

Centre Number						Candidate Number				
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Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
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6	
7	
8	
TOTAL	



General Certificate of Secondary Education  
Higher Tier  
January 2011

# Geography (Specification B)

40352H

H

Paper 2 Hostile World

Monday 24 January 2011 9.00 am to 10.00 am

**For this paper you must have:**

- the insert (enclosed).
- You may use a calculator.

**Time allowed**

- 1 hour

**Instructions**

- Use black ink or black ball-point pen. You may use pencil for maps, diagrams and graphs.
- Fill in the boxes at the top of this page.
- Answer **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 50.
- 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.



J A N 1 1 4 0 3 5 2 H 0 1

Answer **either** Section A or Section B.

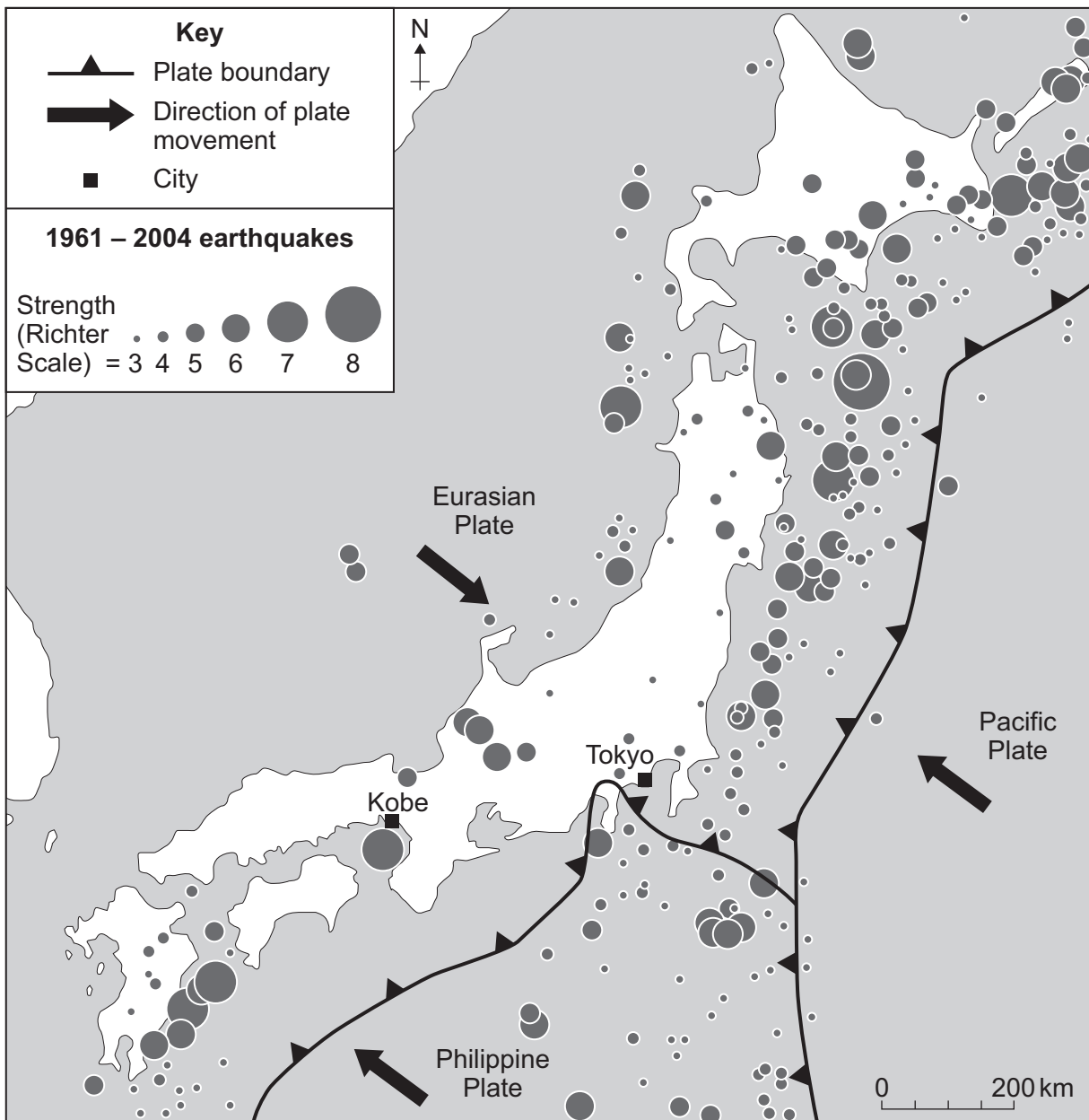
**Section A – Living with Natural Hazards**

Use case studies to support your answers where appropriate.

**Total for this question: 14 marks**

- 1 Study **Figure 1**. **Figure 1** shows the distribution of earthquakes in and around Japan (1961–2004).

**Figure 1**



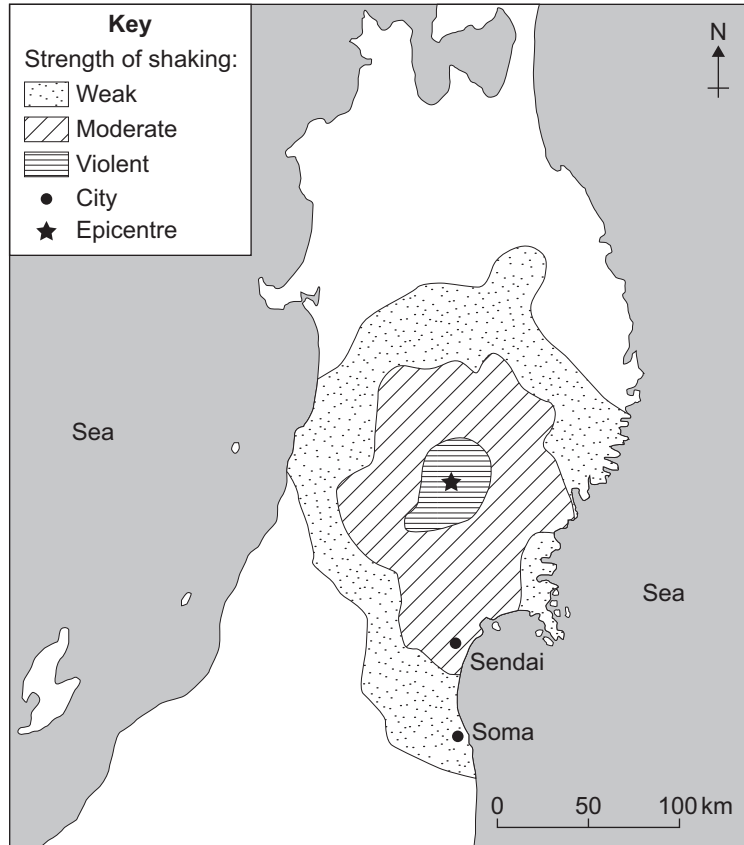


1 (c) Study Figure 2. Figure 2 shows information about an earthquake in Japan (2008).

Figure 2

**Earthquake shakes northern Japan  
June 15, 2008**

The earthquake was centred in a mountainous region in the countryside on Japan's main island, Honshu. As a result of the earthquake 12 people died and 358 were injured, many by broken glass. Large numbers of people are in temporary shelters because their homes have been destroyed. Many roads were badly damaged and one road bridge collapsed. A bus carrying 20 passengers was forced off the road and skidded down a hillside. All high speed trains in the area were stopped, delaying 117 000 passengers. Over 2000 passengers were trapped inside three trains for nine and a half hours. The earthquake caused landslides, crushing buildings and blocking roads. In one hot spring resort a landslide buried seven people. It was reported that aftershocks caused cracks in a dam and people had to be evacuated.



1 (c) (i) Describe the location of the earthquake epicentre.

.....

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.....

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(2 marks)



1 (c) (ii) From **Figure 2**, give **two** examples of the primary effects of the earthquake and **two** examples of the secondary effects of the earthquake.

Complete the table below.

Primary effects	Secondary effects
1 .....	1 .....
.....	.....
.....	.....
2 .....	2 .....
.....	.....
.....	.....

(4 marks)

14

Turn over for the next question

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**Total for this question: 15 marks**

**2** Study **Figure 3**, on the insert. **Figure 3** is a map of the world showing the distribution and strength of tropical storms.

**2 (a)** Complete the paragraph below.

Most tropical storms are found between latitudes 10 degrees and 30 degrees north and south of the ..... . Tropical storms are more common in the ..... hemisphere. The greatest number of category five tropical storms happen in the ..... Ocean. (3 marks)

**2 (b)** Give **one** condition that is needed for a tropical storm to form.

.....  
..... (1 mark)





2 (d) Study **Figure 5**. **Figure 5** shows the number of powerful tropical storms in the Atlantic Ocean each year.

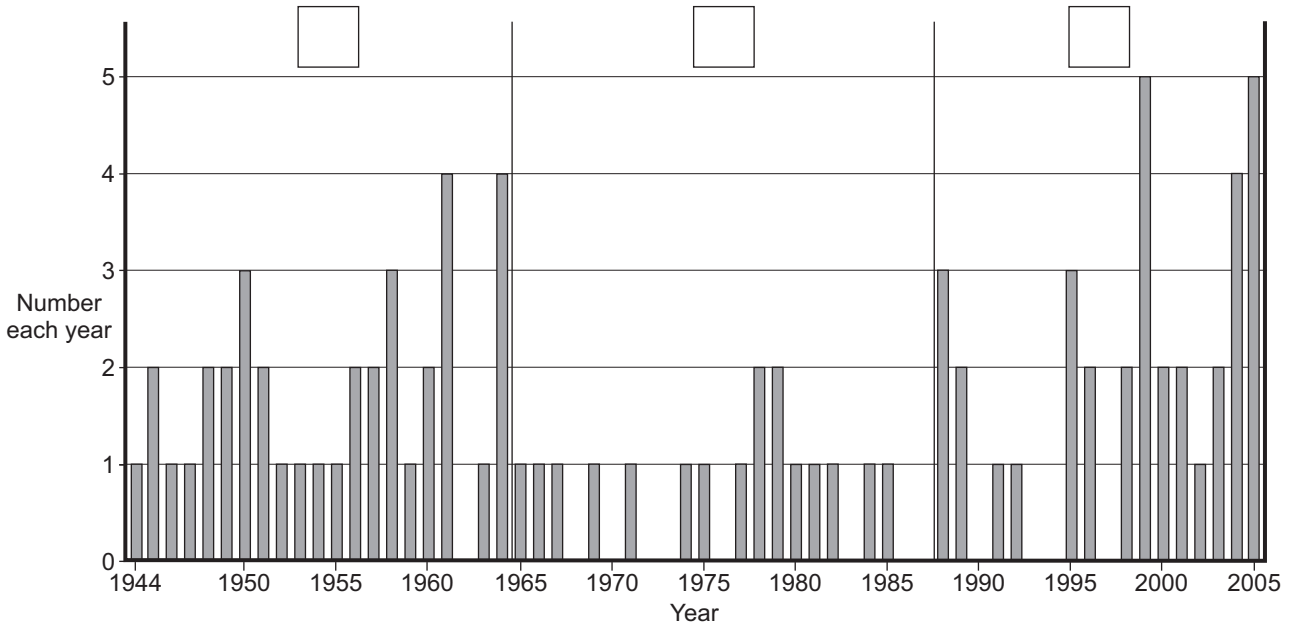
Add the letters **A** and **B** to **two** of the boxes on **Figure 5** to show:

**A** – a period of low tropical storm activity

**B** – a period of high tropical storm activity.

(2 marks)

**Figure 5**



2 (e) Suggest why the number of tropical storms may change in the future.

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*Extra space* .....

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<b>15</b>

**Turn over for the next question**

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**Total for this question: 13 marks**

**3** Study **Figure 6**, on the insert. **Figure 6** shows information about wildfires in the state of Victoria, Australia.

**3 (a) (i)** What was the maximum temperature recorded in Victoria on 7 February 2009?

..... °C (1 mark)

**3 (a) (ii)** Which direction was the wind blowing from on 9 February 2009?

..... (1 mark)

**3 (a) (iii)** Name the town in Victoria that was most at risk from wildfires on 9 February 2009.

..... (1 mark)

**3 (b)** Suggest why the cost of fighting wildfires in Victoria might increase in the future.

Use **Figure 6** to help you.

.....  
.....  
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..... (2 marks)

**3 (c)** 'A wildfire is a completely natural hazard.'

Do you agree?

Tick the box of your choice.

Yes  No

Give reasons for your choice.

Use evidence from **Figure 6** and your own knowledge.

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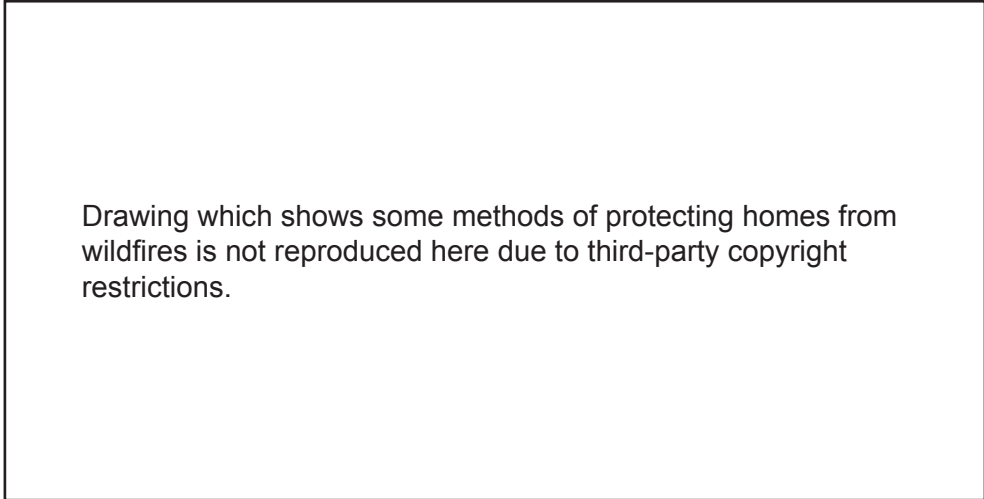




**Total for this question: 8 marks**

**4** Study **Figure 7**. **Figure 7** shows some methods of protecting homes at risk from wildfires.

**Figure 7**



**4 (a)** The methods shown in **Figure 7** help people to protect their homes from wildfires.

Suggest how **two** of these methods protect homes.

1 .....

2 .....

*(2 marks)*





Answer **either** Section A **or** Section B.

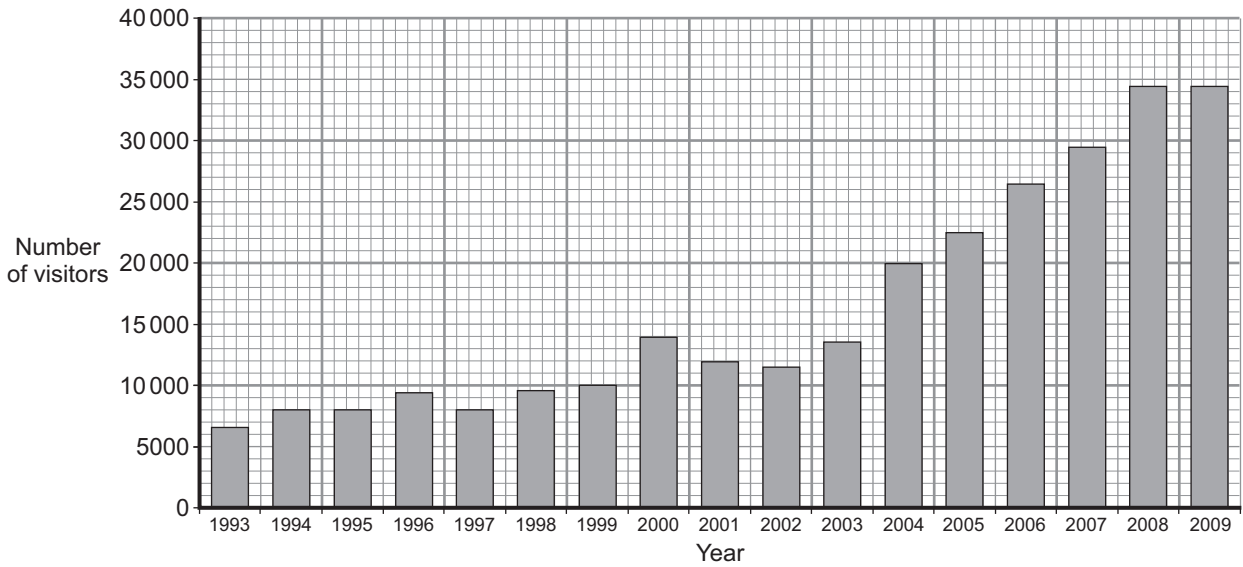
**Section B – The Challenge of Extreme Environments**

Use case studies to support your answers where appropriate.

**Total for this question: 15 marks**

**5 (a)** Study **Figure 8**. **Figure 8** shows the number of visitors to Antarctica (1993–2009).

**Figure 8**



Describe the changes shown in **Figure 8**.

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*(3 marks)*



**5 (b)** Study **Figure 9**, on the insert. **Figure 9** shows the top 10 destinations visited in Antarctica in 2008 and average monthly temperatures at three places in Antarctica.

**5 (b) (i)** What was the lowest average monthly temperature at Vostok?

..... °C

(1 mark)

**5 (b) (ii)** For how many months of the year is the average monthly temperature below 0°C at Rothera Point?

.....

(1 mark)

**5 (b) (iii)** Which of the top 10 destinations visited in Antarctica is the furthest south?

.....

(1 mark)

**5 (b) (iv)** Which destination is the most popular for visitors to Antarctica?

.....

(1 mark)

**5 (b) (v)** Suggest why all of the top 10 destinations visited in Antarctica are located on and around the Antarctic Peninsula and why none are located in the centre of the Antarctic continent.

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(4 marks)

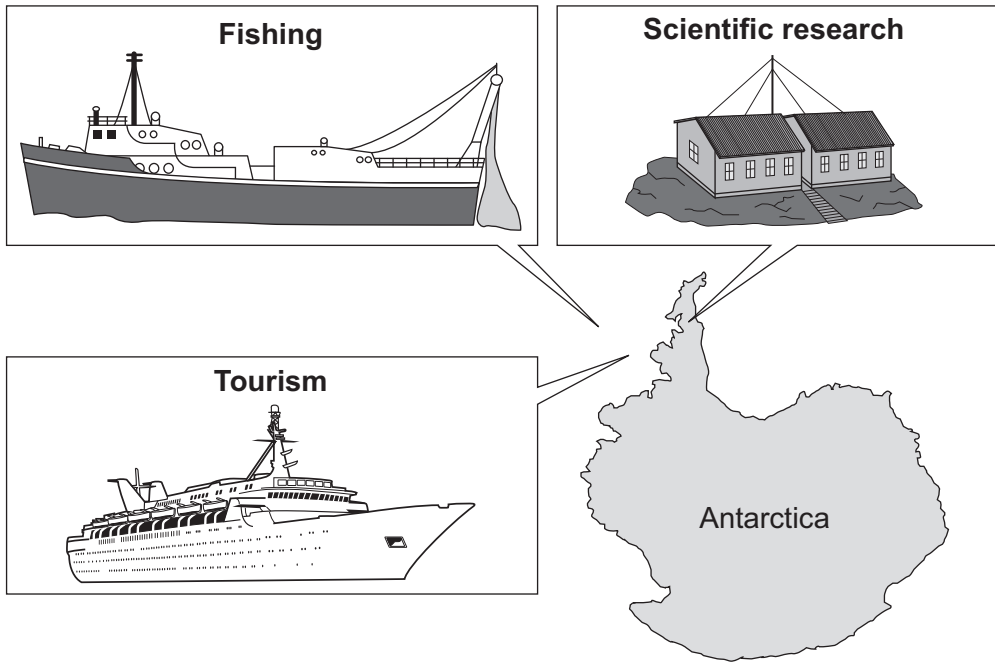
**Question 5 continues on the next page**

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5 (c) Study Figure 10. Figure 10 shows some human activities in Antarctica.

Figure 10



Choose **one** of the activities shown in **Figure 10**. Describe the effects of this human activity on the Antarctic environment.

Chosen activity .....

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(4 marks)



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<b>15</b>

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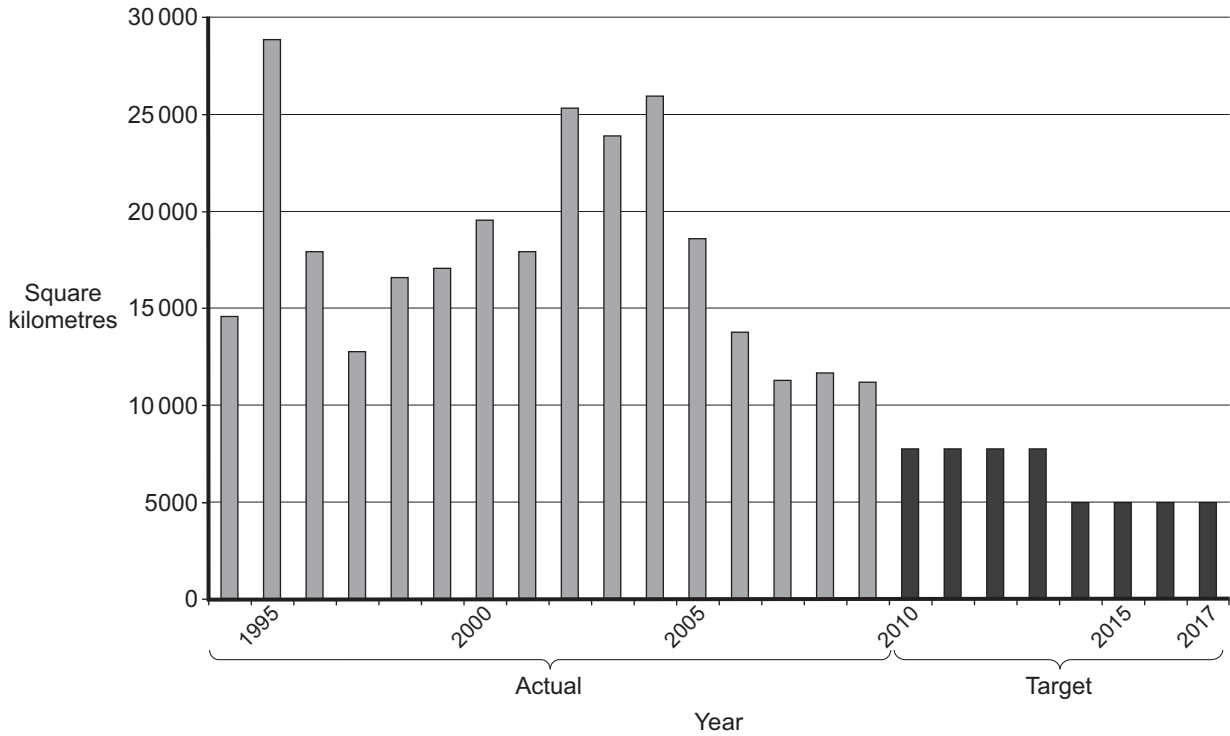
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**Total for this question: 14 marks**

**6** Study **Figure 11**. **Figure 11** shows the amounts of deforestation in the Amazon region of Brazil, between 1994–2009 (actual) and 2010–2017 (targets).

**Figure 11**



**6 (a)** Use **Figure 11** to complete the paragraph below.

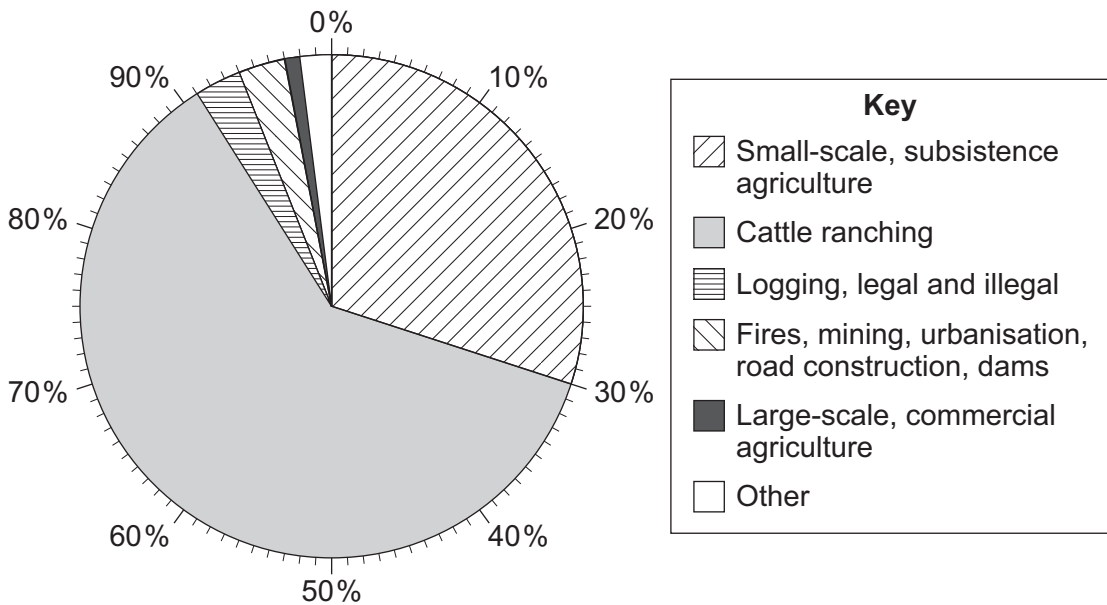
The year of greatest deforestation was ..... After 2004  
 the amount of deforestation per year started to decrease. From 2014 the target  
 figure for the amount of land that is allowed to be deforested is  
 ..... square kilometres per year.

*(2 marks)*



6 (b) Study Figure 12. Figure 12 shows the causes of deforestation in the Amazon region of Brazil.

Figure 12



6 (b) (i) What percentage of deforestation in the Amazon region of Brazil is caused by cattle ranching?

..... %

(1 mark)

6 (b) (ii) Explain how deforestation can damage the natural environment.

Use Figure 12 and your own knowledge.

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Question 6 continues on the next page

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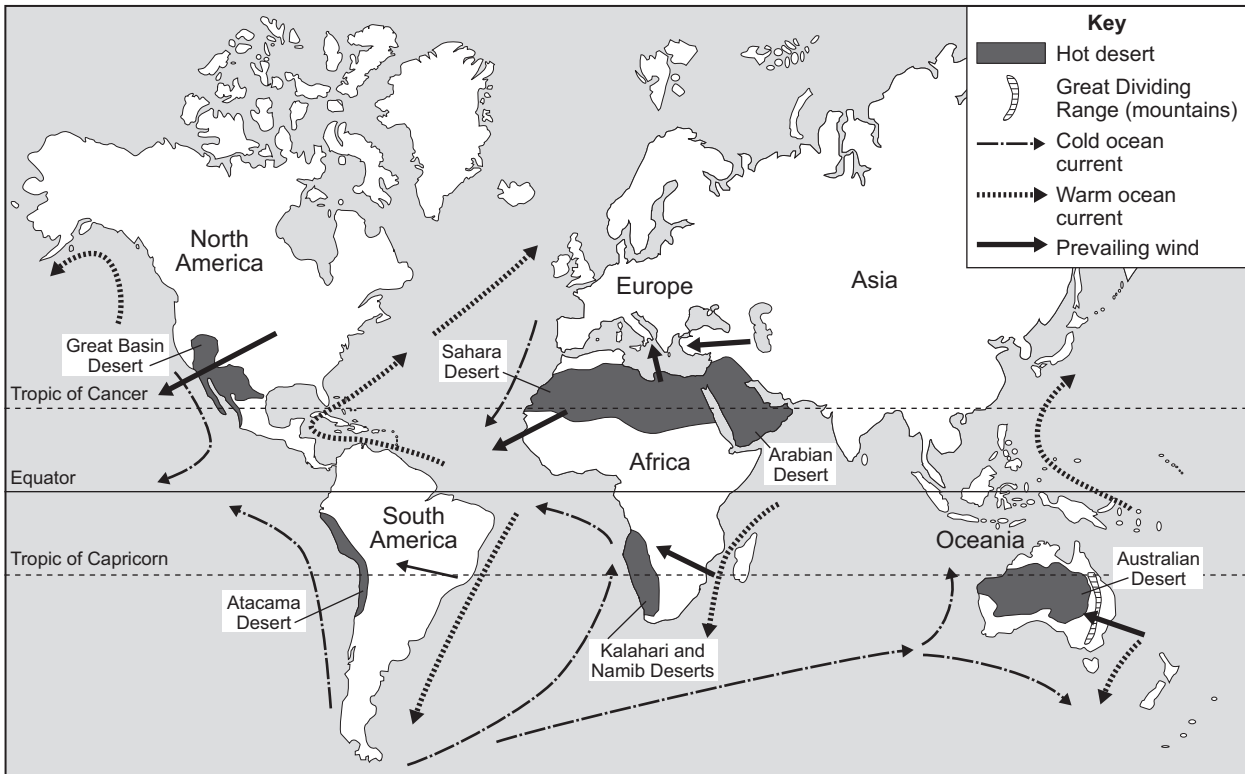
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Total for this question: 12 marks

7 (a) Study Figure 13. Figure 13 shows some of the world's hot desert areas and factors affecting rainfall in hot desert areas.

Figure 13



7 (a) (i) Give **one** fact about the distribution of hot desert areas.

.....

.....

(1 mark)



**7 (a) (ii)** Name the **three** hot desert areas, shown in **Figure 13**, that were formed in the ways described below.

Write the name of the hot desert area in each box.

Name of hot desert area	Description
	<i>The winds blow across the ocean. When the winds reach the land, the winds rise over mountains. The winds cool and there is rainfall. When the winds travel inland, the winds become drier and a rainshadow area develops.</i>
	<i>Any warm wind that does blow from the ocean crosses a cold ocean current. Sea fog is made when the air cools and condenses. This returns moisture to the sea and the moisture does not reach the land. There is a coastal hot desert along the western edge of the continent.</i>
	<i>There is high atmospheric pressure over the land for most of the year. This causes the prevailing winds to be dry. The winds blow from the land out towards low pressure areas over the ocean. The world's largest hot desert has formed.</i>

(3 marks)

**Question 7 continues on the next page**

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Extra space .....

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12

**Turn over for the next question**

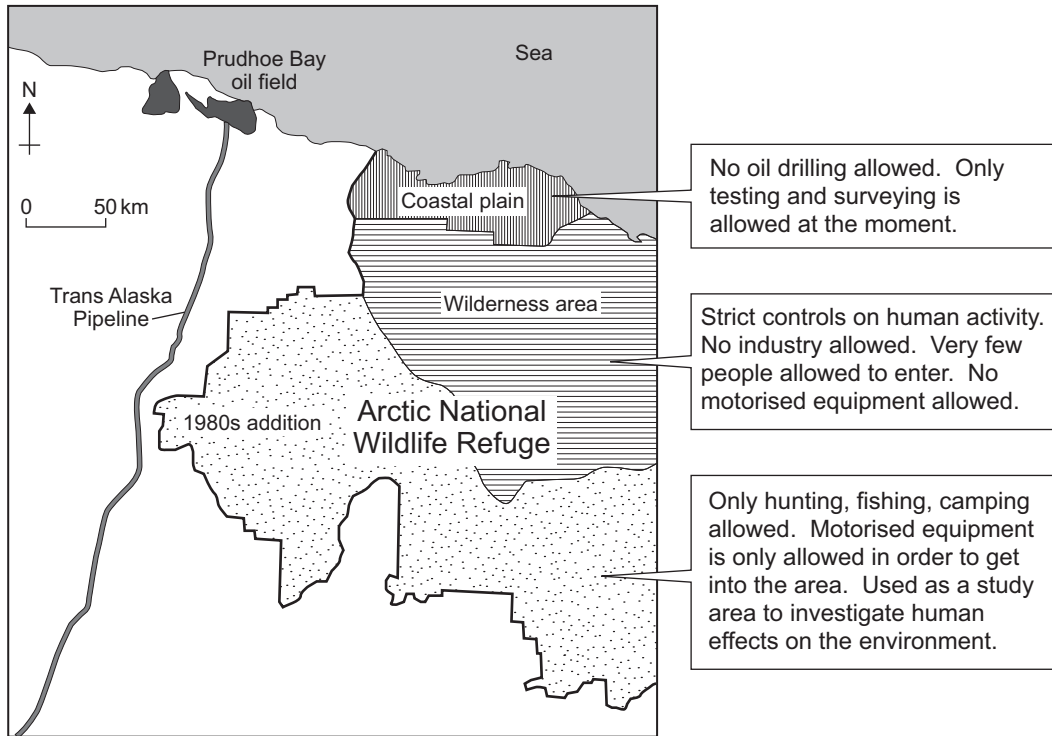
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Total for this question: 9 marks

8 Study **Figure 15**. **Figure 15** shows information about the methods used by the Arctic National Wildlife Refuge (ANWR) in Alaska.

**Figure 15**



8 (a) Suggest how the methods shown in **Figure 15** help to protect the environment of Alaska.

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(3 marks)





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ANSWER IN THE SPACES PROVIDED**

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- Question 1 Figure 1: US Geological Survey, Department of the Interior/USGS  
 Question 1 Figure 2: Map: US Geological Survey, Department of the Interior/USGS  
 Question 2 Figure 3: NASA  
 Question 2 Figure 5: wunderground.com  
 Question 3 Figure 6: Map of Victoria wildfires: [www.aus-emaps.com](http://www.aus-emaps.com)  
 Temperature graph: Australian Bureau of Meteorology, Victoria Climate Services Centre.  
 Question 4 Figure 7: Sherriff's Office, Claiborne Parish, Louisiana, USA.  
 Question 5 Figure 8: International Association of Antarctica Tour Operators (IAATO).  
 Question 5 Figure 9: Coolantarctica.com  
 Question 6 Figure 11: Rhett@mongabay.com  
 Question 6 Figure 12: Rhett@mongabay.com  
 Question 7 Figure 14: Rhett@mongabay.com  
 Question 8 Figure 15: Alaska Department of Natural Resources.

