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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8	
TOTAL	

AQA

General Certificate of Education
Advanced Subsidiary Examination
June 2014

Geography GEOG1

Unit 1 Physical and Human Geography

Monday 12 May 2014 1.30 pm to 3.30 pm

For this paper you must have:
- a pencil
- a rubber
- a ruler.

You may use a calculator.

Time allowed
- 2 hours

A

Instructions
- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Answer Question 1 and **one other question** from **Section A** and Question 5 and **one other question** from **Section B**.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The maximum mark for this paper is 120.
- Each question is worth 30 marks.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.
- You will be marked on your ability to:
  – use good English
  – organise information clearly
  – use specialist vocabulary where appropriate.

Advice
- Where appropriate, sketch maps and diagrams should be used to illustrate answers and reference made to examples and case studies.
- You are advised to spend about 60 minutes on Section A and about 60 minutes on Section B.

Section A

Answer **Question 1** and **one other question** from this section.

1 Rivers, Floods and Management

1 (a) **Figure 1a** is a map showing the characteristics of the drainage basins of Clapham Beck and Austwick Beck and **Figures 1b** and **1c** are storm hydrographs of Clapham Beck and Austwick Beck, following the same storm.

Figure 1a

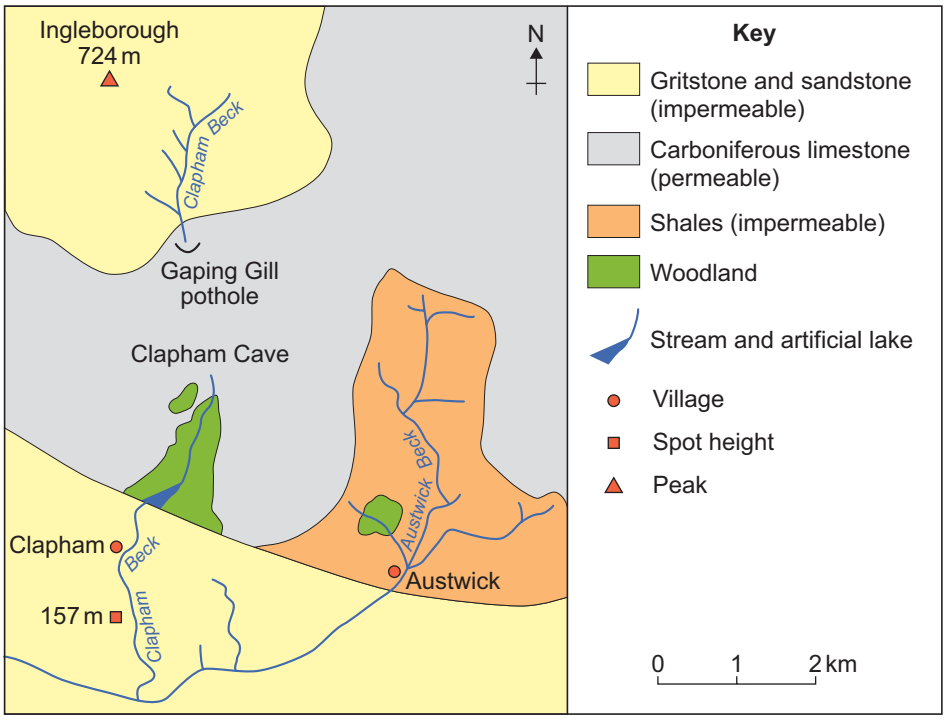


Figure 1b

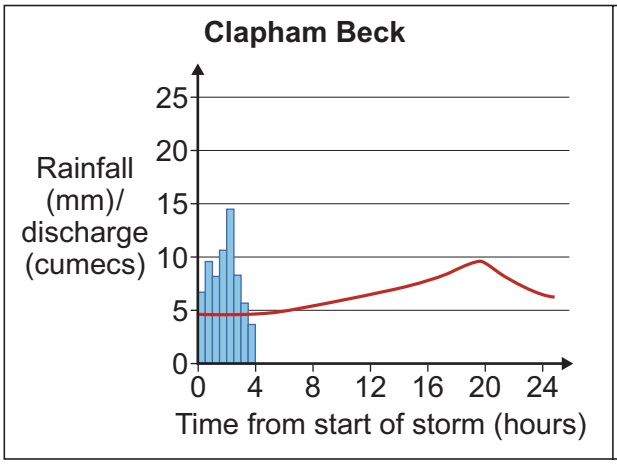
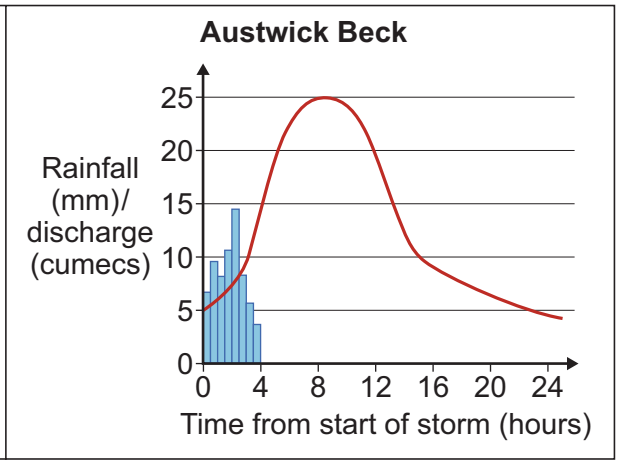


Figure 1c



1 (a) (i) Contrast the hydrographs shown in **Figures 1b** and **1c**.

[4 marks]

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1 (a) (ii) Use **Figure 1a** to explain the contrasts between the hydrographs shown in **Figures 1b** and **1c**.

[5 marks]

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1 (b) **Figure 2** is an extract from a geographical magazine about flooding in Brisbane, Australia in January 2011.

Figure 2

Brisbane has a long history of flooding, dating back to the 1840s when records began. Until 2011, the most devastating flood had occurred in January 1974.

The Wivenhoe dam was built in the early 1980s in response to the devastation caused by the 1974 flood. In 2011, the rainfall was more prolonged and of greater intensity. It is estimated that in the 7 days leading up to the 2011 flood, the Brisbane catchment received 40% more rainfall than during the equivalent period in 1974.

All this rain meant that management of water releases from Wivenhoe dam became a critical issue. Some flood engineers believe that earlier water releases from the dam were too small, so later releases were much greater than should have been required. A massive release on 11 January was in large part responsible for flooding in Brisbane.

Using **Figure 2** only, comment on the relative importance of physical and human causes of flooding.

[6 marks]

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Question 1 continues on the next page

1 (c) Discuss advantages and disadvantages of soft engineering as a river flood management strategy.

[15 marks]

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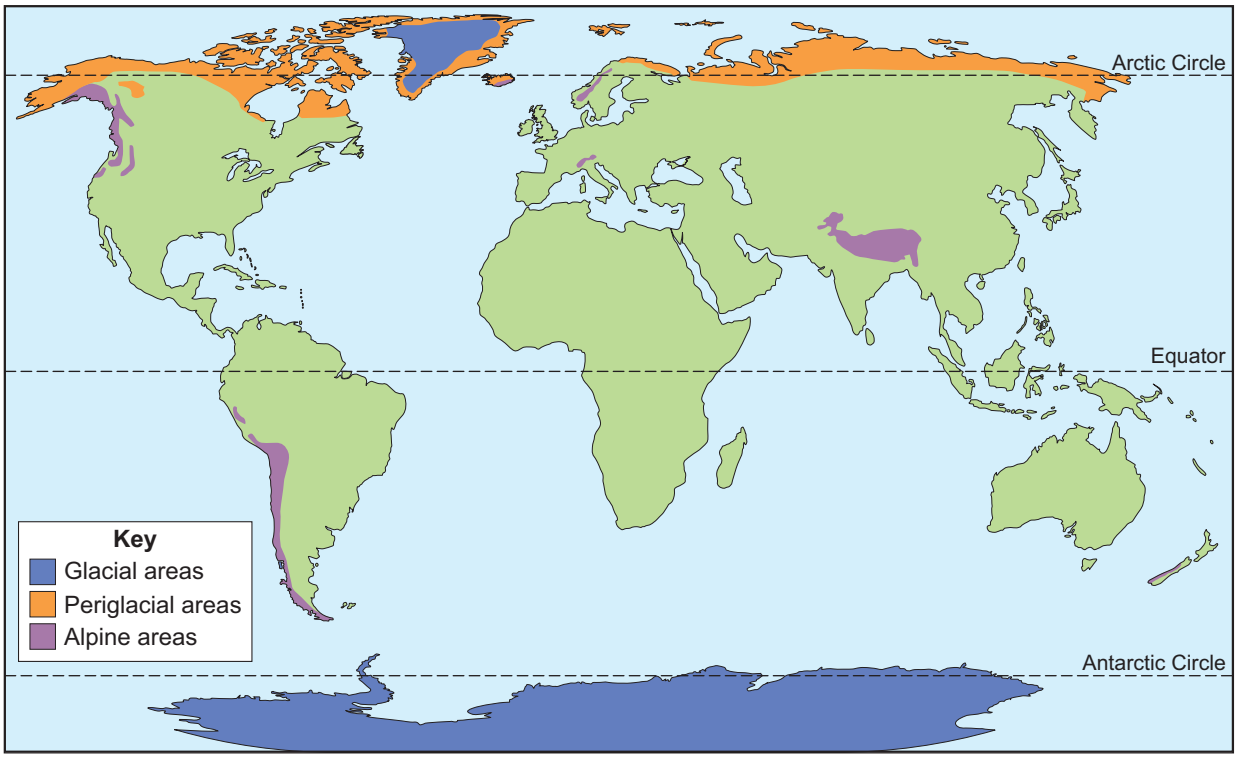
Turn over for the next question

2 Cold Environments

2 (a) **Figure 3** shows the distribution of cold environments.

Figure 3



Describe the distribution of cold environments shown in **Figure 3**.

[4 marks]

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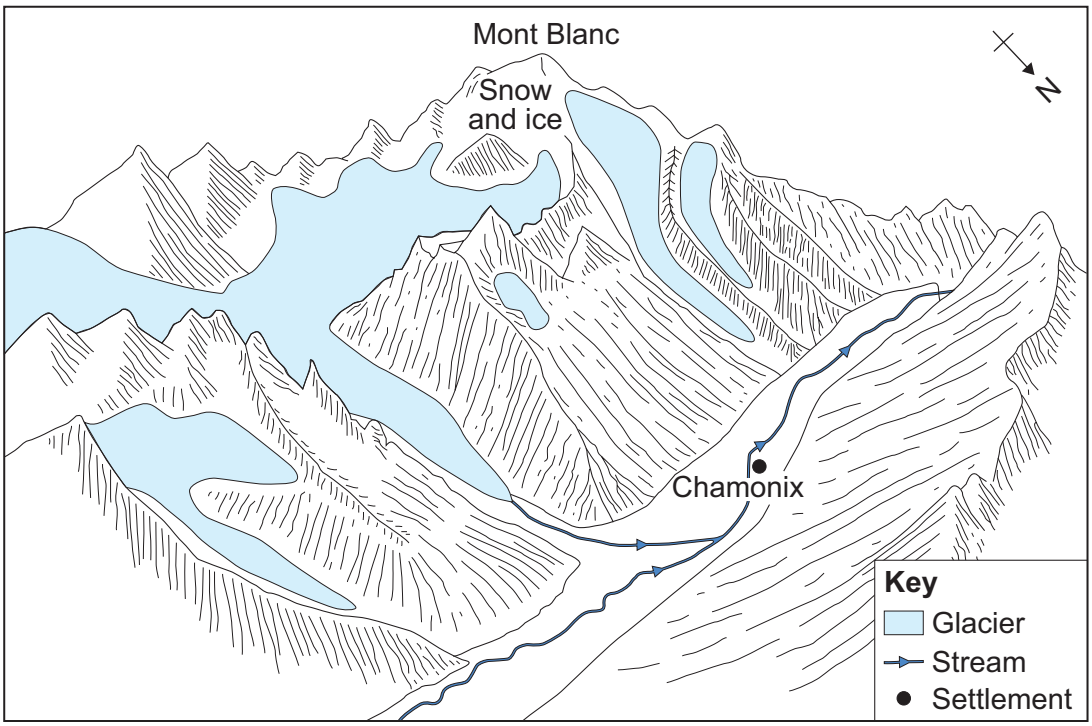
2 (b) (i) **Figure 4** is a sketch of the area around Chamonix in the French Alps.

Figure 4



Describe the landforms shown in **Figure 4**.

[4 marks]

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Question 2 continues on the next page

2 (b) (ii) Explain the formation of a glacial trough.

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2 (c) 'More recent developments in tundra areas and the Southern Ocean (such as oil in Alaska, fishing, tourism) are more sustainable than earlier uses (such as traditional economies, whaling, sealing).'

Discuss this view.

[15 marks]

Question 2 continues on the next page

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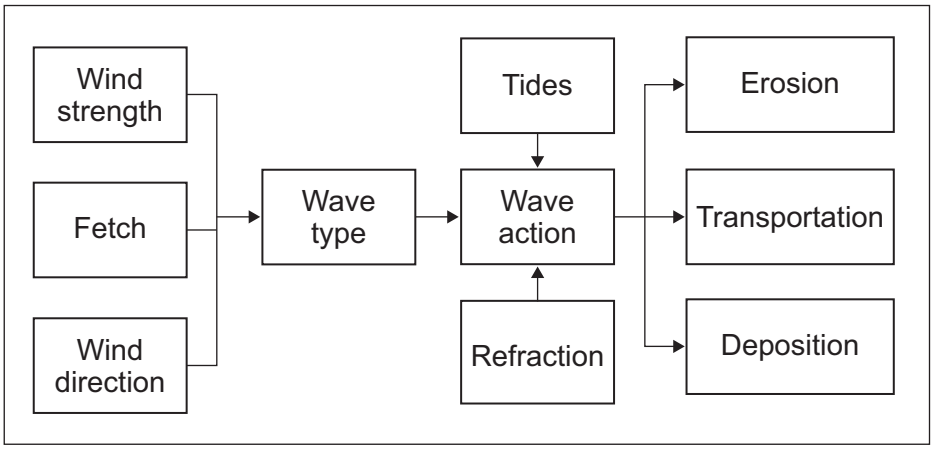
3 Coastal Environments

3 (a) **Figure 5** shows parts of the coastal system.

Figure 5



Outline links between different parts of the coastal system shown in **Figure 5**.

[4 marks]

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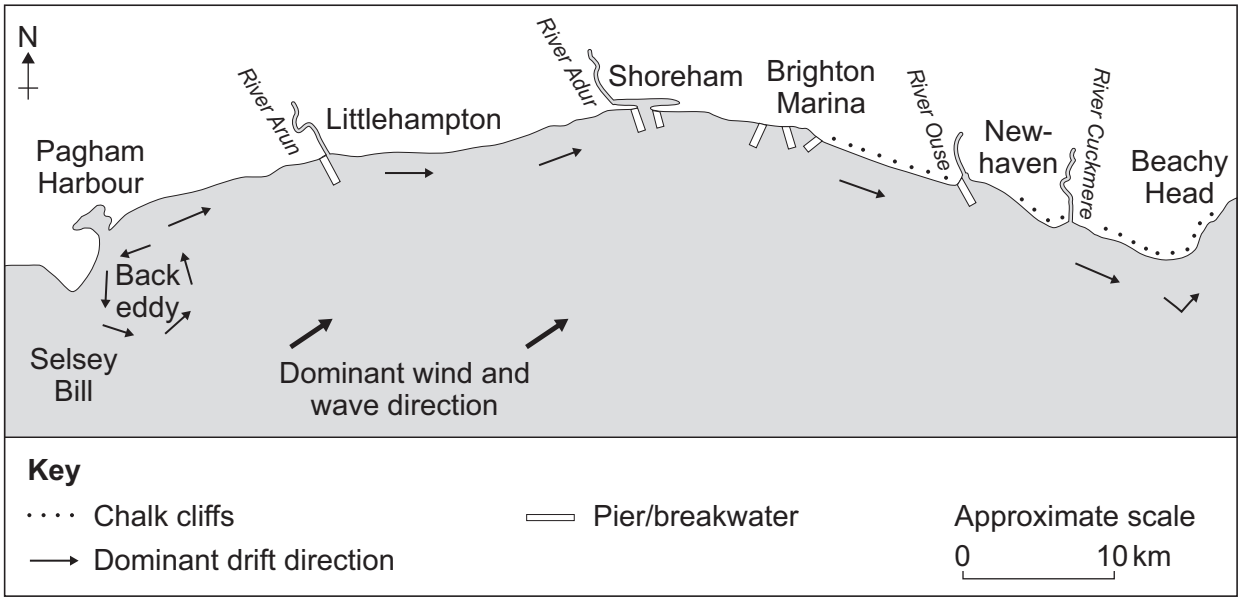
Question 3 continues on the next page

3 (b) (i) **Figure 6** is a sketch map of part of the South Downs sediment cell in southern England.

Figure 6



Comment on the movement of material shown in **Figure 6**.

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3 (b) (ii) Explain how soft engineering could protect a coastline.

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3 (c) Describe the characteristics, and explain the formation, of **two or more** landforms resulting from coastal deposition (such as beaches, spits, bars, dunes and salt marshes).

[15 marks]

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Turn over for the next question

4 **Hot Desert Environments and their Margins**

4 (a) (i) **Figure 7** is a photograph of Las Vegas, south-western USA.

Figure 7

Describe the development that has taken place in Las Vegas, shown in **Figure 7**.

[4 marks]

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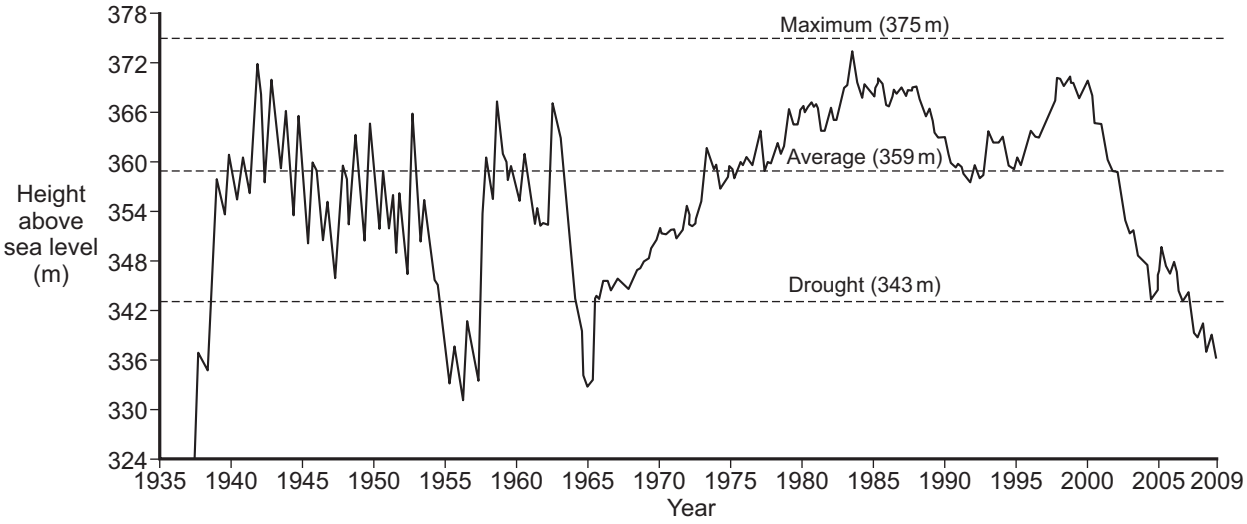
4 (a) (ii) **Figure 8** shows the water levels of Lake Mead at the Hoover Dam, near Las Vegas. The Hoover Dam was built in the 1930s.

Figure 8



Describe the changing water levels of Lake Mead shown in **Figure 8**.

[4 marks]

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4 (a) (iii) To what extent is development sustainable in areas such as south-western USA or southern Spain?

[7 marks]

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4 (b) Explain the role of wind action in the formation of desert landforms (such as deflation hollows, yardangs, zeugen and sand dunes).

[15 marks]

Question 4 continues on the next page

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End of Section A

Section B

Answer **Question 5** and **one other question** from this section.

5 Population Change

5 (a) (i) Define the term 'infant mortality rate'.

[2 marks]

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5 (a) (ii) Suggest why 'infant mortality rate' is a useful development indicator.

[3 marks]

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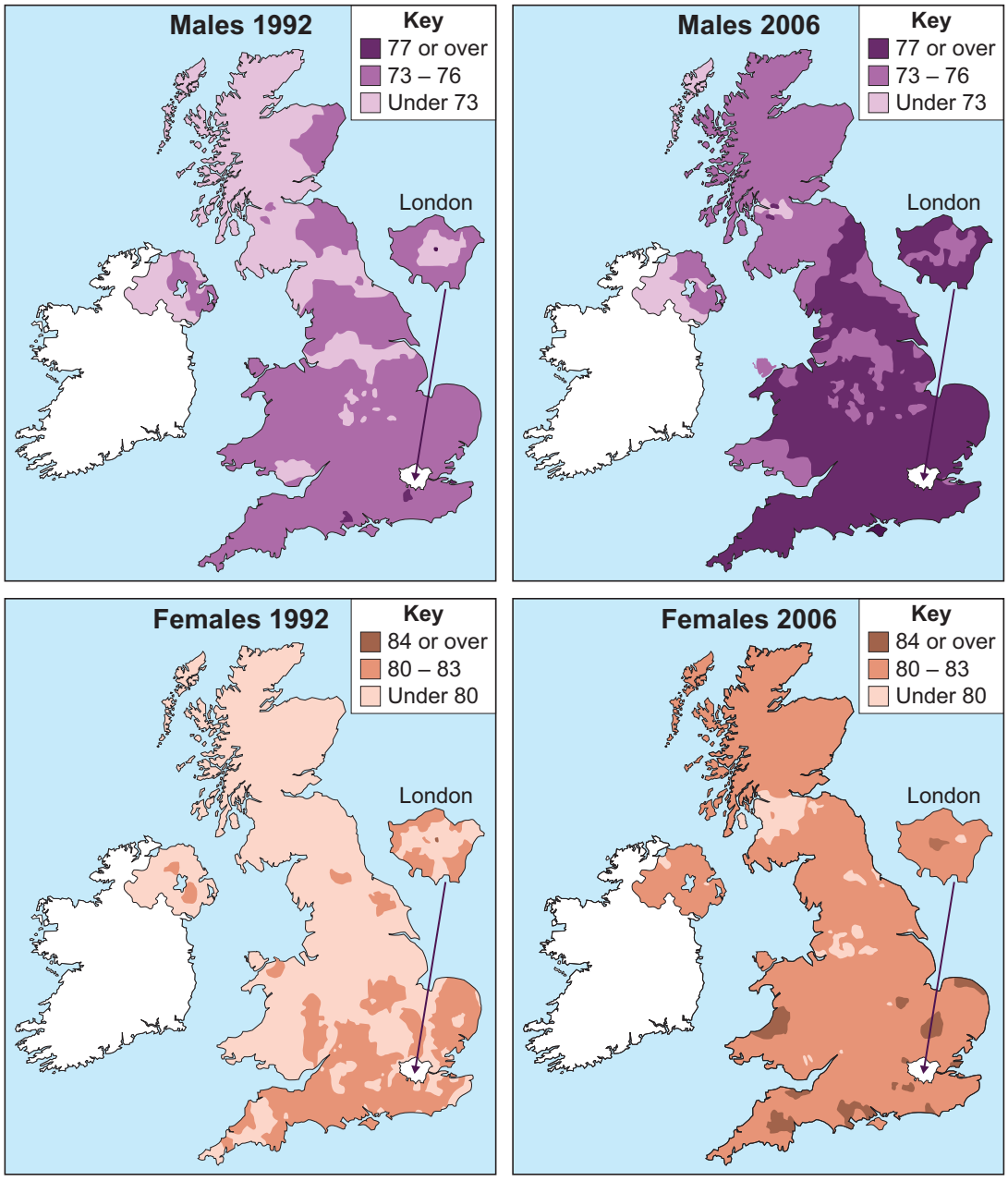
Question 5 continues on the next page

5 (b) **Figure 9** shows changes in life expectancy of males and females in the UK between 1992 and 2006.

Figure 9



5 (b) (i) Summarise the main changes shown in **Figure 9**.

[4 marks]

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5 (b) (ii) Describe social and political implications of the changes shown in **Figure 9**.

[6 marks]

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5 (c) 'The positive impacts of population change on the character of rural and urban areas outweigh the negative impacts.'

To what extent do you agree with this view?

[15 marks]

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Turn over for the next question

6 Food Supply Issues

6 (a) **Figure 10** shows world cereal production and area harvested from 1961–2004.

Due to copyright restrictions we are unable to electronically publish Figure 10.

Comment on the trends shown in **Figure 10**.

[4 marks]

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6 (b) (i) Define the term 'environmental stewardship'.

[2 marks]

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6 (b) (ii) Describe how environmental stewardship can influence the level and nature of food production in the European Union.

[5 marks]

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Question 6 continues on the next page

6 (c) **Figure 11** shows dietary energy supply per person per day in 2003.

Due to copyright restrictions we are unable to electronically publish Figure 11.

Describe the pattern shown in **Figure 11**.

[4 marks]

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6 (d) Explain how **two or more** of the following strategies can lead to an increase in food production:

appropriate/intermediate technology;

commercialisation;

land colonisation;

land reform.

[15 marks]

Question 6 continues on the next page

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7 Energy Issues

7 (a) (i) What is meant by 'co-operation in world affairs' in the context of the geopolitics of energy?

[2 marks]

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7 (a) (ii) **Figure 12** is a graph from a newspaper showing the BP share price following the oil spill from the Deepwater Horizon rig in the Gulf of Mexico in April 2010.
The rig was operated by BP, a British-based TNC.

Describe how **Figure 12** illustrates conflict in world affairs relating to energy production.

[5 marks]

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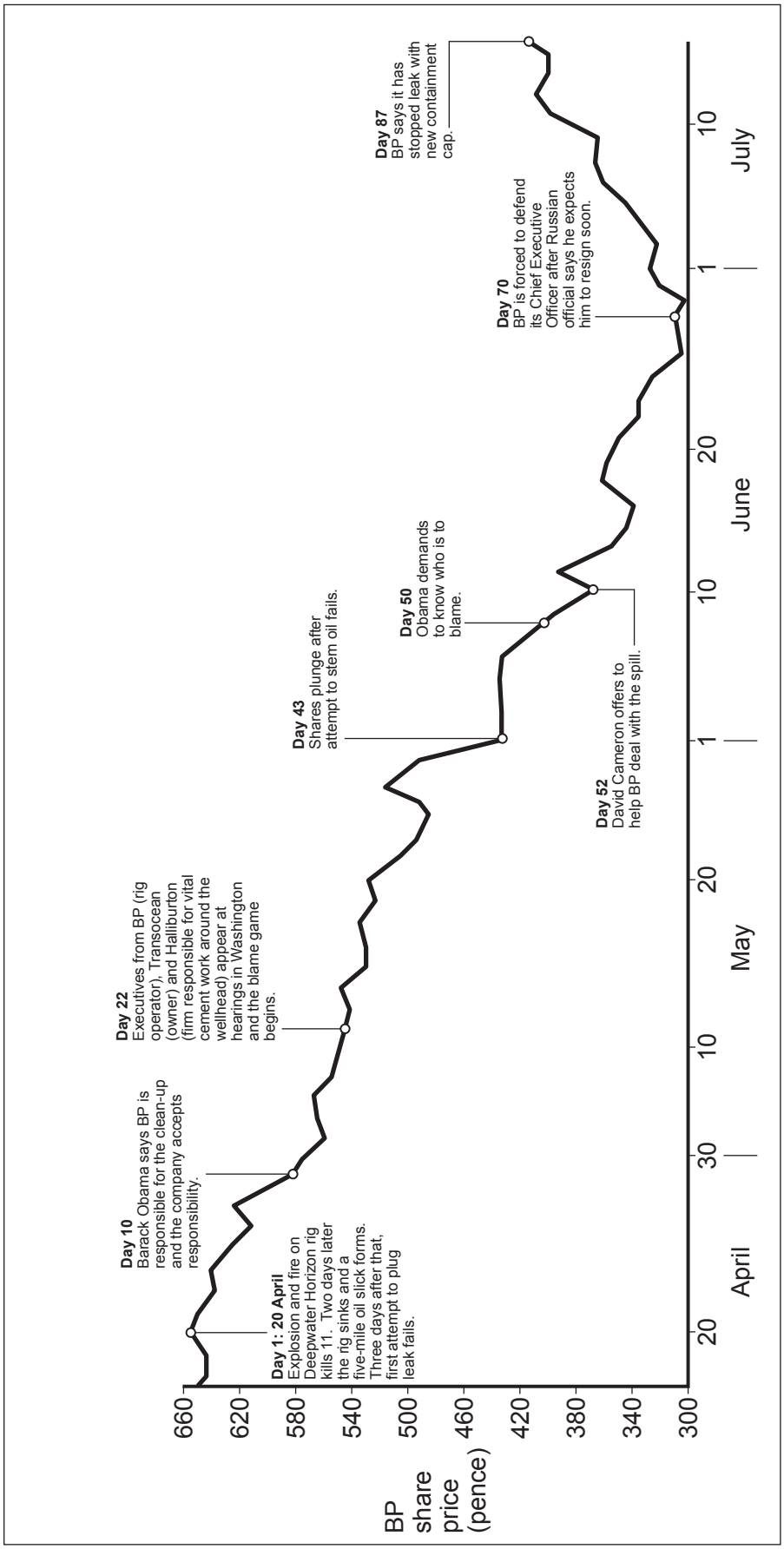
Figure 12



Question 7 continues on the next page

7 (b) (i) **Figure 13** shows the amount of electricity generated from selected renewable sources in the UK from 2008 to 2010.

Figure 13

Renewable source		Electricity generated (Gigawatt hours) 2008	2009	2010
Wind energy	Onshore	5792	7564	7137
	Offshore	1305	1740	3046
Solar power		17	20	33
Hydroelectricity	Small scale	568	598	511
	Large scale	4600	4664	3092

Describe and comment on the trends shown in **Figure 13**.

[4 marks]

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7 (b) (ii) Outline disadvantages of solar power.

[4 marks]

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7 (c) To what extent can transport be developed to encourage sustainability?

[15 marks]

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8 Health Issues

8 (a) (i) **Figure 14** shows information for three different areas in Leeds Metropolitan District (MD).

Figure 14

	Wealth indicator		Health indicator	
Area type: area name	**Average house purchase price (£)**	**Job seekers' allowance (%)**	**Coronary heart disease prevalence (%)**	**Limiting long term illness (%)**
Inner city: Lincoln Green	63 421	13.17	2.25	25.29
Suburban: Cookridge	215 089	3.25	4.70	17.64
Rural-urban fringe: Scarcroft	307 437	1.46	4.30	15.12
Leeds MD	**180 530**	**4.71**	**3.55**	**17.98**

Comment on the information shown in **Figure 14**.

[4 marks]

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Question 8 continues on the next page

8 (a) (ii) Describe how age and/or gender can influence access to facilities for health care.

[5 marks]

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8 (b) (i) Define the term 'obesity'.

[2 marks]

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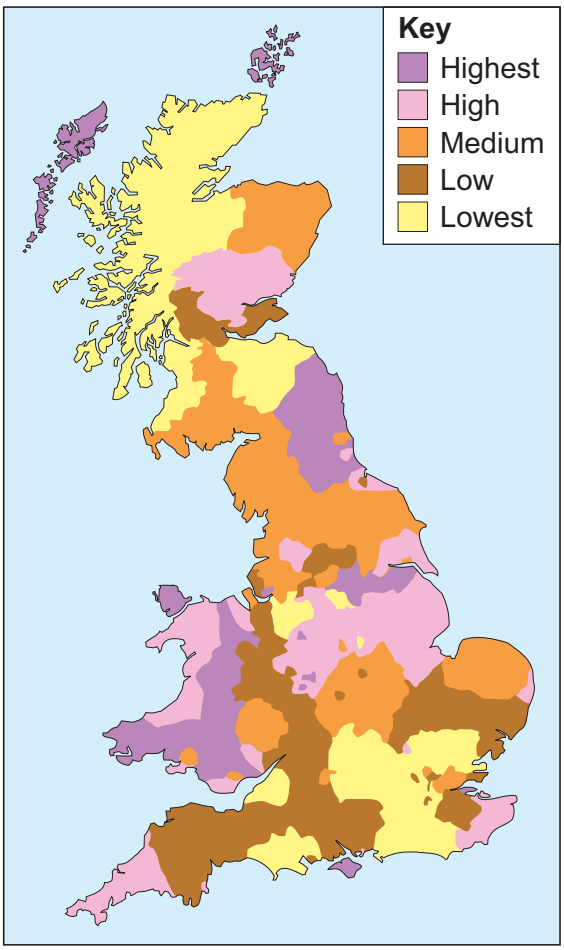
8 (b) (ii) **Figure 15** shows the distribution of obesity in England, Scotland and Wales.

Figure 15



Describe the distribution of obesity shown in **Figure 15**.

[4 marks]

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Question 8 continues on the next page

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8 (c) Discuss advantages and disadvantages of contrasting health care approaches in **two or more** countries at different stages of development.

[15 marks]

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END OF QUESTIONS

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