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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TOTAL	

AQA

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.

A

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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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 (c) (ii) Use a case study to discuss the immediate and long-term responses to a volcanic eruption.

[8 marks]

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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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Question 2 continues on the next page

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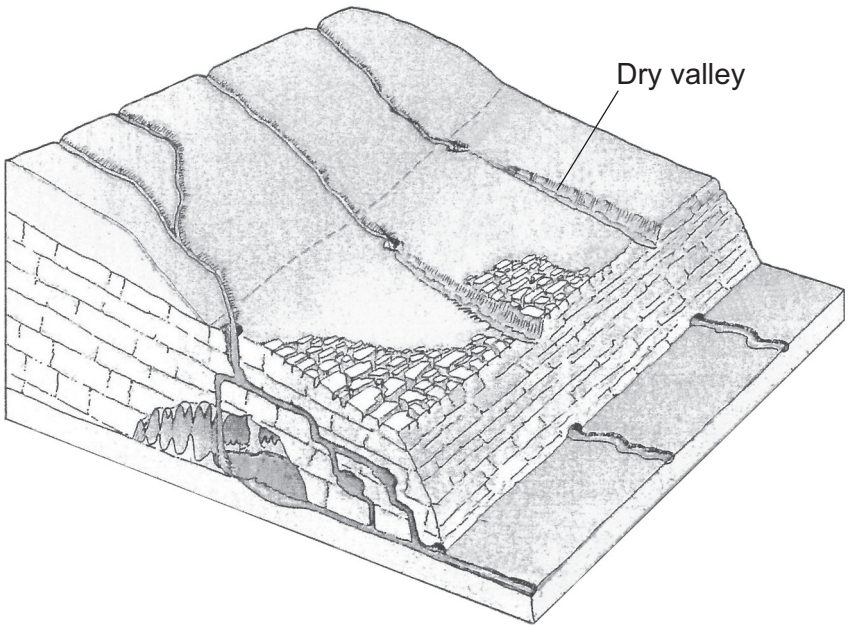
2 (c) Study **Figure 5**, a block diagram showing limestone features.

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]

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

[4 marks]

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Question 2 continues on the next page

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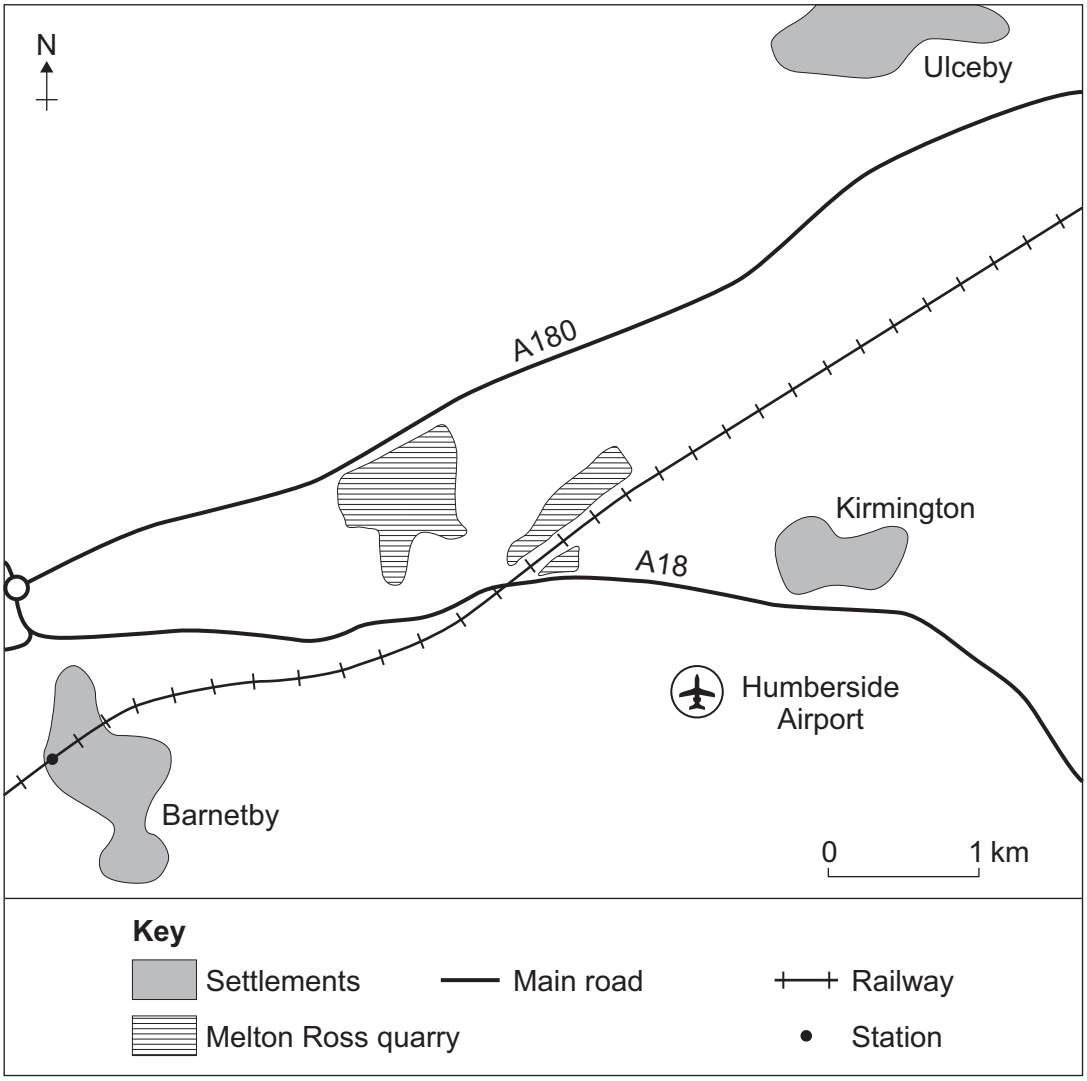
2 (d) Study **Figure 6**, a sketch map showing the location of Melton Ross quarry.

Figure 6



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

[3 marks]

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2 (d) (ii) 'The demand for resources has led to quarrying.' With the help of a case study, discuss issues that result from quarrying to meet the demand for resources.

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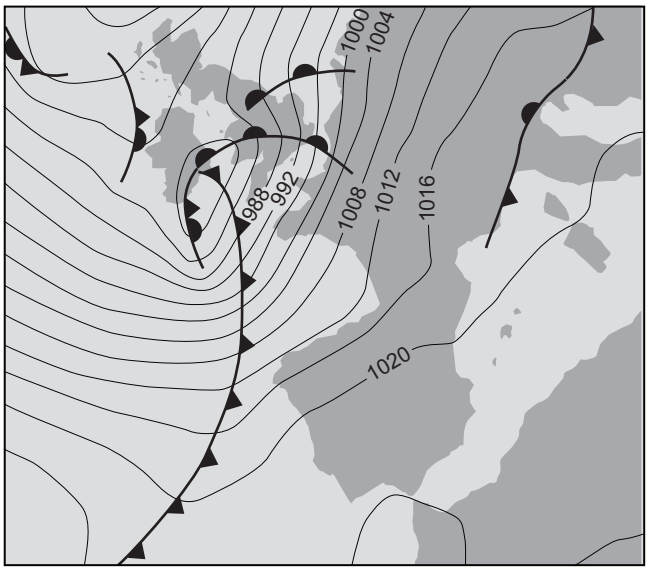
3 (b) Study **Figure 8**, a synoptic chart showing the St Jude storm over the British Isles on 28 October 2013.

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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Question 3 continues on the next page

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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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3 (d) With the help of case studies, explain why the effects of tropical revolving storms vary between richer and poorer parts of the world.

[8 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.

Producer (Hawthorn bush) → Herbivore (Caterpillar) → Carnivore (Sparrow)

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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Question 4 continues on the next page

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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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4 (e) Use a case study to discuss different ways in which temperate deciduous woodland is managed.

[8 marks]

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End of Section A

Turn over for Section B

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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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Question 5 continues on the next page

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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

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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]

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Figure 19

Question 6 continues on the next page

Turn over ▶

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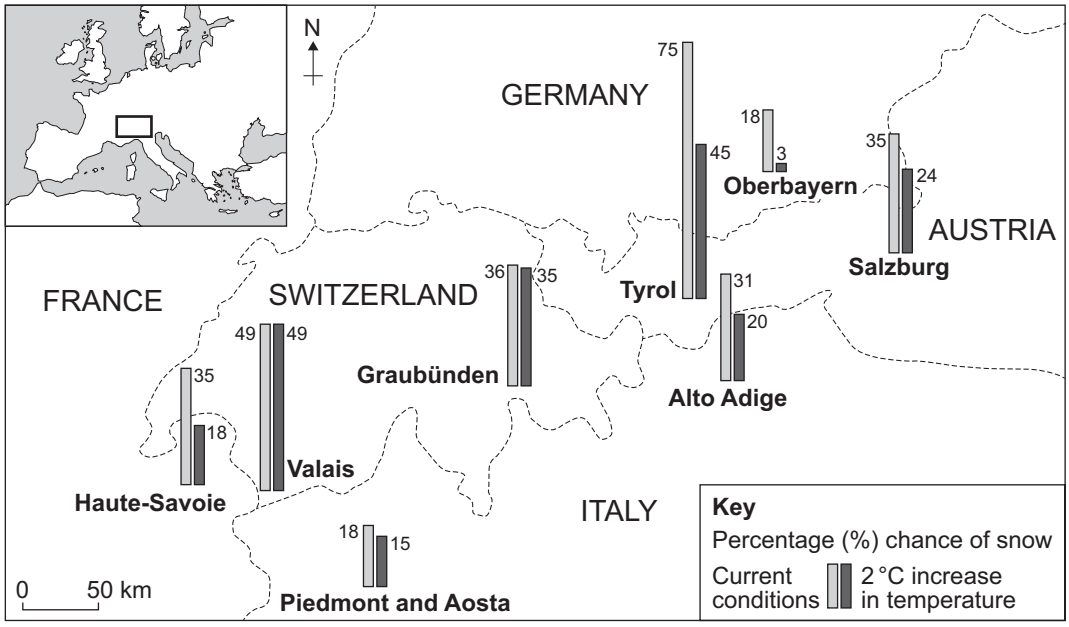
6 (d) Study **Figure 20**, a located bars map showing the chance of snow in selected regions of the Alps under current conditions and the chance of snow if there is a 2 °C increase in temperature.

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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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 (c) Study **Figure 22**, a table showing information about three coastal management strategies.

Figure 22

Coastal management strategy	Cost (£)	Construction	Years before significant maintenance
Sea walls	6 000–10 000 per metre	Continuous	30–50
Groynes	5 000–10 000 each	Every 200 metres	10
Rock armour	1 000–4 000 per metre	Continuous but short distance	10

State which you think is the best option: .....

With the help of **Figure 22**, justify your choice.

[6 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]

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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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7 (e) Use a case study of a coastal habitat to describe how it has been conserved and discuss how this has led to conflict with other land uses.

[8 marks]

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