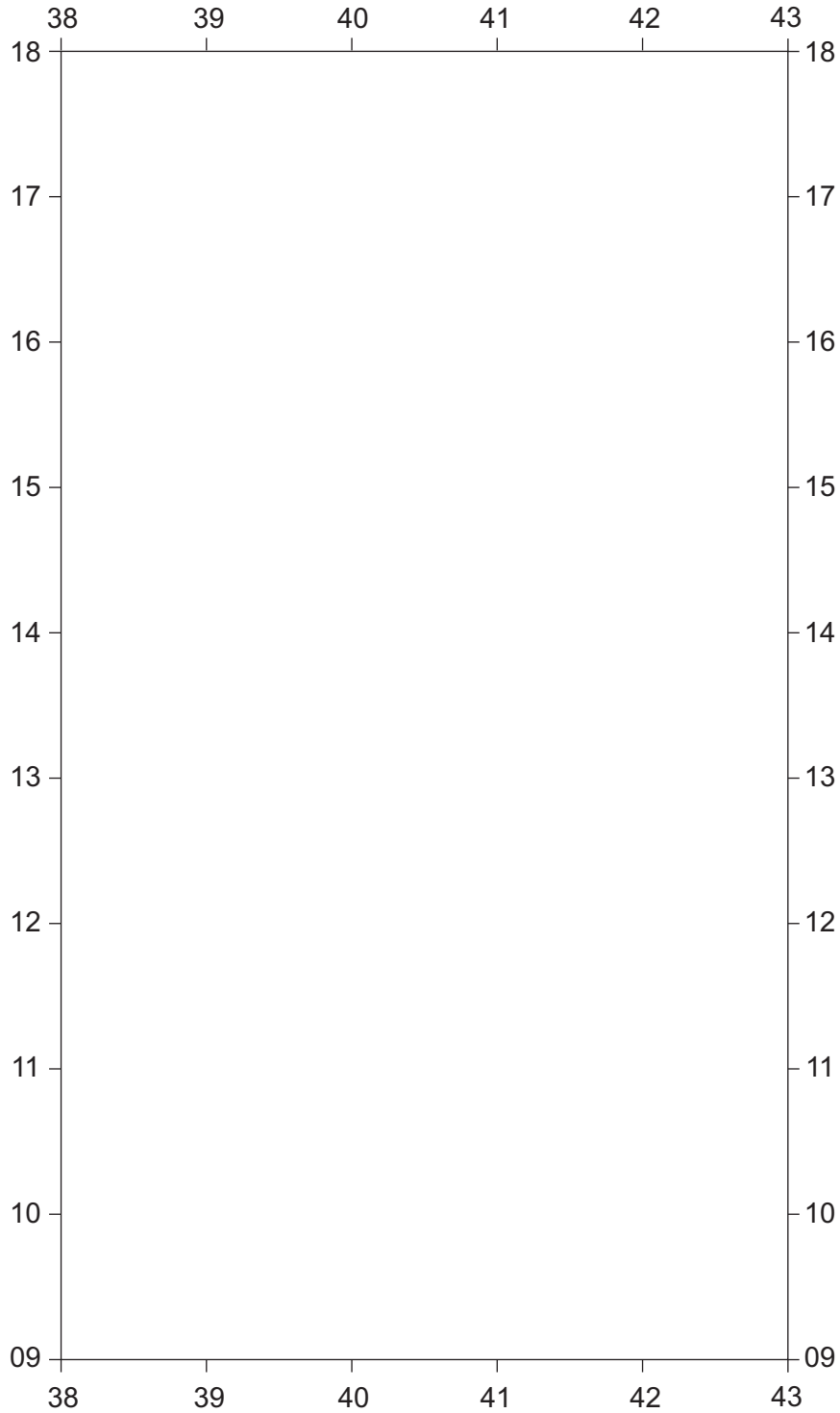
**7 (b) (ii)** Measure the distance **along** the spit from **X** (421150) to **Y** (397105).

..... km

*(2 marks)*



7 (b) (iii) Use **Figure 17** 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

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

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7 (c) Study **Figure 18** on the insert, photographs of dunes at Studland in Dorset.

Describe how the vegetation changes from near the sea to further inland.

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7 (d) Use a case study to explain why a coastal habitat has distinct characteristics.

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END OF QUESTIONS

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ANSWER IN THE SPACES PROVIDED**

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Figure 9: © NASA

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