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Sample Assessment Materials
September 2007

GCE Geography

Edexcel Advanced Subsidiary GCE in Geography (8GE01)
First examination 2009

Edexcel Advanced GCE in Geography (9GE01)
First examination 2010

A PEARSON COMPANY

Edexcel GCE e-Spec

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- Information on the products and services provided by Edexcel to support the specification.

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Contents

A Introduction

These sample assessment materials have been prepared to support the specification.

Their aim is to provide the candidates and centres with a general impression and flavour of the actual question papers and mark schemes in advance of the first operational examinations.

B Sample question papers

Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						6	G	E	0	1	/	1	Signature	

Paper Reference(s)

6GE01/1

Edexcel GCE

Geography

Advanced Subsidiary

Unit 1: Global Challenges

Sample Assessment Material

Time: 1 hour 30 minutes

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
2	
3	
4	
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6	
7	
8	
9	
10	
Total	

Materials required for examination
Nil

Items included with question papers
Resource Booklet

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL questions in Section A and ONE question in Section B.
Write your answers in the spaces provided in this question paper.
Do not use pencil. Use blue or black ink.
Indicate which question you are answering by marking the box (☒). If you change your mind, put a line through the box (~~☒~~) and then indicate your new question with a cross (☒).
Some parts of questions must also be answered with a cross in a box (☒).
Do not return the Resource Booklet with the question paper.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 6 questions in Section A and 4 questions in Section B. Section A carries 65 marks and Section B carries 25 marks. The total mark for this paper is 90.
There are 20 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

Quality of written communication will be taken into account in the marking of your responses to Questions 7, 8, 9 or 10 (Select ONE question only). These questions are indicated with an asterisk (*). Quality of written communication includes clarity of expression, the structure and presentation of ideas and grammar, punctuation and spelling.
You are advised to spend approximately one hour on Section A and 30 minutes on Section B.

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SECTION A

Answer ALL questions.

You must use the Resource Booklet.
You are advised to spend approximately one hour on Section A.

1. Study Figure 1.

(a) Global hazards can be hydro-meteorological or geophysical. Arrange the following hazards into these two groups by putting the letters A to D into the table provided.

A earthquakes

B tropical cyclones

C volcanic eruptions

D stormy coasts

hydro-meteorological	geophysical

(2)

(b) What evidence suggests that location **X** is a disaster hotspot?

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(2)

(c) Explain why earthquakes and volcanoes frequently occur in the same areas.

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(3)

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(d) Describe and explain the distribution of tropical storms.

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(4) **Q1**

(Total 11 marks)

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2. Study Figure 2.

(a) Describe the general pattern of temperature change from

1000 until 1900

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since 1900.

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(2)

(b) Suggest **two** ways of investigating medium and longer term climate change, before global temperature records were available (from 1861).

1 .....

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2 .....

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(2)

(c) Climate change may have natural and human causes. Arrange the following into these two groups by putting the letters A to F into the table provided.

A damage to the ozone layer over the Antarctic

B changes in solar output

C volcanic eruptions

D deforestation in the tropics

E changes in the earth's orbit

F exhaust fumes from motor vehicles

natural	human

(2)

Leave blank

(d) Explain how evidence from the graph might support arguments for **both**

natural causes of climate change

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human causes for global warming.

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(4)

Q2

(Total 10 marks)

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3. Study Figure 3.

(a) Describe **two** of the changes shown on the map of the Arctic.

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2 .....

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(2)

(b) What advantages might rising temperatures bring to the Arctic?

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(3)

(c) Explain **one** emerging **environmental** concern in the Arctic.

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(4)

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(d) Explain how Arctic warming will have consequences for the wider world.

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(4)

Q3

(Total 13 marks)

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4. Study Figure 4(a).

(a) (i) Which EU country was the **source** of most immigrants to the UK?

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(1)

(ii) Suggest reasons for this flow.

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(2)

(b) (i) Which EU country was the **destination** for most UK emigration?

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(1)

(ii) Suggest reasons for this flow.

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(2)

Leave blank

(c) Which of the following population movements is best described as **economic** migration?

Put a cross in the most appropriate box.

- ☒ people forced to leave a country to escape from famine
- ☒ those who arrive claiming to be victims of persecution
- ☒ people travelling abroad to find work elsewhere
- ☒ people entering a country unofficially, without proper checks
- ☒ those who retire to 'a place in the sun'

(1)

(d) Study Figure 4(b).

Explain why the UK is a 'global hub' for international migration.

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(4)

Q4

(Total 11 marks)

Leave blank

5. Study Figure 5.

(a) Which of the following best describes urbanisation?

Put a cross in the most appropriate box.

- ☒ the rapid growth of cities
- ☒ the growth of slum settlements on the edge of cities
- ☒ the growth in the proportion of people living in cities
- ☒ jobs and housing attracting people from the countryside
- ☒ people moving out into the suburbs

(1)

(b) Suggest an appropriate term for the housing area **A**.

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(1)

(c) Compare the sites and buildings of the two housing areas shown.

Area **A** .....

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Area **B** .....

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(4)

Leave blank

(d) Explain the likely consequences of the urban growth shown in the photograph.

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(4)

Q5

(Total 10 marks)

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6. Study Figure 6.

(a) Match the patterns of lights from settlements in each of the following places with their description, by putting the letters X, Y and Z into the table provided.

X in the main urban areas

Y along the banks of a major river

Z following the coast

place	description
UK	
Mediterranean	
Egypt	

(2)

(b) Suggest why most of Africa is in darkness, *switched off* from development.

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(4)

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(c) Explain the consequences of this lack of development for people in the poorer parts of Africa.

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(4) **Q6**

(Total 10 marks)

TOTAL FOR SECTION A: 65 MARKS

Leave blank

SECTION B

Answer ONE question in this section.
Use the evidence provided in the Resource Booklet and your own ideas.
You are advised to spend approximately 30 minutes on Section B.

***7.** Study Figure 7.

(a) Suggest reasons for the trends in natural disasters shown in the graph.

(10)

(b) Choose **one named** area of the world and explain why it is considered a disaster hotspot.

(15)

(Total 25 marks)

***8.** Study Figure 8.

(a) Suggest what this survey, carried out in the USA, shows about people's views on global warming.

(10)

(b) Explain how people are attempting to deal with the effects of global warming at **either** a local **or** a global scale.

(15)

(Total 25 marks)

***9.** Study Figure 9.

(a) Suggest reasons for the contrasting population patterns in these two suburbs.

(10)

(b) Examine the effects of a greying population on health and welfare services.

(15)

(Total 25 marks)

***10.** Study Figure 10.

(a) Suggest why the various groups shown hold differing views about this global trade.

(10)

(b) Explain how people can manage the environmental and social costs of globalisation for a better world.

(15)

(Total 25 marks)

Leave blank

Indicate which question you are answering by marking the box (☒).
If you change your mind, put a line through the box (~~☒~~)
and then indicate your new question with a cross (☒).

Chosen Question Number:

Question 7 ☒ **Question 8** ☒

Question 9 ☒ **Question 10** ☒

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Section B

(Total 25 marks)

TOTAL FOR SECTION B: 25 MARKS
TOTAL FOR PAPER: 90 MARKS

END

Paper Reference(s)

6GE01/1

Edexcel GCE

Geography

Advanced Subsidiary

Unit 1: Global Challenges

Sample Assessment Material

Resource Booklet

Do not return the Resource Booklet with the question paper.

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SECTION A

The following resources relate to Questions 1–6

Figure 1 Areas of the world affected by selected natural hazards

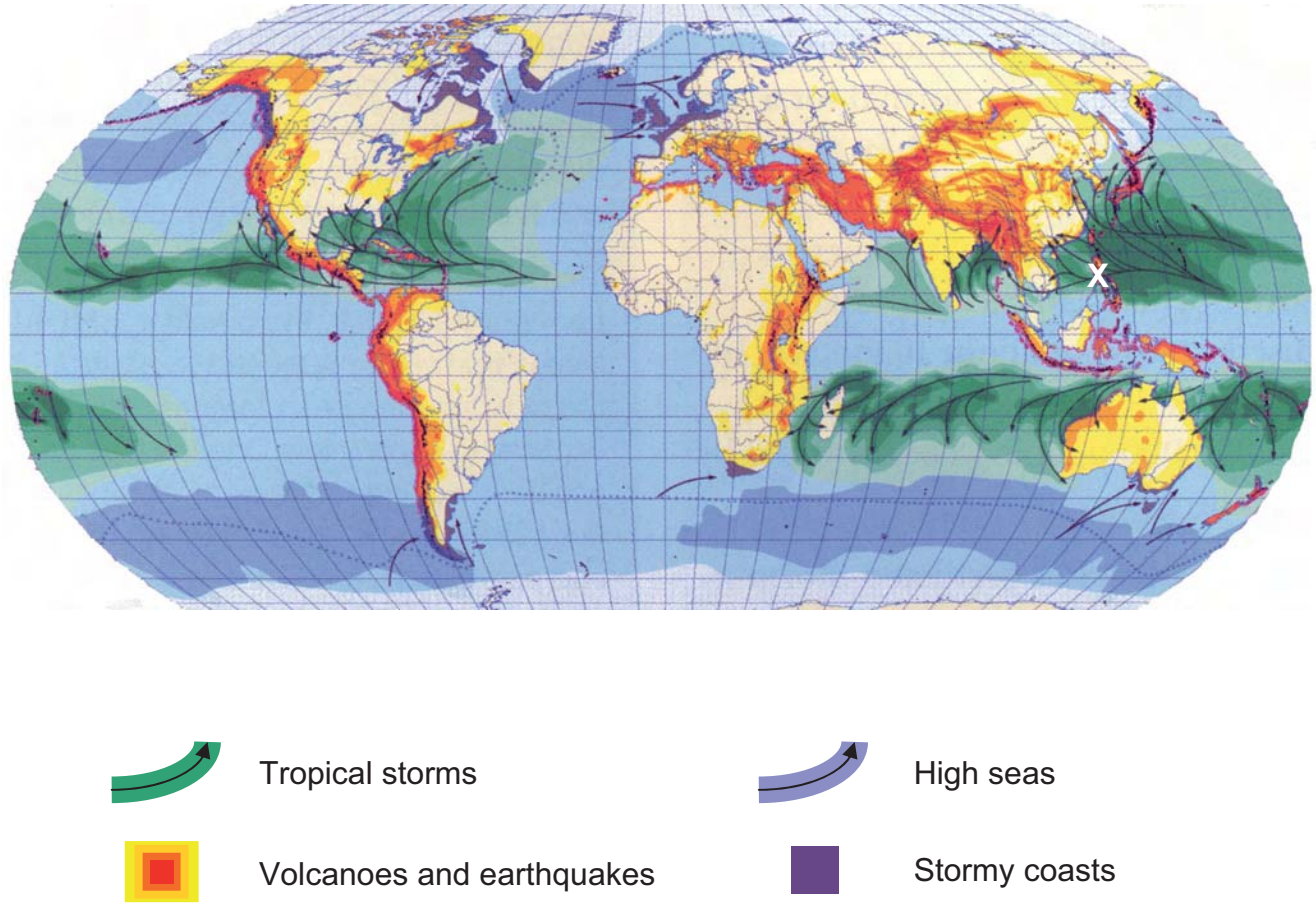
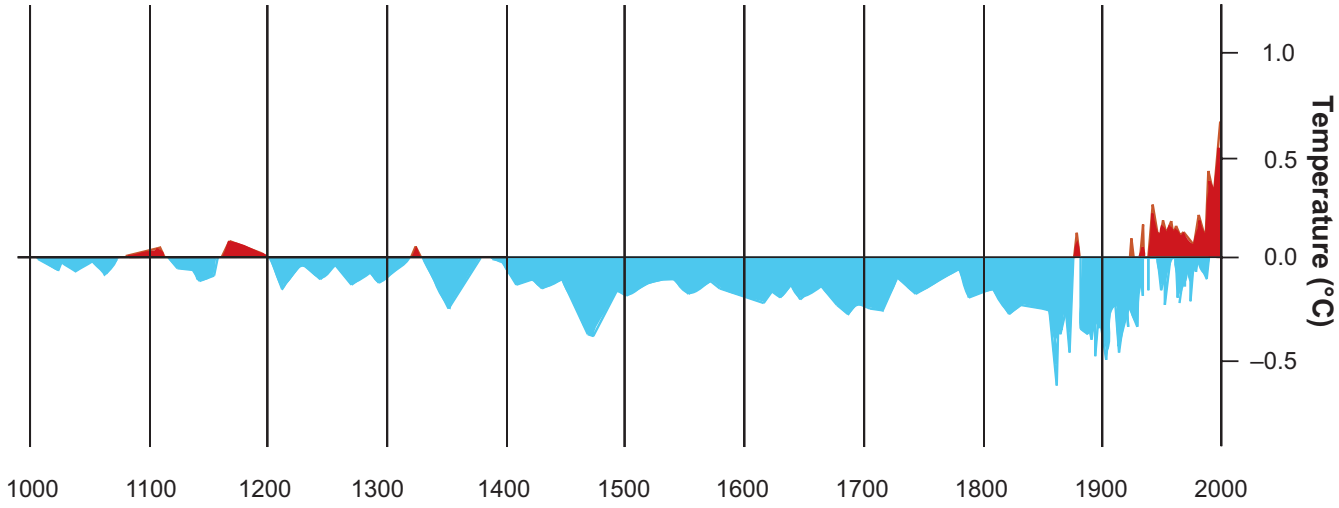


Figure 2 One thousand years of temperature change



Baseline represents the average temperature between 1861 and 2000

Figure 3 Future changes in the Arctic region

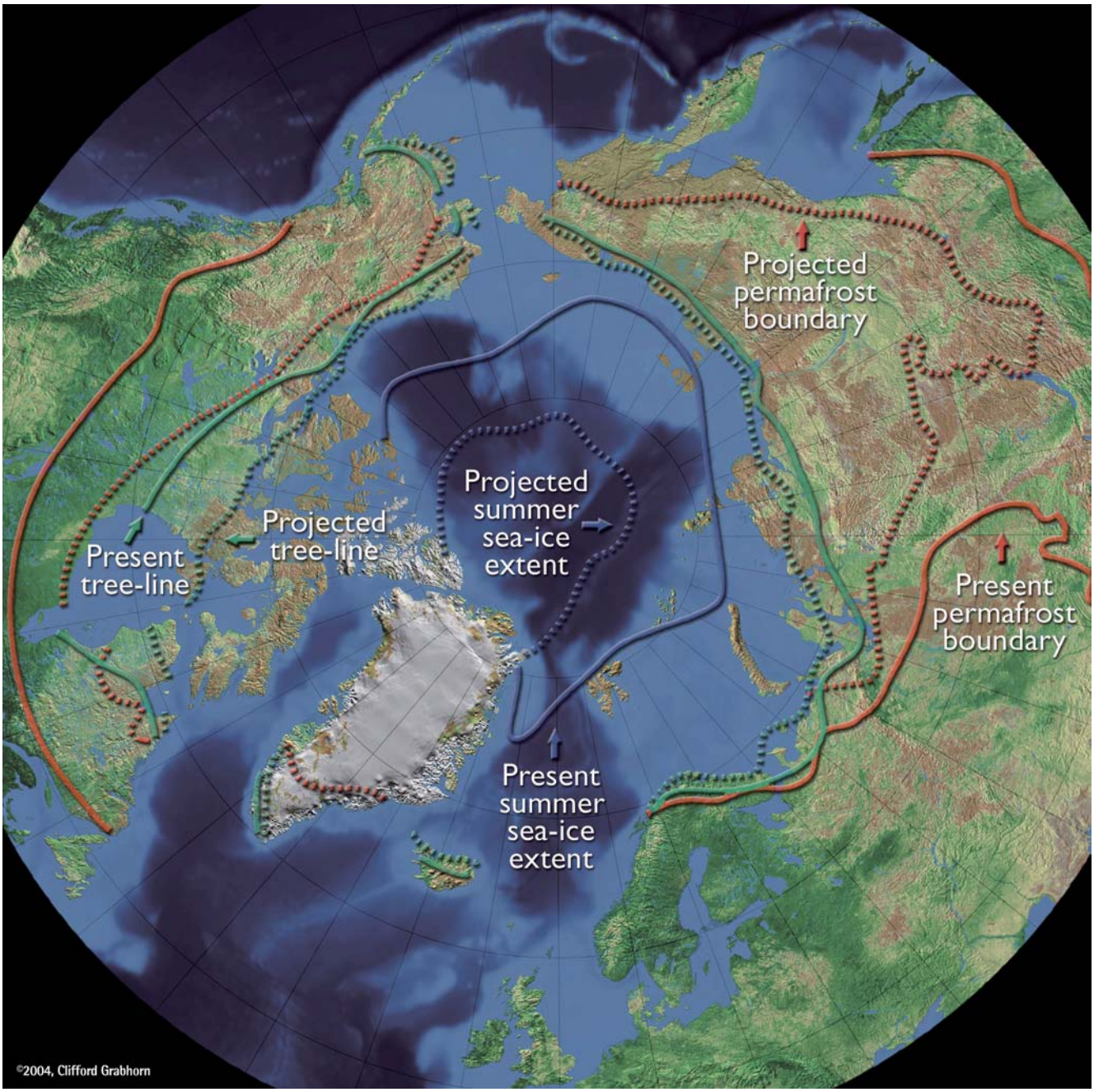


Figure 4(a) **Some of the flows of immigration and emigration to and from the UK (EU)**

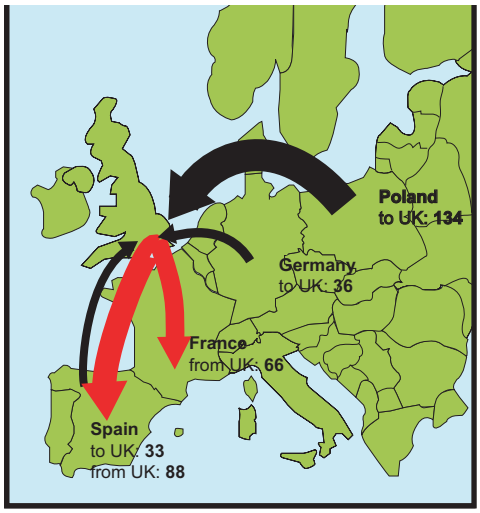


Figure 4(b) **Some of the flows of immigration and emigration to and from the UK (rest of the world)**

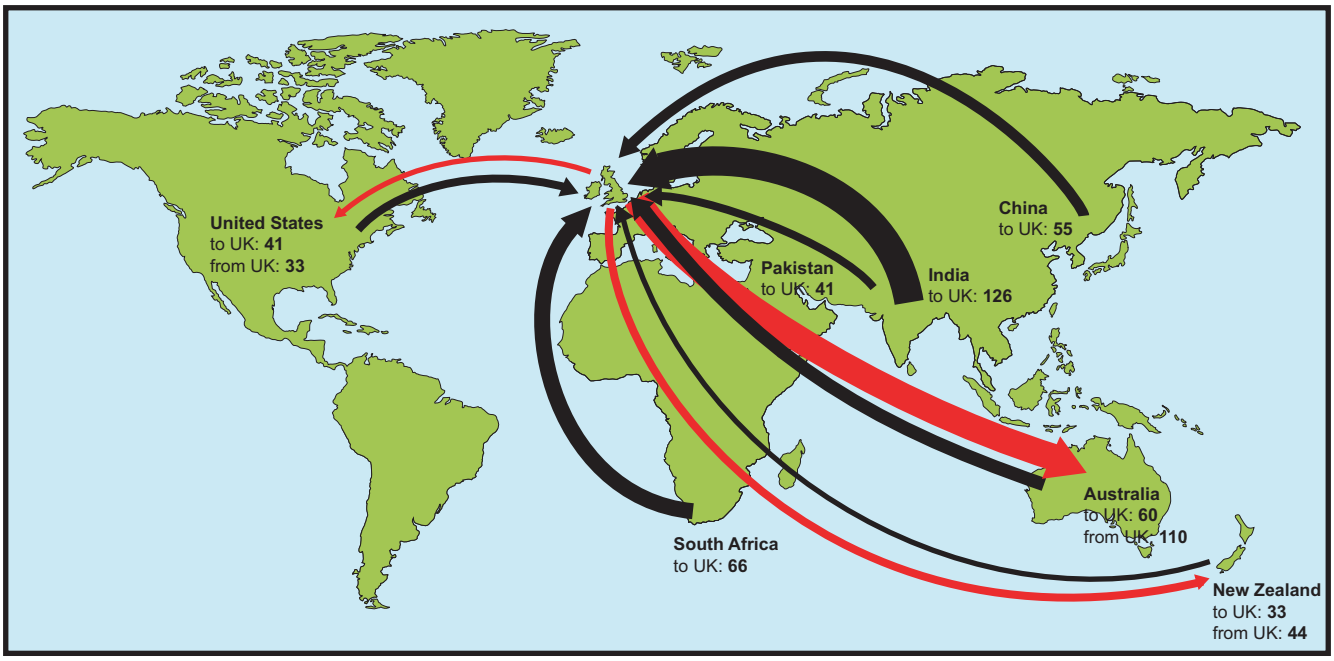


Figure 5 Housing areas in a rapidly growing megacity in South America

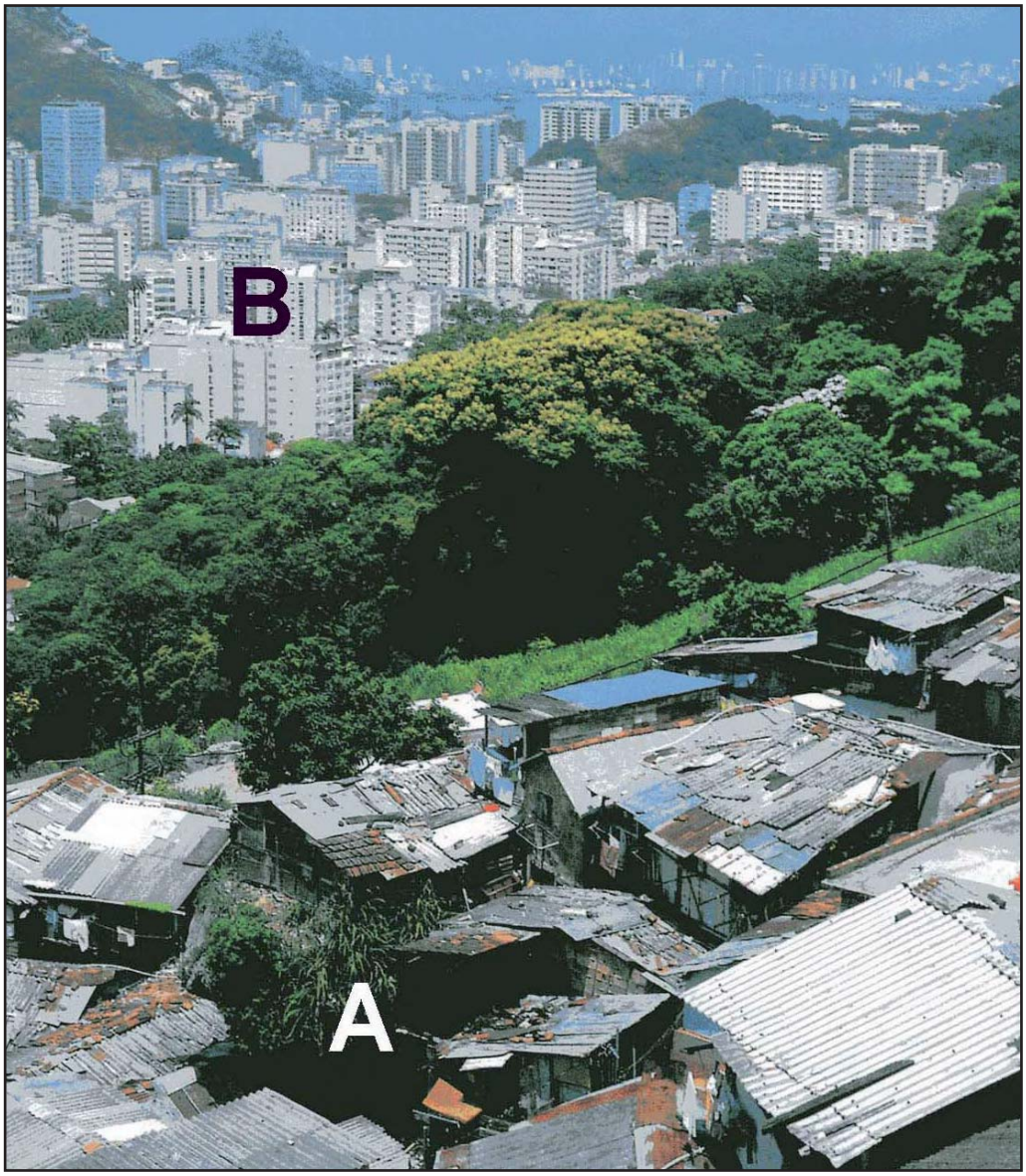


Figure 6 A satellite image of lights from settlements across Europe and Africa

SECTION B

The following resources relate to Questions 7–10

Figure 7 Trends in the number of global natural disasters in the 20th century

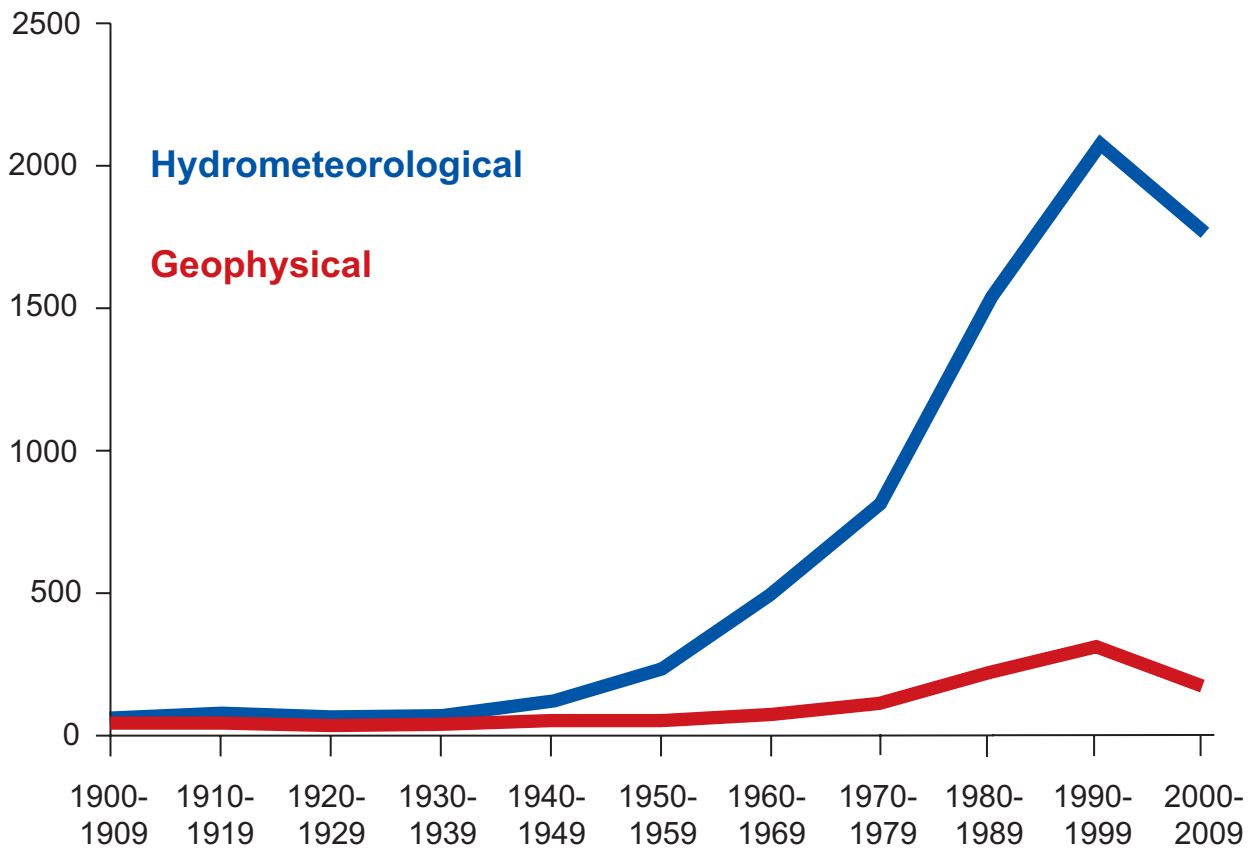


Figure 8 **Some results from a recent survey of American views on global warming**

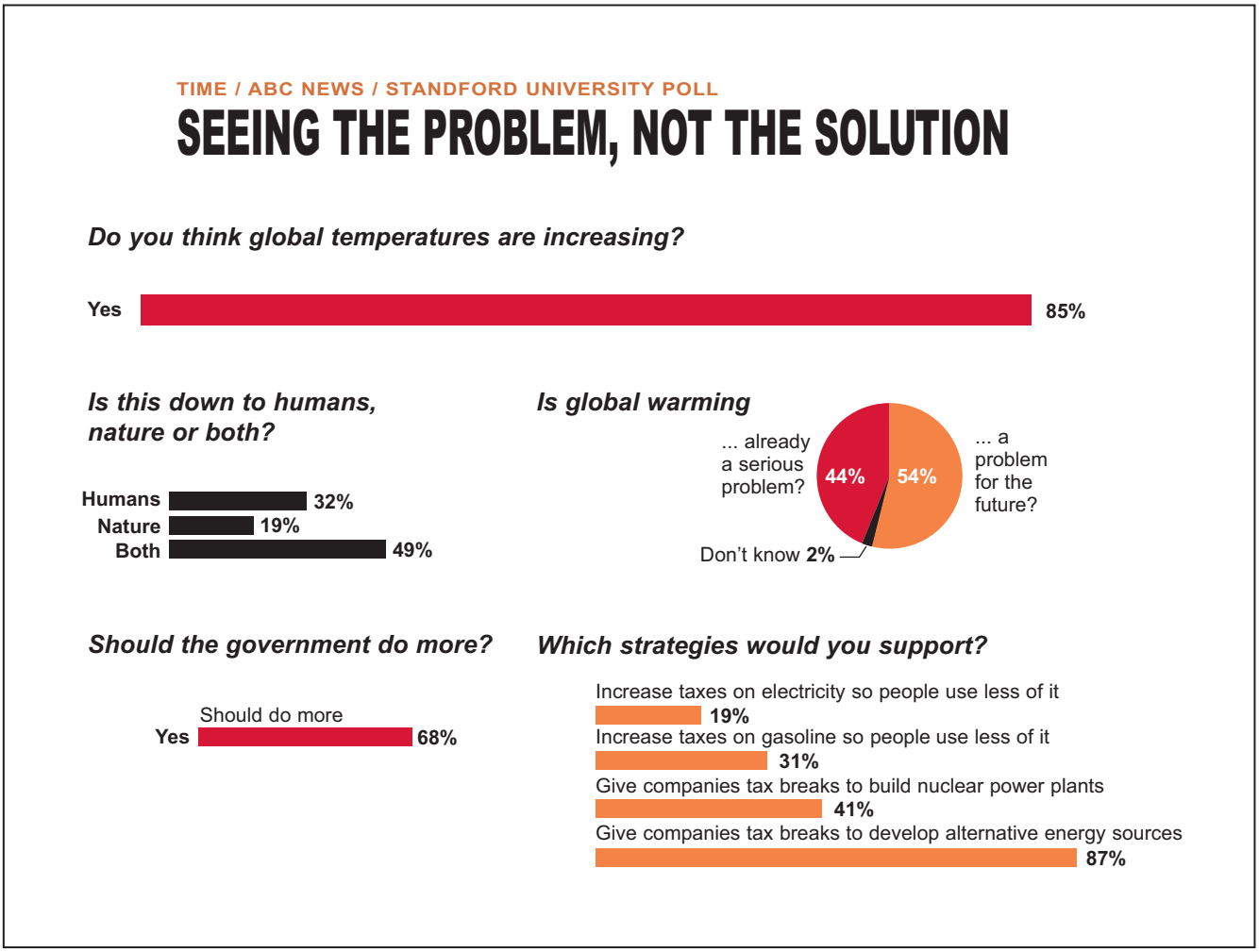


Figure 9 Profiles of people in two areas within a large city

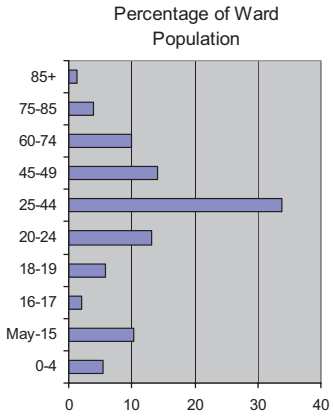
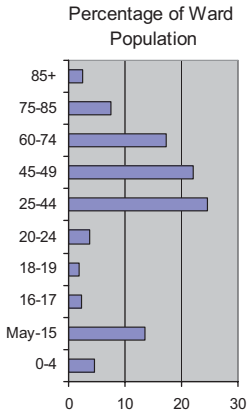
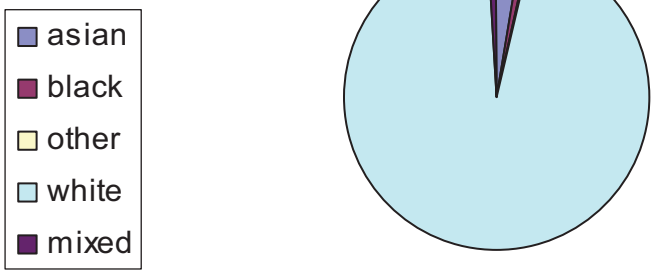
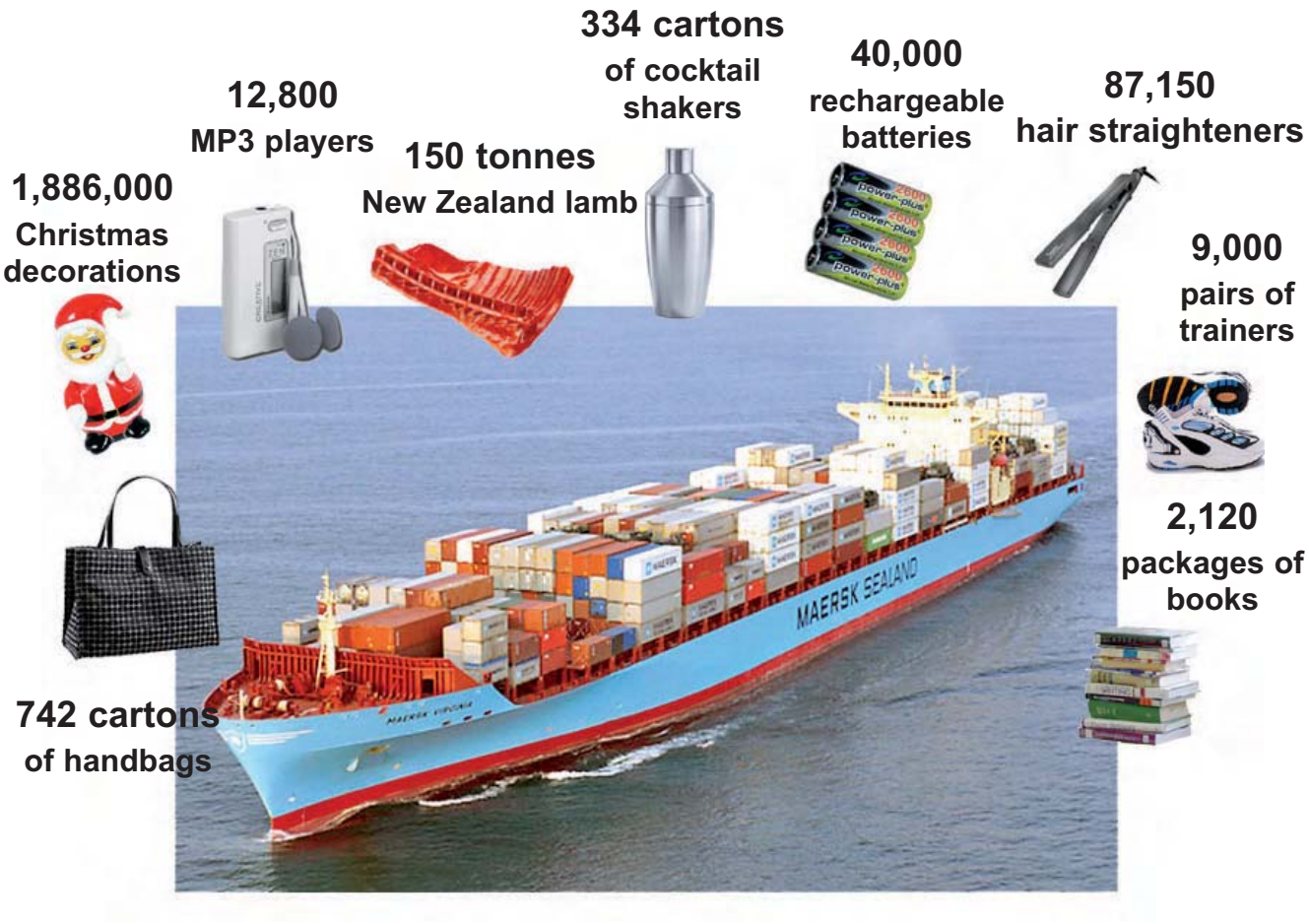
	Outer suburb	Inner city
Population by age		
Population by ethnic origin		
Other information		
% with their own home	86	25
% with no car	5	63
% who are unemployed	1	17
% who are lone parents	14	56

Figure 10 The world's largest container ship brings goods from China to the UK, in time for Christmas 2006



UK customers are generally happy but some businesses and workers are less pleased
Millions of Chinese people and their government support this venture
Maersk shipping lines has offices in 150 countries, and 500 large container ships
Critics of this world-wide commercial activity see this as 'globalisation gone mad'

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Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						6	G	E	0	2	/	1	Signature	

Paper Reference(s)

6GE02/1

Edexcel GCE

Geography

Advanced Subsidiary

Unit 2: Geographical Investigations

Sample Assessment Material

Time: 1 hour

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
2	
3	
4	
Total	

Materials required for examination
Nil

Items included with question papers
Resource Booklet

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ONE question from Section A and ONE question from Section B.
Write your answers in the spaces provided in this question paper.
Do not use pencil. Use blue or black ink.
Indicate which question you are answering by marking the box (☒). If you change your mind, put a line through the box (~~☒~~) and then indicate your new question with a cross (☒).

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 2 questions in Section A and 2 questions in Section B.
Section A carries 35 marks and Section B carries 35 marks. The total mark for this paper is 70.
There are 20 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

Quality of written communication will be taken into account in the marking of ALL your responses.
Quality of written communication includes clarity of expression, the structure and presentation of ideas and grammar, punctuation and spelling.

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Leave blank

SECTION A

Answer ONE question in this section.

Candidates should use the resources provided, their own ideas, and relevant fieldwork and research which they have done.

EXTREME WEATHER

If you choose to answer Question 1, put a cross in the box ☒ .

1. Study Figure 1.

(a) Describe how the depression shown on this chart might produce extreme weather hazards.

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(b) Examine the success of strategies used to manage **one** type of extreme weather event.

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(c) Describe and explain **a programme of fieldwork and research** you would use to investigate the links between precipitation and flooding along a stretch of river.

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Q1

(Total 35 marks)

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Candidates should use the resources provided, their own ideas, and relevant fieldwork and research which they have done.

CROWDED COASTS

If you choose to answer Question 2, put a cross in the box ☒.

2. Study Figure 2.

(a) Describe how **physical** and **economic** factors may have made Florida a crowded coast.

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(b) Using **named** examples, examine the **environmental** costs of coastal development such as those shown in Florida.

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(c) Describe and explain **a programme of fieldwork and research** you would use to investigate the impacts of **either** coastal erosion **or** coastal flooding, along a stretch of coastline.

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(15)

Q2

(Total 35 marks)

TOTAL FOR SECTION A: 35 MARKS

Leave blank

SECTION B

Answer ONE question in this section.

Candidates should use the resources provided, their own ideas, and relevant fieldwork and research which they have done.

UNEQUAL SPACES

If you choose to answer Question 3, put a cross in the box ☒ .

3. Study Figure 3.

(a) Comment on how well this information shows the inequalities of living in Winchester and Hackney.

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(b) With reference to **one or more** named **urban** areas, examine the impacts of deprivation on people's lives.

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Leave blank

(c) Describe the **results** of your **fieldwork and research** into how to reduce inequality, and explain how these help you to judge the success of **either** the urban **or** rural schemes involved.

Leave blank

(15)

Q3

(Total 35 marks)

Leave blank

Candidates should use the resources provided, their own ideas, and relevant fieldwork and research which they have done.

REBRANDING PLACES

If you choose to answer Question 4, put a cross in the box ☒ .

4. Study Figure 4.

(a) Comment on how true a picture the cartoon is of *a countryside in crisis*.

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(b) With reference to **named examples**, explain how rebranding strategies such as those shown in Figure 4 might regenerate **rural** areas.

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(c) Describe the **results** of your **fieldwork and research** into **urban** rebranding, and explain how these help you to judge the success of the schemes involved.

Leave blank

(15)

Q4

(Total 35 marks)

TOTAL FOR SECTION B: 35 MARKS

TOTAL FOR PAPER: 70 MARKS

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Paper Reference(s)

6GE02/1

Edexcel GCE

Geography

Advanced Subsidiary

Unit 2: Geographical Investigations

Sample Assessment Material

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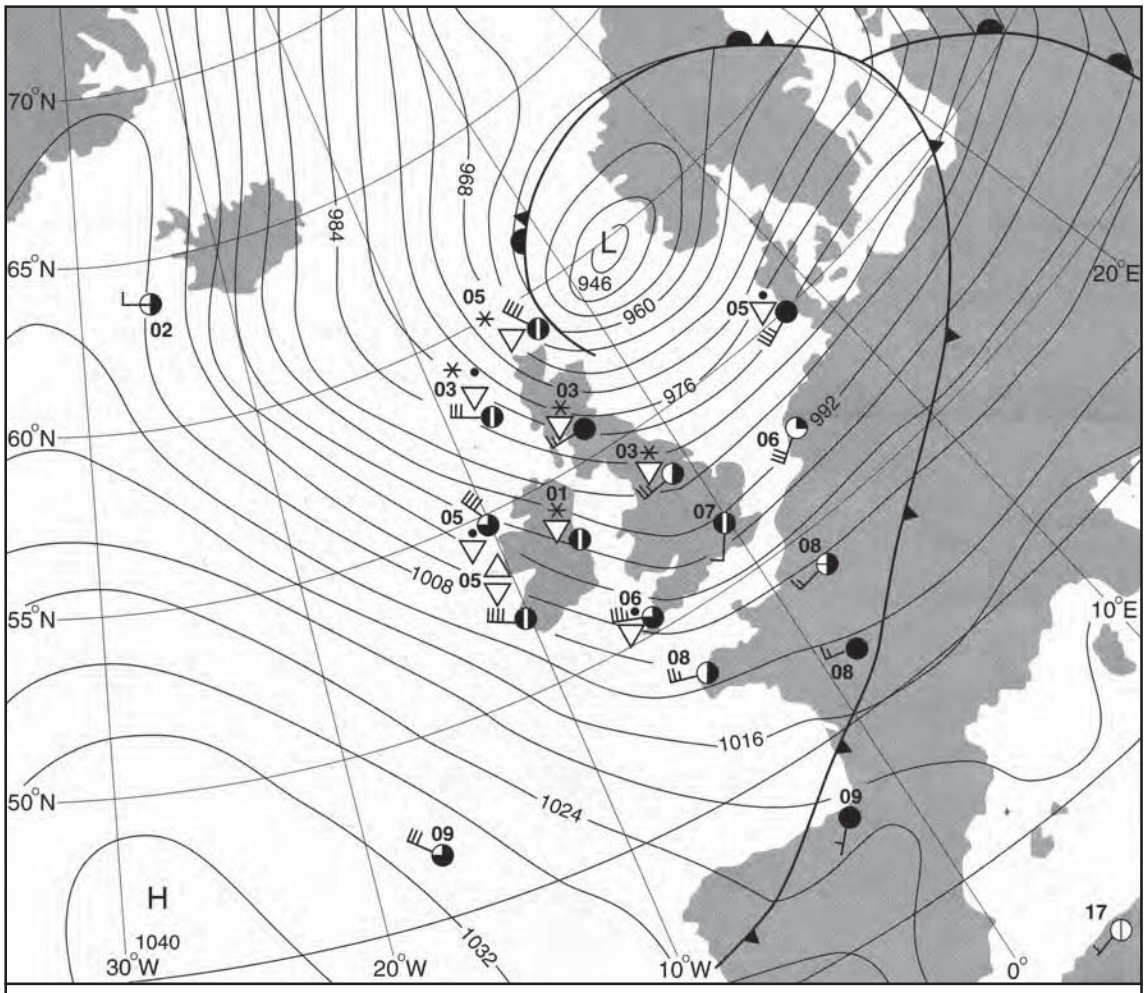
Figure 1 Some severe weather conditions associated with a deep depression (January)



Synoptic chart (Weather map) for January 3rd 1984 (1200 hrs)

WIND

Symbol	Wind speed (knots)
◎	Calm
	1 - 2
	3 - 7
	8 - 12
	13 - 17
For each additional half feather add 5 knots	
	48 - 52

CLOUD

Symbol	Cloud amount (oktas)
e.g. ◐	7

1024	Isobars showing pressure in millibars
H	High pressure
L	Low pressure

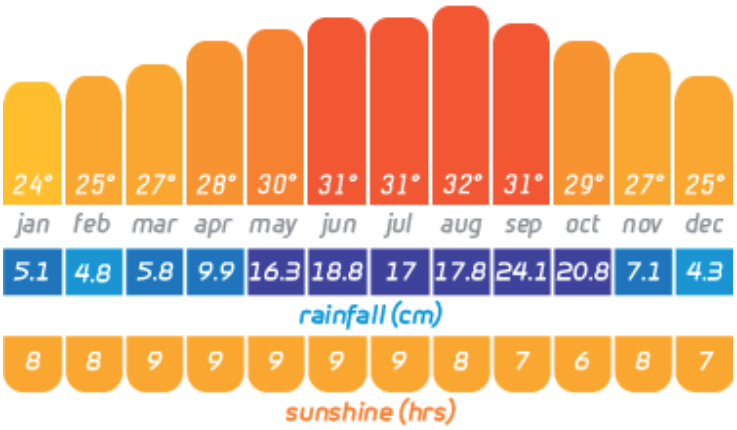
WEATHER

Symbol	Weather
•	Rain
▽	Shower
✳	Snow

TEMPERATURE
This is shown by two digits and is in degrees Celsius (eg. 05 = 5°C)

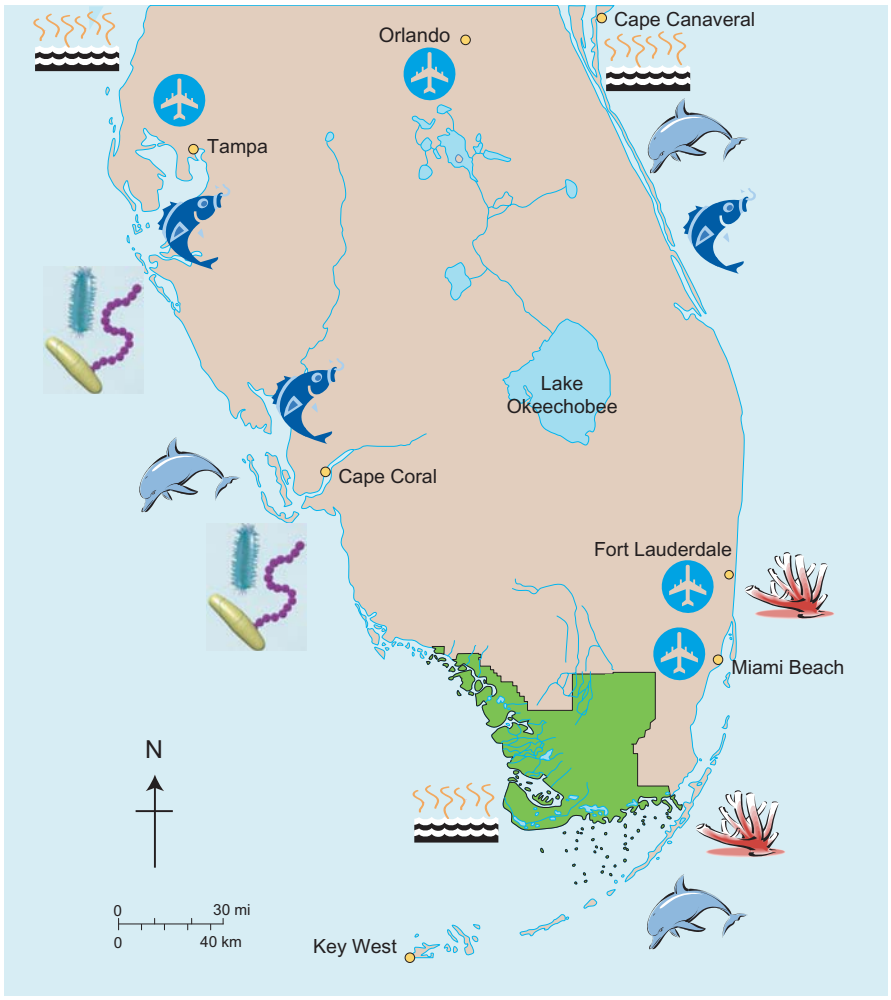
Warm front
Cold front
Occluded front

Figure 2 Economic and environmental information about the Florida coastline



Florida's beaches attract 75 million visitors each year and 80% of residents live beachside.

But all is not well in the sunshine state…



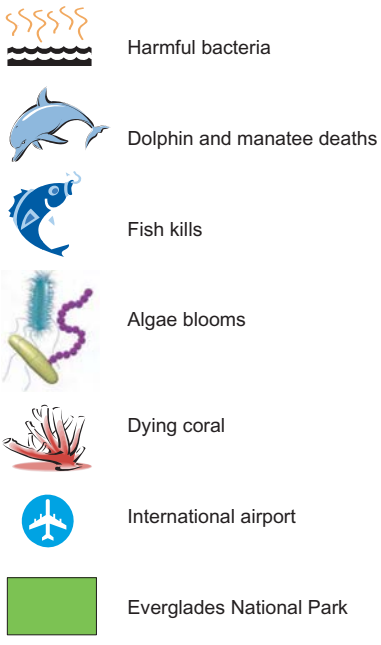


Figure 3 Best and worst places to live in the UK

	WINCHESTER	HACKNEY
Lifestyle Average house price Average income per year Income Support claimants	 £280 000 £22 120 1540 people	 £430 000 £25 000 18 920 people
Crime figures 2005/6 Violence against persons Theft of a motor vehicle	 1310 115	 7471 1749
Education 15-year-olds with 5 or more GCSE passes A* to C	 77.2%	 17.2%
Environment Total area of gardens Total area of green space	 23 970 sq m 609 738 sq m	 3496 sq m 62 city parks
Population Total numbers Type	 110 000 White, middle-class	 205 000 -

Winchester comment:

"It's very nice here, being so near the countryside and with so few problems. The schools are really good. But finding work isn't easy and the night life is a bit limited for younger people."

Hackney comment:

"We manage to rub along and help each other but we live under pressure all the time, especially financially. Hackney is a grubby, overcrowded place that needs big money spending on it, and right now!"

Figure 4 Countryside in crisis and strategies for rebranding the countryside

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Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						6	G	E	0	3	/	1	Signature	

Paper Reference(s)

6GE03/1

Edexcel GCE

Geography

Advanced

Unit 3: Contested Planet

Sample Assessment Material

Time: 2 hours 30 minutes

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
2	
3	
4	
5	
6	
Total	

Materials required for examination
Nil

Items included with question papers
Resource Booklet

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer TWO questions in Section A. Answer ALL parts of Section B.
Write your answers in the spaces provided in this question paper.
Do not use pencil. Use blue or black ink.
Indicate which question you are answering by marking the box (☒). If you change your mind, put a line through the box (~~☒~~) and then indicate your new question with a cross (☒).

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 5 questions in Section A and one question in Section B.
Section A carries 50 marks and Section B carries 40 marks.
The total mark for this paper is 90.
There are 32 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

Quality of written communication will be taken into account in the marking of ALL your responses.
Quality of written communication includes clarity of expression, the structure and presentation of ideas and grammar, punctuation and spelling.
You are advised to spend approximately 80 minutes on Section A and 70 minutes on Section B.

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SECTION A

Answer TWO questions in this section.
You are reminded of the need to use examples to support your arguments.
You are advised to spend approximately 80 minutes on Section A.

1. Study Figure 1.

(a) Suggest how the contrasting distribution/pattern of major oil exporters and importers shown in Figure 1 could affect the energy security of some nations.

(10)

(b) The development of alternative energy sources is a possible response to future energy demands. Assess the possible costs and benefits of this approach.

(15)

(Total 25 marks)

2. Study Figure 2.

(a) Suggest how water resources and human wellbeing might be affected by the data in Figure 2.

(10)

(b) Using named examples, assess the role of different players and decision makers in trying to secure a sustainable 'water future'.

(15)

(Total 25 marks)

3. Study Figure 3.

(a) Explain the pattern of alien species invasions, and suggest the possible impacts of alien species on ecosystems.

(10)

(b) Evaluate the relative importance of global and local threats to one named global ecosystem.

(15)

(Total 25 marks)

Leave blank

4. Study Figure 4.

(a) Explain how membership of Intergovernmental Organisations gives some countries political and economic power.

(10)

(b) Using examples, assess the view that the relationship between superpowers and the developing world is a neo-colonial one.

(15)

(Total 25 marks)

5. Study Figure 5.

(a) Explain the message of the cartoon, and state how far you agree with its message.

(10)

(b) Assess the view that economic development is not possible without causing environmental degradation.

(15)

(Total 25 marks)

Leave blank

Put a cross in the box indicating the first question you have chosen to answer (☒).
If you change your mind, put a line through the box (☒)
and then put a cross in another box (☒).
You will be asked to indicate your second question choice on page 11.

Chosen Question Number:

Question 1 ☐ **Question 2** ☐

Question 3 ☐ **Question 4** ☐

Question 5 ☐

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(Total 25 marks)

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Put a cross in the box indicating the second question you have chosen to answer (☒).
If you change your mind, put a line through the box (~~☒~~)
and then put a cross in another box (☒).

Chosen Question Number:

Question 1 ☐ **Question 2** ☐

Question 3 ☐ **Question 4** ☐

Question 5 ☐

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(Total 25 marks)

TOTAL FOR SECTION A: 50 MARKS

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SECTION B

Answer ALL parts of this section, referring to the advance information you have been asked to study.

You are reminded of the need to use examples from any part of your GCE Geography course to support your answers.

You are advised to spend approximately 70 minutes on Section B.

6. (a) Explain the factors that have led to Latin America's rapid adoption of GM farming technology.

(10)

(b) Assess the human and environmental impacts of GM farming in Latin America.

(18)

(c) To what extent does GM technology provide a technological fix that is economically sustainable?

(12)

(Total 40 marks)

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Q6

(Total 40 marks)

TOTAL FOR SECTION B: 40 MARKS
TOTAL FOR PAPER: 90 MARKS

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Paper Reference(s)

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SECTION A

The following resources relate to Questions 1–5

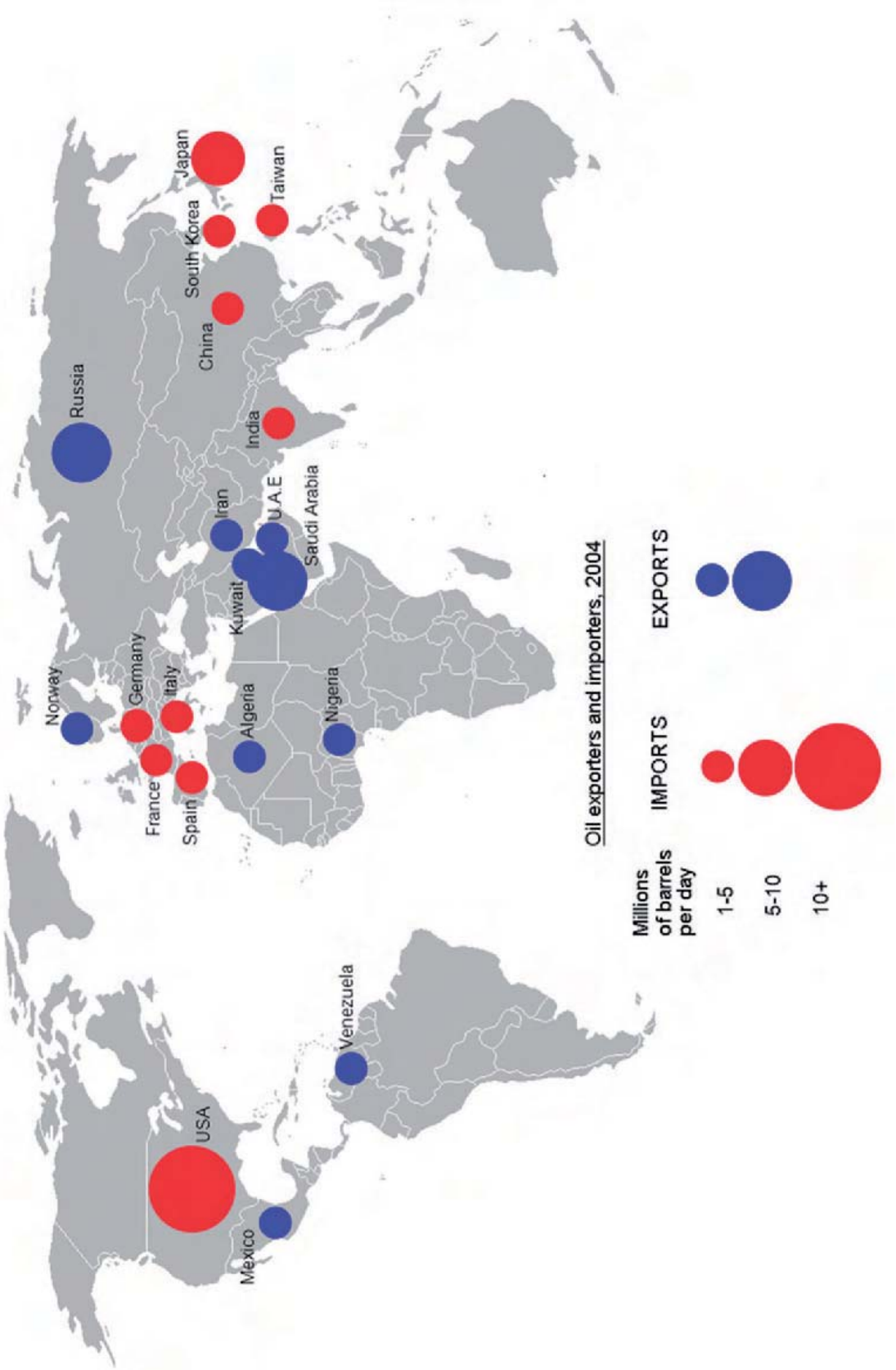
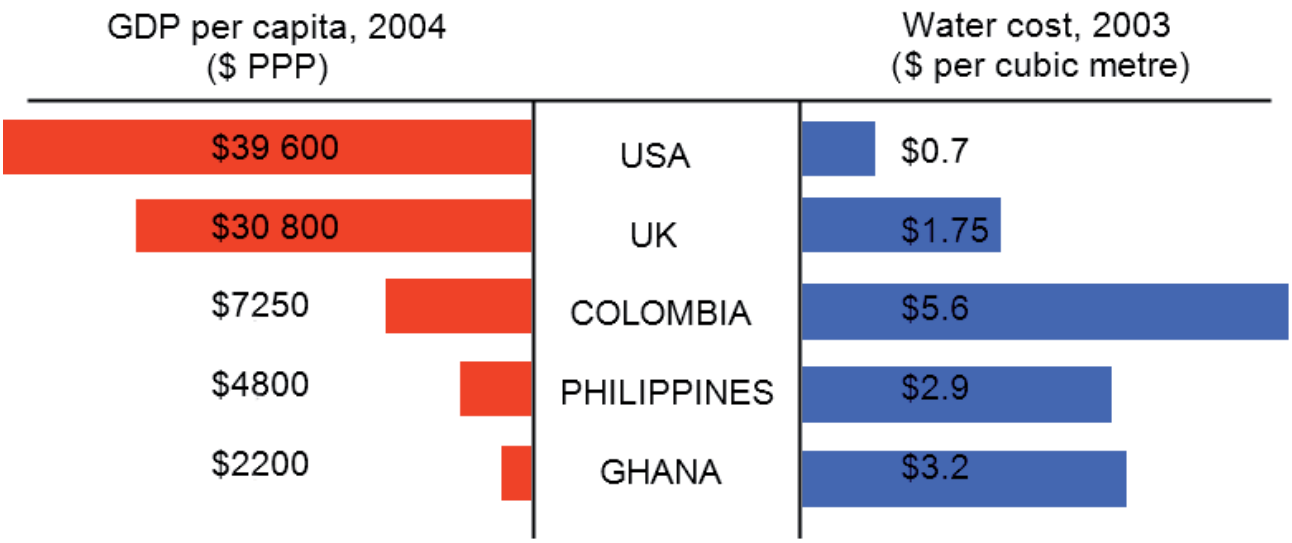


Figure 1 The top ten global oil exporters and importers, 2004

Figure 2 Per capita GDP compared to the cost of water for five countries



Note:
Costs are via piped household connections in the USA and UK
Costs are via informal water sellers in Colombia, Philippines and Ghana

$ PPP (Purchasing Power Parity) GDP is adjusted to reflect the cost of living in each country

Figure 3 **Examples of marine alien species invasions**

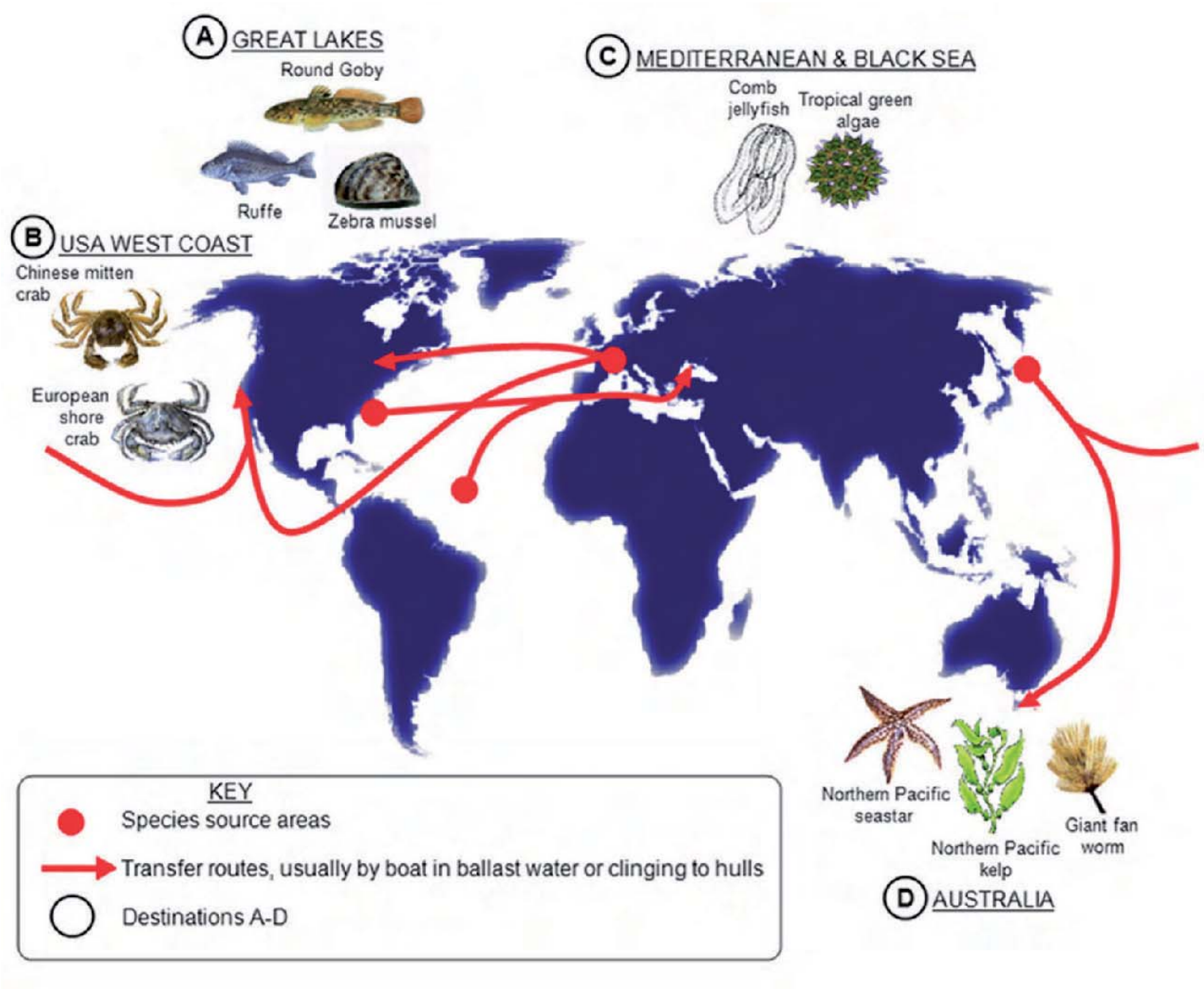
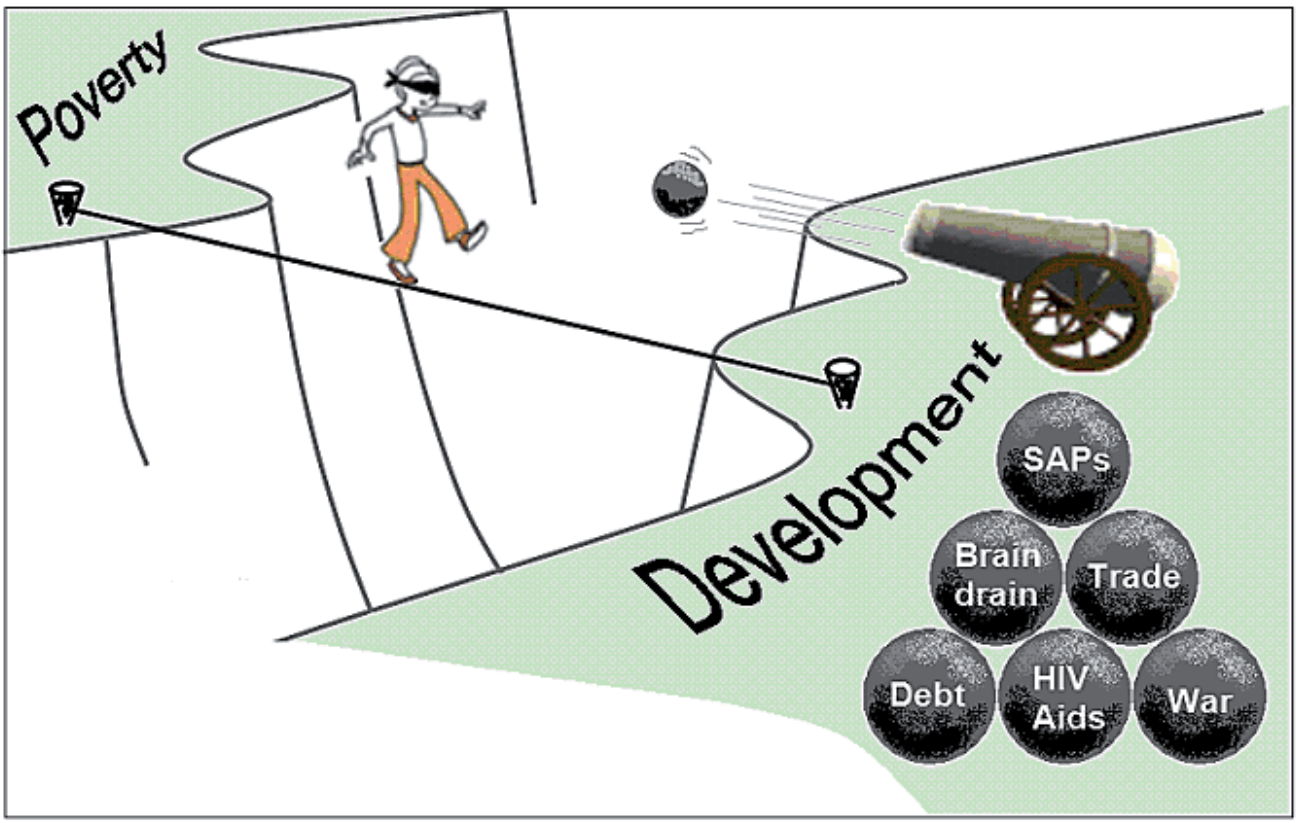


Figure 4 Country involvement in Intergovernmental Organisations

	Permanent Member of the **United Nations Security Council**	Member of **North Atlantic Treaty Organisation**	Percentage voting power at the **International Monetary Fund**	**G8** Member country	**World Trade Organisation** (key decision making countries)
India			1.9		
China	✔		3.7		
Russia	✔		2.7	✔	
Japan			6.0	✔	✔
Germany		✔	5.9	✔	
Canada		✔	2.9	✔	✔
Italy		✔	3.2	✔	✔
France	✔	✔	4.9	✔	✔
UK	✔	✔	4.9	✔	✔
USA	✔	✔	16.8	✔	✔

Figure 5 Walking the development tightrope



SECTION B

The following resources relate to Question 6

GENETICALLY MODIFIED CROPS IN LATIN AMERICA

Background

The first genetically modified crops to enter the consumer market were tomatoes, in the early 1990s. On a large commercial scale, GM cotton, soybeans, maize and oil seed rape (canola) have all been grown since 1996/97. The growth in GM, or transgenic, crop area has been rapid but not geographically even. In Europe the technology has been largely rejected by consumers, whereas GM crop production has accelerated in North and South America and to a lesser extent in Asia. Almost all GM crops have been developed with one of two traits – insect resistance and herbicide tolerance, although delayed ripening and virus resistance have also been developed in some crops. The crop varieties have been developed by major companies and are patented.

Figure 1: TNCs dealing in GMOs* and profits in 2005

Monsanto	US$ 255 million
BASF	US$ 3.7 billion
Bayer	US$ 1.9 billion
Dow Chemical	US$ 4.5 billion
Dupont	US$ 2.1 billion
Syngenta	US$ 460 million

*(*GMO = Genetically Modified Organisms)*

Farmers have to buy GM seed each year, rather than save some of their harvest to plant the following year.

By 2005, 21 countries were growing GM crops commercially, 11 in the developed world and 10 in the developing world with a total productive area of around 90 million hectares, farmed by over 8 million farmers.

Many countries have ratified (brought into law) or signed the Cartagena Protocol (2003) on biosafety. This international protocol adopts the precautionary principle with respect to GM crop technology and allows countries to ban imports of GM crops, as well as obliging exporters to label their products as GM.

Figure 2: Total GM crop area 1996–2005

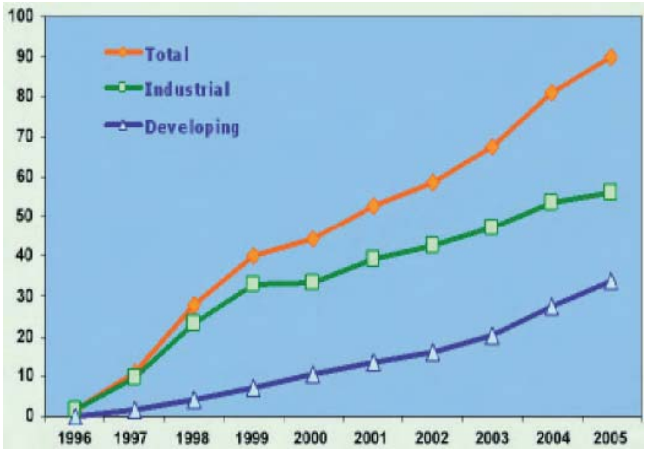
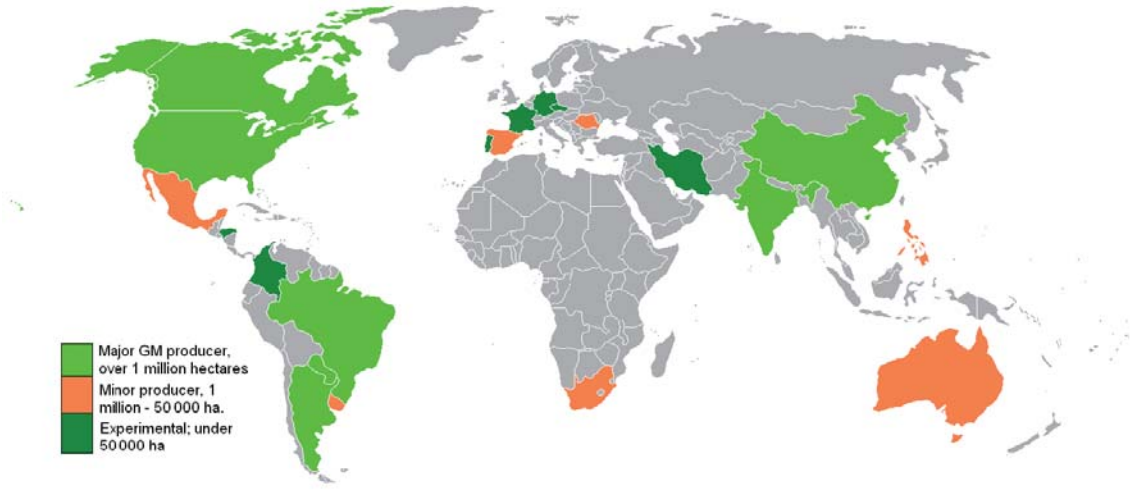


Figure 3: Global GM crop production, 2005



Latin America

In Latin America the main GM crops are maize (Argentina, Uruguay), soybean (Argentina, Brazil, Paraguay, Mexico, Uruguay) and cotton (Argentina, Mexico). GM soybean was approved for use in Argentina in 1996 and by 2005 there were over 15 million hectares planted. The country accounts for around 20% of total GM crop production. GM was made legal in Brazil in 2004, although GM crops had been grown for several years before this date.

Figure 4: Latin America's GM crop area, 2005 (hectares)

(Source: FAO Newsroom, 27 Jan 2005)

Virtually all soybeans grown in Argentina and Brazil are GM (compared to 55% globally) and around 25% of cotton is GM (compared to 28% globally). As the total area of GM crops in Brazil and Argentina has grown, there has been a shift in the balance of crop production in both countries, as well as a growth in the total area of arable land farmed.

Figure 5: Crop area in Brazil 1981–2006

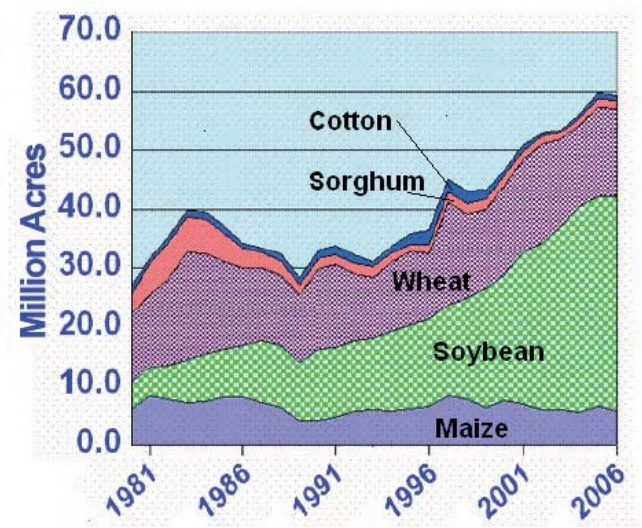


Figure 6: Harvested areas of major crops in Argentina 1994–2005

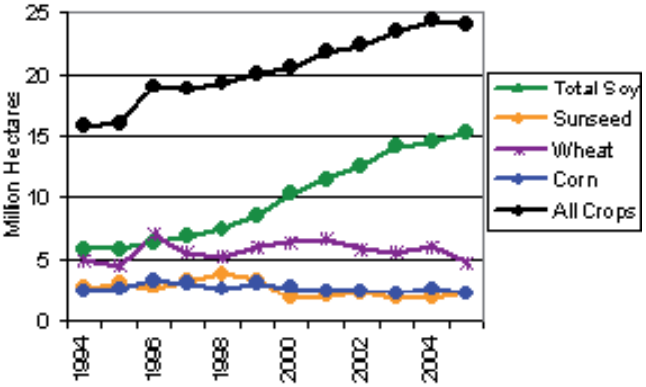
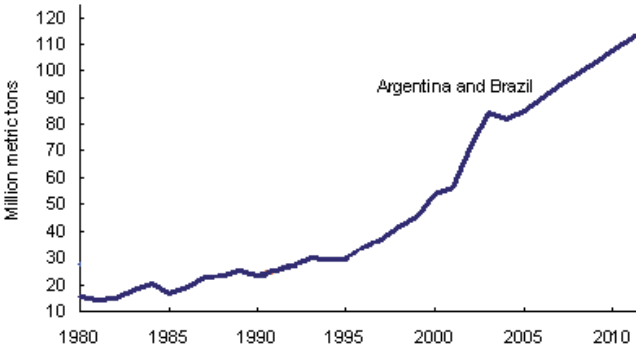
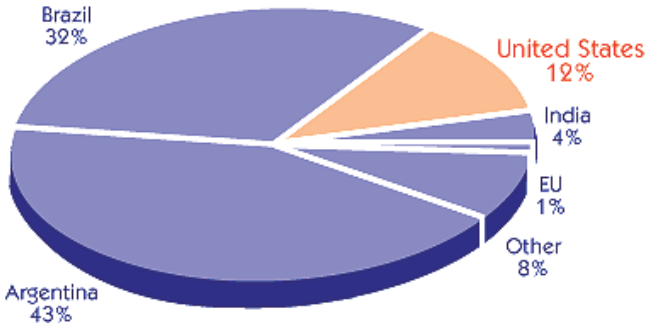


Figure 7: Export of soybeans and soybean meal from Brazil and Argentina 1984–2010 (projection)



(Source: USDA, 2004)

Figure 8: Global exports by country 2004



Whilst growing GM crops in the UK has not been made legal, they are imported and used for animal feed: *"Materials from GM crops are used in animal feed in the UK, and are subject to a safety assessment as part of their authorisation"* (Food Standards Agency, UK, 2006). Other Latin American countries have increased their exports of GM produced crops, particularly to the developed world.

Figure 9: Soybean growing provinces in Argentina

In Argentina, soy production makes up 42% of the value of all agricultural output, while in Paraguay it makes up 41% and in Brazil 24%, according to the FAO.

Brazil's farm exports reached a historical high of US$ 20.2 billion in the first half of 2005 – an increase of 10.2% over the same period in 2004. Soybeans continue to lead the farm export sector, with revenue of US$ 4.36 billion, even though international soy prices have fallen 20% since 2002. In Argentina, the value of soybean exports is around US$ 3 billion per year.

Figure 10: Trends in cotton and soybean commodity prices 1980–2006

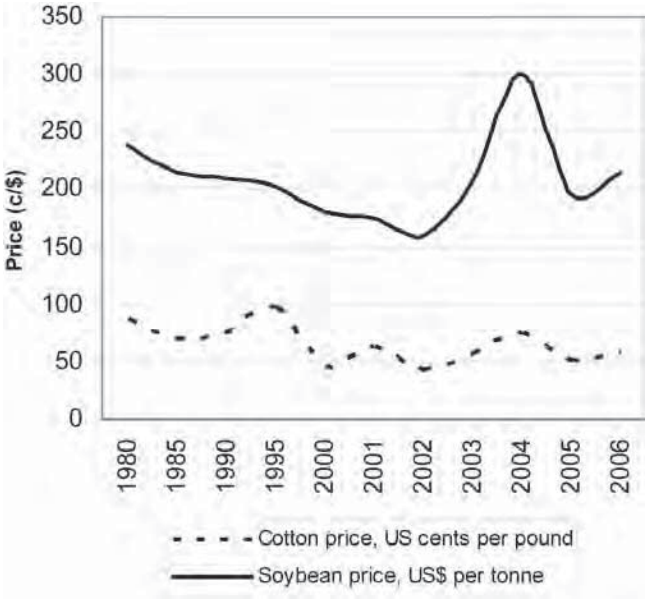


Figure 11: Deforestation 1996–2000 in selected Argentinian States

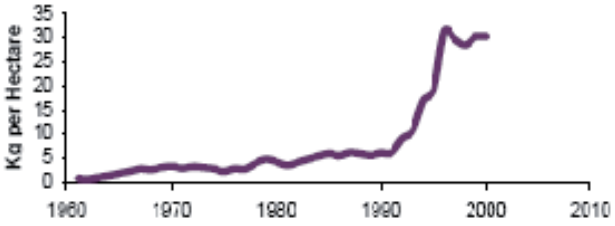
Chaco State	*118 000 hectares*
Salta State	*160 000 hectares*
Santiago del Estero State	*223 000 hectares*

The growth of GM crops in Argentina, and especially 'Roundup Ready' soybeans, appears to have had significant impacts on the rural economy:

- *About 150 000 small farmers have left the land as the area of GM crops has expanded*
- *Some 300 000 farm workers have lost their jobs as larger more mechanised farms have replaced smaller, traditional ones*
- *The number of farms units has fallen by around 100 000 since 1998*
- *Production of many staple foods, including milk, rice, maize, potatoes and lentils, has fallen sharply*

- *Glyphosate herbicide use has risen, from around 15 million litres in 1997 to 150 million litres in 2003/4*
- *There is little evidence to suggest that GM soybean has higher yields than traditional varieties, and some USA studies suggest it may actually yield 5–10% less*
- *Some scientists are concerned that weeds are becoming resistant to herbicides, leading to greater herbicide use, rather than lower use which GM varieties promised.*

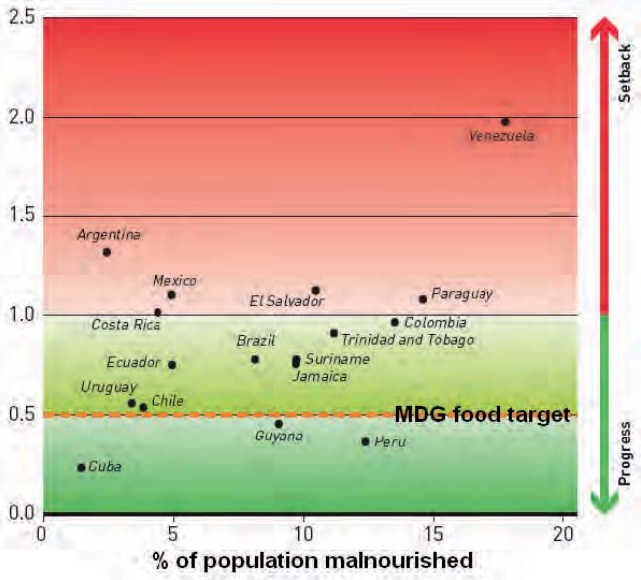
Figure 12: Fertiliser consumption per hectare in Argentina



(Source: WRI, 2006)

In 2000, the United Nations Millennium Development Goals set a target of reducing by 50% the number of people who were malnourished by 2015.

Figure 13: Progress in Latin America toward the Millennium Development Goal target of reducing by half the number of malnourished people, by 2015



(Source: adapted from 'Food Insecurity in the World, 2006', UN FAO)

Views on GM crop technology

View 1: Monitoring the environmental effects of GM crops

A group of experts convened at the UN Food and Agriculture Organisation (FAO) recommended that any responsible deployment of Genetically Modified (GM) crops needs to comprise the whole technology development process, from the pre-release risk assessment, to biosafety considerations and post release monitoring.

Environmental goals must also encompass the maintenance and protection of basic natural resources such as soil, water and biodiversity. In this way monitoring could become the key element in generating the necessary knowledge to protect agro-systems, rural livelihoods and broader ecological integrity.

Potential hazards associated with GM cropping – according to the scientists – have all to be placed within the broader context of both positive and negative impacts that are associated with all agricultural practices.

Extract from FAO Report on GM agriculture, 2006

View 2: "Genetically modified organisms (GMOs) are here to stay. Scientists in both public and private sectors clearly regard genetic modification as a major new set of tools, while industry sees GMOs as an opportunity for increased profits. Yet the public in many countries distrusts GMOs, often seeing them as part of globalisation and privatisation, as being "anti-democratic" or "meddling with evolution". In turn, governments often lack coherent policies on GMOs, and have not yet developed and implemented adequate regulatory instruments and infrastructures."

Extract from FAO 'Spotlight' magazine, 2001 "Genetically Modified Crops" by LO Fresco, Assistant DG FAO Agriculture Dept

View 3: "One of the most frequent benefits claimed about GM crops is that they will reduce herbicide use for farmers. However, a 2004 study based on US Department of Agriculture data that looked at herbicide use on herbicide tolerant GM plants, found that after an initial decline over the first three years, consistent increases in herbicide use have occurred for the subsequent five years. Herbicide use on herbicide tolerant GM crops in the US now exceeds herbicide use on conventional varieties."

Greenpeace Australia, 2006

View 4: "Here is a technology that is not only scale neutral, but delivers more benefits to the poor."

Dr. Clive James, Chairman, ISAAA (International Service for the Acquisition of Agri-biotech Applications)

View 5: "In particular cases, GM crops can contribute to substantial progress in improving agriculture, in parallel to the (usually slow) changes at the socio-political level. GM crops have demonstrated the potential to reduce environmental degradation and to address specific health, ecological and agricultural problems which have proved less responsive to the standard tools of plant breeding and organic or conventional agricultural practices. There is an ethical obligation to explore these potential benefits responsibly, in order to contribute to the reduction of poverty, and to improve food security and profitable agriculture in developing countries."

Nuffield Council on Bioethics, 2006

View 6: "Brazil is losing its soil, and above all, the small farmers are losing their land. They are pushed out by the big producers and must move further and further into the Cerrado or even into the Amazon forest, which covers 60 per cent of Brazil. Latest figures show that the yearly loss to the Amazon forest has increased by as much as 40 per cent in the year 2002 – mostly for cattle raising and agricultural fields, especially soy cropping. 16 per cent of the whole Amazon forest has already disappeared and every day, another 7000 ha of forest is lost – a surface of 10 kilometers by 7 kilometers. In Mato Grosso, Brazil's single biggest producer state, soy cultivated area increased 89 per cent between 1995 and 2004. A soy field in the Cerrado loses approximately 8 tonnes of soil per hectare per year."

'Soy expansion – losing forests to fields', WWF, 2003

View 7: "GM production is designed for large agroindustrial concerns that can afford expensive seeds and an equally expensive array of inputs. As a result, it is unsuitable for most small and medium-sized producers in Latin America. It leads to dramatic changes in the landscape. It causes a dramatic concentration of income and land. In Argentina, with 16 million hectares of GM soy, an estimated 60 000 farms have gone out of business over the last decade because of the crop."

Germán Vélez, director of Grupo Semillas, a Columbian NGO

Internet research sources

These websites represent a range of opinions and views both for and against GM farming technology:

www.monsanto.com is the website of Monsanto, a TNC involved in developing and marketing GM crops and farming technology.

www.genewatch.org GeneWatch UK is a not-for-profit group that monitors developments in genetic technologies from a public interest, environmental protection and animal welfare perspective.

www.bbc.co.uk The BBC is a public service news broadcaster. It news stories are archived and are searchable.

www.foodfuture.org.uk This website has been produced by the Food and Drink Federation (FDF), on behalf of the UK food and drink manufacturing industry.

www.fao.org The Food and Agriculture organisation of the United Nations monitor food and food supply issues and produces an annual update on global food insecurity (The State of Food Insecurity / SOFI).

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Paper Reference(s)

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ADVANCE INFORMATION

Information

Research focus materials are pre-released to candidates 4 weeks before the examination via the Edexcel website (www.edexcel.org.uk).

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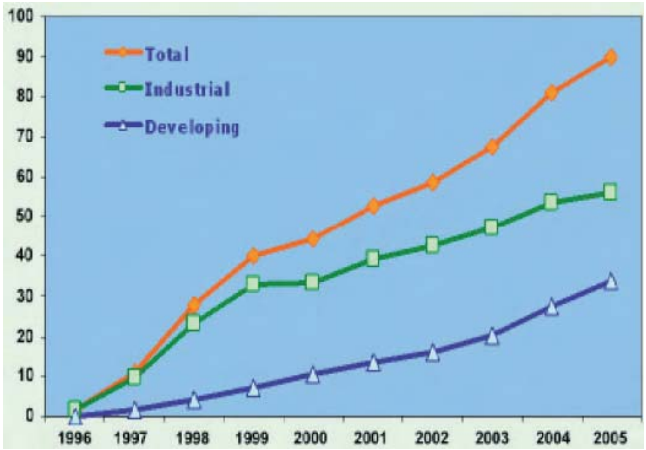
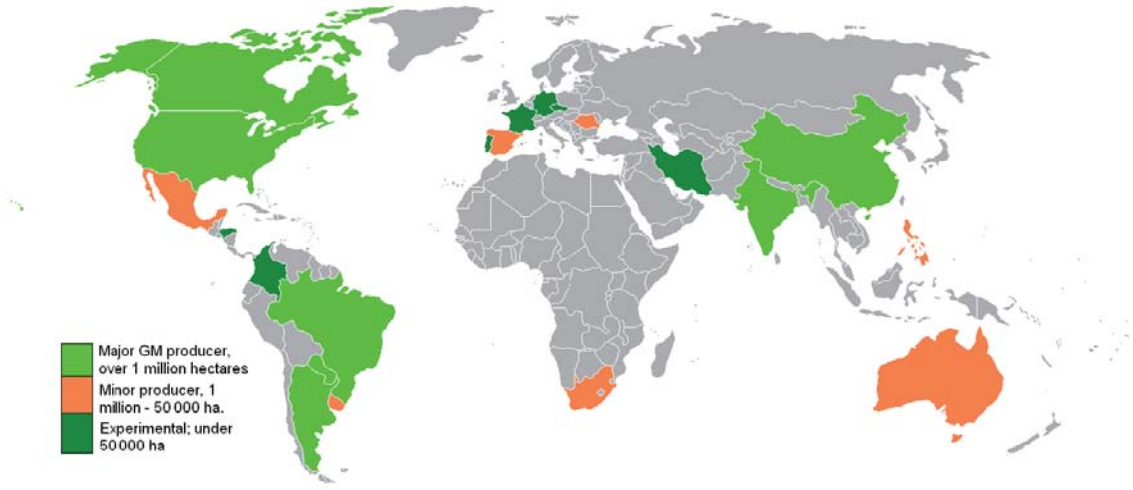


Figure 3: Global GM crop production, 2005



Latin America

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Figure 4: Latin America's GM crop area, 2005 (hectares)

(Source: FAO Newsroom, 27 Jan 2005)

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Figure 5: Crop area in Brazil 1981–2006

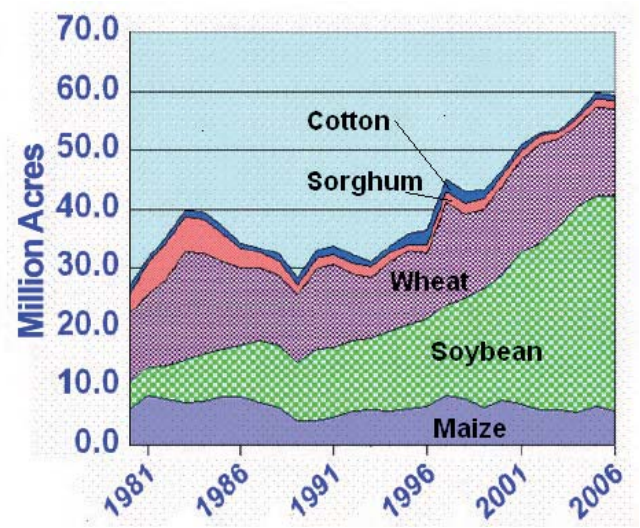


Figure 6: Harvested areas of major crops in Argentina 1994–2005

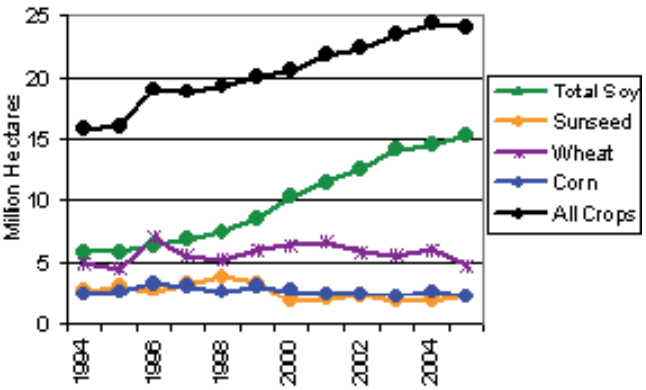
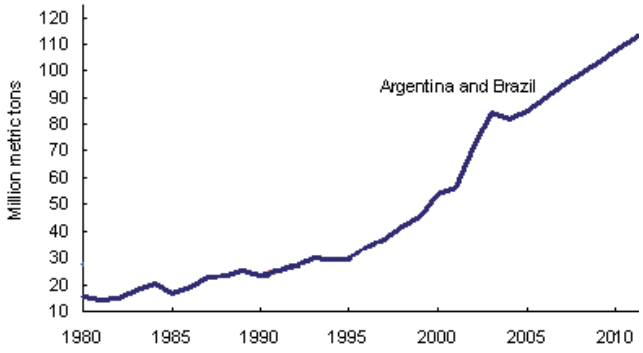


Figure 7: Export of soybeans and soybean meal from Brazil and Argentina 1984–2010 (projection)



(Source: USDA, 2004)

Figure 8: Global exports by country 2004

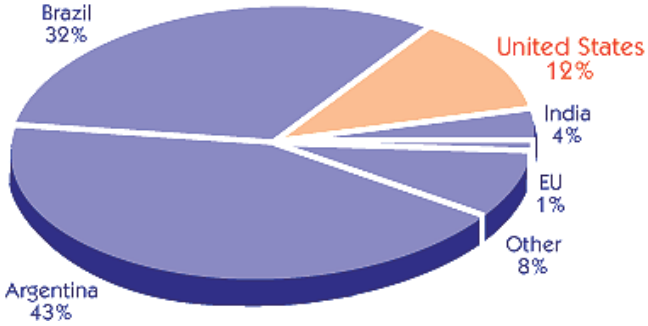


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Figure 9: Soybean growing provinces in Argentina

In Argentina, soy production makes up 42% of the value of all agricultural output, while in Paraguay it makes up 41% and in Brazil 24%, according to the FAO.

Brazil's farm exports reached a historical high of US$ 20.2 billion in the first half of 2005 – an increase of 10.2% over the same period in 2004. Soybeans continue to lead the farm export sector, with revenue of US$ 4.36 billion, even though international soy prices have fallen 20% since 2002. In Argentina, the value of soybean exports is around US$ 3 billion per year.

Figure 10: Trends in cotton and soybean commodity prices 1980–2006

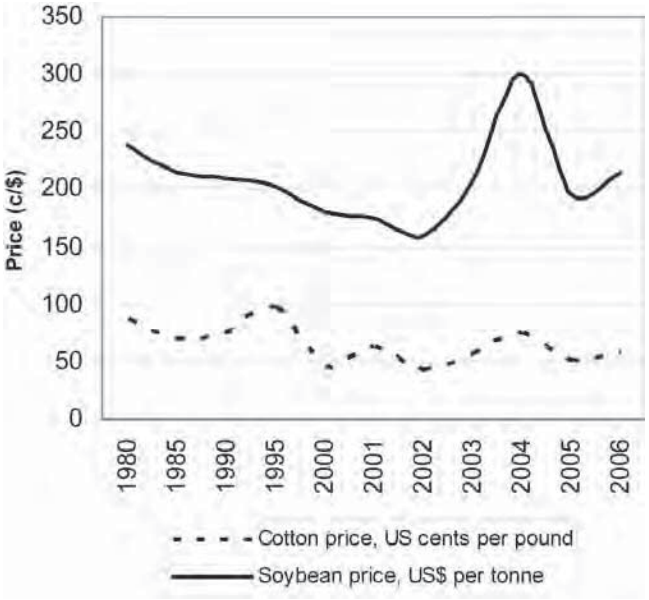


Figure 11: Deforestation 1996–2000 in selected Argentinian States

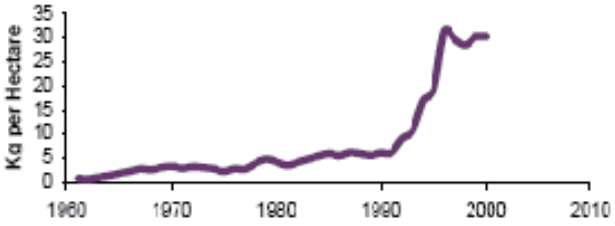
Chaco State	*118 000 hectares*
Salta State	*160 000 hectares*
Santiago del Estero State	*223 000 hectares*

The growth of GM crops in Argentina, and especially 'Roundup Ready' soybeans, appears to have had significant impacts on the rural economy:

- *About 150 000 small farmers have left the land as the area of GM crops has expanded*
- *Some 300 000 farm workers have lost their jobs as larger more mechanised farms have replaced smaller, traditional ones*
- *The number of farms units has fallen by around 100 000 since 1998*
- *Production of many staple foods, including milk, rice, maize, potatoes and lentils, has fallen sharply*

- *Glyphosate herbicide use has risen, from around 15 million litres in 1997 to 150 million litres in 2003/4*
- *There is little evidence to suggest that GM soybean has higher yields than traditional varieties, and some USA studies suggest it may actually yield 5–10% less*
- *Some scientists are concerned that weeds are becoming resistant to herbicides, leading to greater herbicide use, rather than lower use which GM varieties promised.*

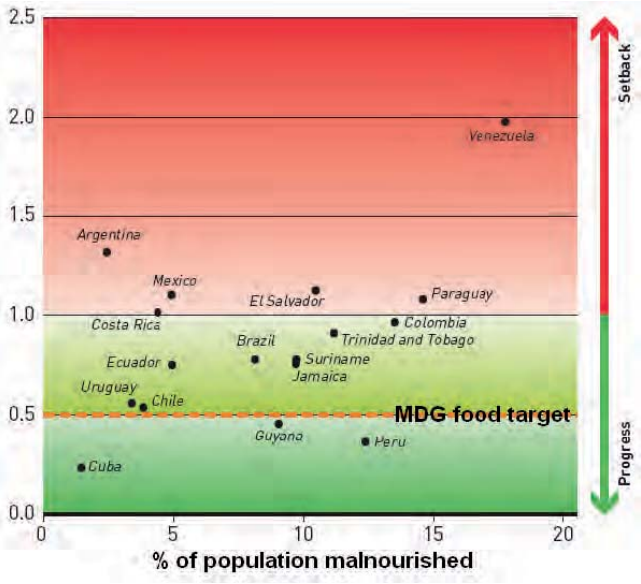
Figure 12: Fertiliser consumption per hectare in Argentina



(Source: WRI, 2006)

In 2000, the United Nations Millennium Development Goals set a target of reducing by 50% the number of people who were malnourished by 2015.

Figure 13: Progress in Latin America toward the Millennium Development Goal target of reducing by half the number of malnourished people, by 2015



(Source: adapted from 'Food Insecurity in the World, 2006', UN FAO)

Views on GM crop technology

View 1: Monitoring the environmental effects of GM crops

A group of experts convened at the UN Food and Agriculture Organisation (FAO) recommended that any responsible deployment of Genetically Modified (GM) crops needs to comprise the whole technology development process, from the pre-release risk assessment, to biosafety considerations and post release monitoring.

Environmental goals must also encompass the maintenance and protection of basic natural resources such as soil, water and biodiversity. In this way monitoring could become the key element in generating the necessary knowledge to protect agro-systems, rural livelihoods and broader ecological integrity.

Potential hazards associated with GM cropping – according to the scientists – have all to be placed within the broader context of both positive and negative impacts that are associated with all agricultural practices.

Extract from FAO Report on GM agriculture, 2006

View 2: "Genetically modified organisms (GMOs) are here to stay. Scientists in both public and private sectors clearly regard genetic modification as a major new set of tools, while industry sees GMOs as an opportunity for increased profits. Yet the public in many countries distrusts GMOs, often seeing them as part of globalisation and privatisation, as being "anti-democratic" or "meddling with evolution". In turn, governments often lack coherent policies on GMOs, and have not yet developed and implemented adequate regulatory instruments and infrastructures."

Extract from FAO 'Spotlight' magazine, 2001 "Genetically Modified Crops" by LO Fresco, Assistant DG FAO Agriculture Dept

View 3: "One of the most frequent benefits claimed about GM crops is that they will reduce herbicide use for farmers. However, a 2004 study based on US Department of Agriculture data that looked at herbicide use on herbicide tolerant GM plants, found that after an initial decline over the first three years, consistent increases in herbicide use have occurred for the subsequent five years. Herbicide use on herbicide tolerant GM crops in the US now exceeds herbicide use on conventional varieties."

Greenpeace Australia, 2006

View 4: "Here is a technology that is not only scale neutral, but delivers more benefits to the poor."

Dr. Clive James, Chairman, ISAAA (International Service for the Acquisition of Agri-biotech Applications)

View 5: "In particular cases, GM crops can contribute to substantial progress in improving agriculture, in parallel to the (usually slow) changes at the socio-political level. GM crops have demonstrated the potential to reduce environmental degradation and to address specific health, ecological and agricultural problems which have proved less responsive to the standard tools of plant breeding and organic or conventional agricultural practices. There is an ethical obligation to explore these potential benefits responsibly, in order to contribute to the reduction of poverty, and to improve food security and profitable agriculture in developing countries."

Nuffield Council on Bioethics, 2006

View 6: "Brazil is losing its soil, and above all, the small farmers are losing their land. They are pushed out by the big producers and must move further and further into the Cerrado or even into the Amazon forest, which covers 60 per cent of Brazil. Latest figures show that the yearly loss to the Amazon forest has increased by as much as 40 per cent in the year 2002 – mostly for cattle raising and agricultural fields, especially soy cropping. 16 per cent of the whole Amazon forest has already disappeared and every day, another 7000 ha of forest is lost – a surface of 10 kilometers by 7 kilometers. In Mato Grosso, Brazil's single biggest producer state, soy cultivated area increased 89 per cent between 1995 and 2004. A soy field in the Cerrado loses approximately 8 tonnes of soil per hectare per year."

'Soy expansion – losing forests to fields', WWF, 2003

View 7: "GM production is designed for large agroindustrial concerns that can afford expensive seeds and an equally expensive array of inputs. As a result, it is unsuitable for most small and medium-sized producers in Latin America. It leads to dramatic changes in the landscape. It causes a dramatic concentration of income and land. In Argentina, with 16 million hectares of GM soy, an estimated 60 000 farms have gone out of business over the last decade because of the crop."

Germán Vélez, director of Grupo Semillas, a Columbian NGO

Internet research sources

These websites represent a range of opinions and views both for and against GM farming technology:

www.monsanto.com is the website of Monsanto, a TNC involved in developing and marketing GM crops and farming technology.

www.genewatch.org GeneWatch UK is a not-for-profit group that monitors developments in genetic technologies from a public interest, environmental protection and animal welfare perspective.

www.bbc.co.uk The BBC is a public service news broadcaster. It news stories are archived and are searchable.

www.foodfuture.org.uk This website has been produced by the Food and Drink Federation (FDF), on behalf of the UK food and drink manufacturing industry.

www.fao.org The Food and Agriculture organisation of the United Nations monitor food and food supply issues and produces an annual update on global food insecurity (The State of Food Insecurity / SOFI).

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Paper Reference(s)

6GE04/1

Edexcel GCE

Geography
Advanced

Unit 4: Geographical Research

Sample Assessment Material

Time: 1 hour 30 minutes

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
2	
3	
4	
5	
6	
Total	

Materials required for examination
Nil

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ONE question only.
Write your answer in the space provided in this question paper.
Do not use pencil. Use blue or black ink.
Indicate which question you are answering by marking the box (☒). If you change your mind, put a line through the box (~~☒~~) and then indicate your new question with a cross (☒).

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 6 questions in this question paper.
The total mark for this paper is 70.
There are 12 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

Quality of written communication will be taken into account in the marking of ALL your responses. Quality of written communication includes clarity of expression, the structure and presentation of ideas and grammar, punctuation and spelling.

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Answer ONE question only.

It is essential you use your own research to support your arguments.

OPTION 1: Tectonic Activity and Hazards

1. Discuss the relationship between the nature of tectonic hazards and human responses to them.

(Total 70 marks)

OPTION 2: Cold Environments – Landscapes and Change

2. To what extent can Britain's physical geography during the Quaternary be determined through the study of relict glacial and periglacial landforms?

(Total 70 marks)

OPTION 3: Life on the Margins

3. To what extent do food security issues vary spatially and temporally?

(Total 70 marks)

OPTION 4: The Geography of Culture – Peoples and Places

4. Discuss the ways in which cultural values affect how societies use the environment.

(Total 70 marks)

OPTION 5: Pollution and Human Health at Risk

5. Explain why international initiatives are increasingly needed to cope with the risks of disease and pollution.

(Total 70 marks)

OPTION 6: Consuming the Rural Landscape – Leisure and Tourism

6. How can models contribute to the effective management of rural landscapes experiencing demands from leisure and tourism?

(Total 70 marks)

Leave blank

Indicate which question you are answering by marking the box (☒).
If you change your mind, put a line through the box (~~☒~~)
and then indicate your new question with a cross (☒).

Chosen Question Number:

Question 1 ☒ **Question 2** ☒ **Question 3** ☒

Question 4 ☒ **Question 5** ☒ **Question 6** ☒

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(Total 70 marks)

TOTAL FOR PAPER: 70 MARKS

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Paper Reference(s)

6GE04/1

Edexcel GCE

Geography

Advanced

Unit 4: Geographical Research

Sample Assessment Material

ADVANCE INFORMATION

Instructions to Candidates

Select one option based on the research you have carried out for Unit 4. The option statement will give you an idea of the sort of question you will need to answer in the examination for Unit 4. You should use the statement contained here to focus your research prior to the Unit 4 examination.

Information

Research focus materials are pre-released to candidates 4 weeks before the examination via the Edexcel website (www.edexcel.org.uk).

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OPTION 1: Tectonic Activity and Hazards

- The physical causes and effects of tectonic hazards, and responses to them

---

OPTION 2: Cold Environments – Landscapes and Change

- The link between landforms and past climate

OPTION 3: Life on the Margins

- The complex causes of food insecurity

OPTION 4: The Geography of Culture – Peoples and Places

- Attitudes toward the environment in different cultures

OPTION 5: Pollution and Human Health at Risk

- The need for international action

OPTION 6: Consuming the Rural Landscape – Leisure and Tourism

- The carrying capacity model and other models

C Sample mark schemes

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:

  i) ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear
  ii) select and use a form and style of writing appropriate to purpose and to complex subject matter
  iii) organise information clearly and coherently, using specialist vocabulary when appropriate

Unit 1: Global Challenges

Section A

Question Number	Question	Series
1.(a)	**Global hazards can be hydro-meteorological or geophysical. Arrange the following hazards into these two groups by putting the letters A to D into the table provided.**	
	Answer	Mark
	A earthquakes B tropical cyclones C volcanic eruptions D stormy coasts Must be in correct columns but accept any order hydro-meteorological: *B*, *D* geophysical: *A*, *C*	**(2)**

Question Number	Question	Series
1.(b)	**What evidence suggests that location X is a disaster hotspot?**	
	Answer	Mark
	any two from hydro-met hazard eg cyclones/typhoons(1), geophysical eg earthquake zone(1) or dense population/vulnerable people (1)	**(2)**

Question Number	Question	Series
1.(c)	**Explain why earthquakes and volcanoes occur in the same areas.**	
	Answer	Mark
	pattern linked to tectonic plate boundaries (1) caused by weaknesses or movements in the earth's crust (1) additional explanations/details/examples eg island arcs (1)	**(3)**

Question Number	Question	Series
1.(d)	**Describe and explain the distribution of tropical storms.**	
	Answer	Mark
	Description (2 marks) mostly over oceans (1) moving away from tropics/equator (1) and generally westwards (1) through any named sea area eg Gulf/Caribbean (1). Explanation (2 marks) triggered by warmer water (27°C+)(1)path and nature linked to (stalling) trade winds (1) earth's spin/coriolis effect(1) Do <u>not</u> allow 'in the tropics'	**(4)**

Question Number	Question	Series
2.(a)	**Describe the general pattern of temperature change from**	
	Answer	Mark
	1000 until 1900. generally falling/decreasing/getting cooler (1) **Since 1900.** generally rising/increasing/getting warmer (1)	**(2)**

Question Number	Question	Series
2.(b)	**Suggest two ways of investigating medium and longer term climate change, before global temperature records were available (from 1861).**	
	Answer	Mark
	any two from - old maps/records(1) tree rings/vegetation change (1) evidence from ice cores (1) retreating glaciers (1) pollen analysis in peat (1) geomorphology (deposits)(1) coral records(1) changes in sea level (1) relict species (1) etc	**(2)**

Question Number	Question	Series
2.(c)	**Climate change may have natural and human causes. Arrange the following into these two groups by putting the letters A to F into the table provided.**	
	Answer	Mark
	A damage to the ozone layer over the Antarctic B changes in solar output C volcanic eruptions D deforestation in the tropics E changes in the earth's orbit F exhaust fumes from motor vehicles Must be in correct columns but accept any order	**(2)**

natural	human
B	*A*
C	*D*
E	*F*

Question Number	Question	Series
2.(d)	**Explain how evidence from the graph might support arguments for both.**	
	Answer	Mark
	natural causes of climate change (2) has been warmer in distant past (1) human cause unlikely then (too few people/industries) (1) temperatures fell despite population/pollution growing (1) lowest point is in last century not in distant past (1) human causes for global warming (2) most recent rise shows effect of pollution/due to modern car use and power stations (1) rise in last century likely to be a human cause (exponential rise in pollution/population growth) (1) big fluctuations in last 50 years unlikely to be natural(would expect slower response) (1) **(4)**	

Question Number	Question	Series
3.(a)	**Describe two of the changes shown on the map of the Arctic.**	
	Answer	Mark
	Any <u>two</u> responses from: decrease in area of sea ice (1) northward migration of tree line (1) melting of permafrost areas (1) or similar ideas	**(2)**

Question Number	Question	Series
3.(b)	**What advantages might rising temperatures bring to the Arctic?**	
	Answer	Mark
	Any two responses: sea routes may be easier - less sea ice (1) easier to extract resources/minerals - unfrozen ground (1) increased marine fisheries – food supplies for cod (1) increased opportunities for agriculture/forestry – warmer climate/soils (1)	**(3)**

Question Number	Question	Series
3.(c)	**Explain one emerging environmental concern in the Arctic.**	
	Answer	Mark
	Range of answers possible, eg changes in hydrology, ecosystems, food security, etc. Issues do overlap so allow some drift in focus. Looking for links to climate change, some explanation, some impacts and examples eg Snowmelt increases runoff/discharge (1) which leads to flooding/wetter ground conditions (1) warmer/fresh water may reduce fish habitat/numbers (1) beginning to affect char and cisco in some Canadian rivers (1) affects rest of food chain.	**(4)**

Question Number	Question	Series
3.(d)	**Explain how Arctic warming will have consequences in the wider world.**	
	Answer	Mark
	Add to rising sea levels(1), decrease ocean salinity (1), affect/ocean currents(1), affect fish resources(1), threaten bird migrations(1), change weather patterns/polar front(1) etc. Allow further mark for extended point or exemplification eg Atlantic conveyor	**(4)**

Question Number	Question	Series
4.(a)(i)	**Which EU country was the source of most immigrants to the UK?**	
	Answer	Mark
	Poland	**(1)**

Question Number	Question	Series
4.(a)(ii)	**Suggest reasons for this flow.**	
	Answer	Mark
	Poles are economic migrants (1) young/single (1) have skills (1) low wages/no jobs at home or more money/work available in UK (1).	**(2)**

Question Number	Question	Series
4.(b)(i)	**Which EU country was the destination for most UK emigration?**	**0706**
	Answer	Mark
	Spain	**(1)**

Question Number	Question	Series
4.(b)(ii)	**Suggest reasons for this flow.**	
	Answer	Mark
	Brits are voluntary migrants (1) older/retired/well-off (1) wanting warmer climate/different lifestyle (1) Two marks for each flow.	**(2)**

Question Number	Question	Series
4.(c)	**Which of the following population movements is best described as economic migration?**	
	Answer	Mark
	People travelling abroad to find work elsewhere	**(1)**

Question Number	Question	Series
4.(d)	**Explain why the UK is a 'global hub' for international migration.**	
	Answer	Mark
	Accept ideas from world map and/or own knowledge. Wide range possible but credit arguments and detail too: destination for Commonwealth arrivals such as India/Pakistan, etc (1) including links with relatives already here (1) Links with USA/Australia/New Zealand as English-speaking (1) including two way movement for employment such as Australia/New Zealand/USA/even Spain (1) new sources such as China relate to rapid growth in skills/production/market (1) others such as educational/training hub (1) London as world city (1), etc	**(4)**

Question Number	Question	Series
5.(a)	**Which of the following best describes urbanisation?**	
	Answer	Mark
	The growth in the proportion of people living in cities	**(1)**

Question Number	Question	Series
5.(b)	**Suggest an appropriate term for the housing area A.**	
	Answer	Mark
	Shanty, squatter settlement or S American alternatives - Favela/ barriados/periferia	**(1)**

Question Number	Question	Series
5.(c)	**Compare the sites and buildings of the two housing areas shown.**	
	Answer	Mark
	Area A – sited on a steep slope/at edge of city (1) unplanned/temporary/illegal/self build/poor materials (1) Area B - on lowland/within city (1) planned/well constructed/permanent/moder/high rise (1) max 2 marks each	**(4)**

Question Number	Question	Series
5.(d)	**Explain the likely consequences of the urban growth shown in the photograph.**	
	Answer	Mark
	Accept socio-economic and/or environmental effects, wide topic so no extended marks eg overcrowding leads to health issues (1) poor water supplies/sewage lead to disease (1) exemplification by place/diseases, etc. Use of unstable slopes leads to landslides (1) woodland clearance leads to increased runoff and erosion (1) lack of jobs means no/poor wages transport difficulties (1) increase in crime (1) etc.	**(4)**

Question Number	Question	Series
6.(a)	**Match the pattern of lights from settlements in each of the following places with their description, by putting the letters X ,Y and Z into the table provided**	
	Answer	Mark
	X in the main urban areas Y along the banks of a major river Z following the coast place / description UK / ***X*** Mediterranean / ***Z*** Egypt / ***Y***	**(2)**

Question Number	Question	Series
6.(b)	**Suggest why most of Africa is in darkness, *switched off* from development.**	
	Answer	Mark
	Social - lack of education and skills (1) poor health and nutrition (1) politics/tribal issues (1) Environmental – inhospitable environments (1) poor access in a large continent (1) Economic - limited investment in infrastructure/power supplies (1) financial risks for entrepreneurs/ investors (1) exemplification such as Tourism TNCs put off by conflict in East Africa (1) etc	**(4)**

Question Number	Question	Series
6.(c)	**Explain the consequences of this lack of development for people in the poorer parts of Africa.**	
	Answer	Mark
	Need to avoid list so: left behind by progress/ideas (1) valuable resources (human or physical) wasted, or remaining unexploited (1) perhaps conflict/war/terrorism (1) social impacts such as continued cycle of starvation, ill health and death, etc (1) exemplification such as Gambia and Sierra Leone, Eritrea and Somalia (1)	**(4)**

Section A: Total 65 Marks

Section B

Question Number		Question
7.(a) **QWC (i, ii, iii)**		**Suggest reasons for the trends in natural disasters shown in the graph.** **(10)**
Series		Indicative content
		Trends – the increase in the number of water and weather related disasters has been very rapid, beginning in the 1930s and rising to a figure of over 2000 per decade by 1990. Flooding and storms are therefore a growing problem. In contrast, the number of tectonic disasters has risen relatively slowly, may be a little over 10% in comparison. Some suggestion of a fall in all disasters by end of century/ more recently. Explanation/commentary. Disasters may involve deaths, homelessness, emergency situations, but we must also bear in mind the effects of better reporting, media coverage etc. However, the storms may well be related to climate change/global warming, in addition floods also relate to increasing wetland loss, deforestation and urbanisation, which increase runoff and encourage settlement in risky floodplain zones. In many poor and new urban settlements, people are more vulnerable to disaster than they were previously. Tectonic hazards often have less impact and their occurrence is more dispersed and localised. This may be why they appear less common and do not always reach disaster status. An important point here is that we are improving our ability to predict, prepare for and plan against hazards and this prevents them being turned into disasters. It is this that is driving down both graph trends in recent decades. Examples of this are flood prevention, hurricane warnings, building codes and emergency provision.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Describes trends with little explanation. May refer to types of disaster. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Attempts to interpret the trends in the graph. Shows understanding of disasters as opposed to hazards and why they have increased. Geographical terminology is used with some accuracy. Lower end descriptive. There are some written language errors.
Level 3	8-10	Structured, detailed account of disaster status and vulnerability of population/property/infrastructure, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Question Number		Question
7.(b) **QWC (i, ii, iii)**		**Choose one named area of the world and explain why it is considered a disaster hotspot.** **(15)**
Series		Indicative content
		Expect some reference to its global location. Definition given or implied. Need to explain multi-hazard status (better answers will go across hydrometeorological/tectonic divide) eg plate boundaries and tropics. Need to consider hazard ie people and property at risk and may include reference to vulnerability (dense population, unprepared, unprotected). This is not really about the subsequent impacts, but why a disaster occurred. May choose example such as Manila and Philippines which have tsunami, volcanic (Mayon) and typhoon threats, and risk too of floods, landslide even sea level rise. Here population is dense and poor in both city and rural areas. Not well prepared for disasters but has warning systems for volcanoes (Pinatubo) and tropical cyclones. Or a better developed area like California and SF/LA risk is tectonic with St Helens and San Andreas fault zone. Earthquakes in LA '94, SF '98. Breadth of answer could include landslide, floods, wildfire and even tsunami. Vulnerability here is about large dispersed urban population but also high value of property, infrastructure and business. Important to US economy. High level of preparedness, technology, building codes, insurance, etc, but 'big one' is real threat. Drought and flood are kept at bay by massive investment in dams and water storage, etc which are also vulnerable to earthquake.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two disaster hotspot credentials. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Describes example and hazards involved. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of the range of hazards and how these could lead to disaster using appropriate geographical terms to show understanding. Some reference to what is at risk and impacts. Written language errors are minor.
Level 4	13-15	Structured, detailed account of disaster status and vulnerability of population/property/infrastructure, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Question Number		Question
8.(a) **QWC (i, ii, iii)**		**Suggest what this survey, carried out in the USA, shows about people's views on global warming.** **(10)**
Series		Indicative content
		Expect some basic use of resources and what they show. The Problem – most people are aware of increased global warming, and have some idea of the causes, but see it as really a problem for the future. Solutions - they feel governments should do more and prefer solutions linked to tax breaks for research/business and not those imposed on people via power/fuel costs. Explanation/commentary –This poll is in USA so people's view shows less agreement on GW causes than seen elsewhere, and many are unwilling to agree on full link with fossil fuels/resource consumption (especially Republicans?). Not wanting to lose lifestyle, cheap gas, and motor vehicle reliance. America is a low tax, private enterprise society. USA not currently signed up to Kyoto protocol, vested interests in Oil, concerns over competition from China and India.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Describes some findings. May refer to bias of respondents. Geographical terminology is rarely used. Frequent written language errors.
Level 2	5-7	Some structure. Attempts to interpret the results of the survey. Shows understanding of issues and views of respondents. Geographical terminology is used with some accuracy. Lower end descriptive. Some written language errors.
Level 3	8-10	Structured explanation of survey findings and the wider issues involved. Examines the values/attitudes revealed and uses appropriate geographical terms to show understanding. Language written errors are rare.

Question Number		Question
8.(b) **QWC (i, ii, iii)**		**Explain how people are attempting to deal with the effects of global warming at either a local or a global scale.** **(15)**
Series		Indicative content
		Local scale- reducing carbon footprint and lobbying. Where it hurts = industry and construction 40%, travel 30%, home 20%. Offset schemes eg plant trees to cover air flights. Energy efficiency at home eg insulation, lower settings etc Home power eg B&Q wind turbines. Choice of car eg cleaner, smaller, hybrid vehicle. Lights, standby, computers, all can reduce power drain. Shopping eg food miles, shop local, fair trade. Action might include agenda 21, recycling, joining group like FOE or Greenpeace. Question – is it worth it with global players having so much influence? Global scale- international agreements eg Kyoto till 2012, some notable non-signatures. Scientific groups eg IPCC lobby. EU initiative 2007. Looking to stabilise emissions and reduce CO_2. Temperatures will still rise after CO_2 reductions. Emissions (carbon)trading, CDM (planting forests), all have critics. Technological steps include more efficient transport - fuel economy, ethanol use, lower emissions: alternative power – wind energy, solar energy, nuclear, gas and efficiency of coal-fired plants, renewables. Building efficiency: others – halt to deforestation, sequestration, conservation tillage. Big argument is adaption versus mitigation.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two ways to deal with global warming. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Describes how to deal with global warming. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of a variety of ways to deal with global warming using some examples and appropriate geographical terms to show understanding. Written language errors are minor.
Level 4	13-15	Structured, detailed or evaluative account of range of ways to manage global warming, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Question Number		Question
9.(a) **QWC (i, ii, iii)**		**Suggest reasons for the contrasting population patterns in these two suburbs.** **(10)**
Series		Indicative content
		Expect use of resources and what they show. Contrasts: age structures' only real difference is high number of 25-44 and 18-24 year olds in outer suburb, whereas inner city has slightly more children and older adults. Outer suburb is mainly white with inner city having 40% non-whites and black, Asian and mixed race groups. Outer suburb is better off with high home and car ownership. Unemployment (17%) and lone parenting (56%) are issues in the inner city. Explanation/commentary – The outer suburb is clearly more affluent with largely white middle-class families. They have probably moved here (filtering) to take advantage of better facilities as they have higher incomes. They can afford to commute to work, and may be skilled or professional workers. The inner city has a mix of older and younger people, with people generally less well off and facing various social and financial issues. The high non-white population suggests either recent immigrants or those unable to afford more expensive housing. Atial and ethnic groups may gravitate here for support and specific needs. Unemployment, low skills and perhaps students may be other factors involved. Additional points about such areas should have been covered in the sections 'foundations for study' and 'roots'. Some knowledge of examples of such places might therefore be expected.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Describes one or two differences with limited explanation. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Interprets the differences in the data provided, referring to wider issues or examples. Geographical terminology is used with some accuracy. Lower end descriptive. Some geographical terminology is used. There are some written language errors.
Level 3	8-10	Structured explanation of differing population patterns in the two areas and some of the wider issues involved. Uses examples and appropriate geographical terms to show understanding. Written language errors are minor.

Question Number		Question
9.(b) **QWC (i, ii, iii)**		**Examine the effects of a greying population on health and welfare services.** **(15)**
Series		Indicative content
		Greying population – retired in UK will reach 10 million by 2010. Increasing dependency ratios coupled with decreasing role of families as carers. May need more nursing, hospices, etc when NHS is undergoing change. 'Bed-blocking' and'putting in a home' are media topics. More carer training and places will be needed. Also a background issue is fall in pension schemes and their value, end of company schemes etc half of all DHS benefits are for elderly (only 20% for children). Special needs in terms of care, leisure, housing and transport. Problem will increase and dependency means that working population will not be able to support rest. Demographic problem of older 'suburbs' and retirement areas.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two effects, probably on services. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Describes some relevant effects on health or welfare services. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of a variety of greying population effects on health and welfare services using some terms and examples and appropriate geographical terms to show understanding. Written language errors are minor.
Level 4	13-15	Structured, detailed or wide-ranging account of the challenges to health and welfare services posed by a greying population, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Question Number		Question
10.(a) **QWC (i, ii, iii)**		**Suggest why the various groups shown hold differing views of this global trade.** **(10)**
Series		Indicative content
		Expect some basic use of resources and what they show. Consequences may be good and bad, so top responses could be evaluative. Context - goods are varied - including manufacturing, technology, clothes and food. So China has a massive range of production, including items we might imagine as being made in UK. Size of ship suggests massive orders, scale of production, use of containers, even perhaps 'on time' for Christmas. Explanation/commentary – NIC businesses can meet large orders using large-scale production, low-wage/flexible workforce, fewer restrictions, and still ship long distances to make profits. For workers the relatively low wages are valued jobs and income where there was previously only subsistence farming or poverty. However some may be being exploited. For such governments these are valuable exports and jobs, though pollution/over-consumption issues may be ignored. Customers will gain from lower prices and competition, but this may lead to loss of UK jobs – exported to NICs. This may also affect manufacturing base in this country and affect balance of trade/government taxes. Could lead to regional unemployment in heavier/assembly industries. There are some concerns over welfare/exploitation issues and ethical trading.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Describes some impacts with limited explanation. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Explains impacts of globalisation referring to issues/examples of effects at source and destination. Lower end descriptive. Some geographical terminology is used. There are some written language errors.
Level 3	8-10	Structured explanation of consequences of globalisation, for producers and buyers, addressing the wider issues involved. Uses examples and appropriate geographical terms to show understanding. May evaluate. Written language errors are minor.

Question Number		Question
10.(b) **QWC (i, ii, iii)**		**Explain how people can manage the environmental and social costs of globalisation for a better world.** **(15)**
Series		Indicative content
		'for a better world' implies perhaps a moral dimension for top answers. Adopt strategies which reduce costs of consumption eg at a Local scale- Buying locally to cut food miles, supports local jobs and go organic. Choose smaller economy of village store not global muscle of supermarkets. Designer goods may have exploited workforce or created 'robber' industry, using up valuable resources. Offset schemes eg plant trees to cover air flights. Action might include agenda 21, recycling, joining groups like FOE or Greenpeace. Many green decisions help eg using recycling and less landfill, composting, use of bio-degradable packaging, use of public transport etc. Wider scale- could press for international agreements and take interest in WTO etc. Technological steps include renewables.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two ways to approach globalisation. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Describes some examples of how to cope with globalisation. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of a variety of ways to manage globalisation using some terms and examples and appropriate geographical terms to show understanding. Written language errors are minor.
Level 4	13-15	Structured, detailed or wide-ranging account of how to manage the environmental and social costs of globalisation, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

Section B: Total 25 Marks

TOTAL FOR PAPER: 90 Marks

Unit 2: Geographical Investigations

Section A

Question Number		Question
1.(a) **QWC (i, ii, iii)**		**Describe how the depression shown in this chart might produce extreme weather hazards.** **(10)**
Series		Indicative content
		Isobars are close together, strong to gale force winds up to 40 knots (45mph) from NW. This could cause some structural damage and topple trees into streams (a potential local flood hazard). At sea, high waves and surge could affect coastal areas. Heavy showers and rain following behind the cold front, result from the subsiding polar air causing the occlusion. The depression may lead to a more widespread flooding hazard, especially in Ireland and NW Scotland. Snow is falling as the cold polar air returns. The strong winds may cause blizzard conditions over high ground in Scotland. It is January and temperatures whilst in single figures will almost certainly be reduced by the wind chill, to below freezing.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two basic ideas about severe weather features. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Some severe weather opportunities identified using the map, with some explanation of a depression. Geographical terminology is used with some accuracy. Lower end descriptive. There are some written language errors.
Level 3	8-10	Structured account of a range of severe weather hazards, interpreted from information on the synoptic map, using appropriate terms/data. Uses examples and appropriate geographical terms to show understanding. Written language errors are rare.

Question Number		Question
1.(b) **QWC (i, ii, iii)**		**Examine the success of strategies used to manage one type of extreme weather event.** **(10)**
Series		Indicative content
		Some types of extreme weather are not easily managed therefore best avoided in this answer, but candidates could argue their lack of success. Most probably choices are hurricanes, river floods and perhaps drought. **Eg Hurricane watch in Florida:** USA is good example of where some success occurs. The use of technology – satellite imagery and tracking via NOAA – allows people to adapt to hurricane events, by prediction and risk assessment. This gives FEMA and civil authorities best information on which to act. Evacuation prior to hurricanes in 2004 and 2005 was a key reason for low death/casualty rate. Puts help where most needed. Note comparison with Cuba, Haiti, etc faced by similar events. Financial recompense through insurance and emergency programs are also available. However Katrina showed that even this may fail faced with extremes. The below-river level site of New Orleans was a key problem as levees failed under severe pressure. So many let down by older hard engineering approach, or unprepared for severity. Note those who could not get away were the ones who suffered, and vulnerable groups were main victims. May compare with other countries, events, etc. **Eg Flood watch:** single scheme such as floodplain zoning, single city defences or integrated catchment approach so depth or range of approach accepted. **Eg Drought solutions:** probably small-scale scheme.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two aspects of a strategy, eg how to stop floods. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Explains the strengths or weaknesses of strategies appropriate type of extreme weather. Some use of examples. Lower end descriptive. Geographical terminology is used with some accuracy. Lower end descriptive. There are some written language errors.
Level 3	8-10	Structured examination of the success of range or detail of strategies, using appropriate geographical terms and exemplification. Written language errors are rare.

Question Number		Question
1.(c) **QWC (i, ii, iii)**		**Describe and explain a programme of fieldwork and research you would use to investigate the links between precipitation and flooding along a stretch of river.** **(15)**
Series		Indicative content
		Evidence should focus on planning and methodology of fieldwork and use of research sources and how these can link weather data (precipitation) to flood response. A weather diary over a number of days could record the amount and intensity of rain or snowfall. In addition to this primary source, support could come from local or Met Office data. Forecasts and newspapers would refer to the wider situation and antecedent conditions. River flow data could be taken by fieldwork measurements, extrapolating discharge values for a river at flood levels – over bankfull (obvious risk factor). Research could come from earlier flood episodes, newspaper coverage, Environment Agency or National Water Archive sources (these data are based on fixed recording equipment in rivers). One of the simplest ways to see the links between rainfall input and flood response is the flood hydrograph. This graphs precipitation against river discharge over time. It gives a clear picture of the rate of stream response and the likelihood of floods occurring, ie going above bankfull level. Information about the amount and speed of surface runoff is a key factor, therefore infiltration rates, gradients, vegetation interception and channel geometry are also useful data. This is likely to involve fieldwork rather than research, but do agencies monitor such changes? Calculations such as flood return interval or flood frequency need reliable longer term data to be useful.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two basic ideas about fieldwork or research on rainfall or flooding. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Describes some fieldwork and identifies some research sources about weather conditions and river responses/floods. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of fieldwork plans, methodology and use of research sources showing how weather conditions/events link to river responses/floods. Uses appropriate geographical terms and gives examples/details. Written language errors are minor.
Level 4	13-15	Structured detailed account which refers to details of student's own fieldwork and use of research sources. Explores relationship between weather conditions/events and river responses/floods, using appropriate geographical terms and exemplification to show understanding. Written language errors are rare.

TOTAL: 35 Marks

Question Number		Question
2.(a) **QWC (i, ii, iii)**		**Describe how physical and economic factors may have made Florida a crowded coast.** **(10)**
Series		Indicative content
		Environment of gulf is (sub-tropical) sunny, use of climate graph eg temps, and sunshine figures. extensive beaches, warm water, is partly protected by barrier islands, inlets for boats/fishing and lowland coast. Florida Keys are coral island chain, with varied marine species. Everglades have more freshwater species. Built environment dense with high rise hotels. Economic development based around tourism - 75m visitors, with beaches and nearby theme parks, big investment in real estate etc. Airport access to rest of states and international (many UK) clients. Seen as the sunshine state for retirement, with massive in-migration from rest of USA, high beachside population.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two advantages of Florida for coastal development. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Some of physical and economic factors identified using the resources, with some explanation of needs of coastal development. Lower end unbalanced. Geographical terminology is used with some accuracy. Lower end descriptive. There are some written language errors.
Level 3	8-10	Structured account of range of factors behind Florida's development, using the evidence from all resources, using appropriate geographical terms/data. Written language errors are rare.

Question Number		Question
2.(b) **QWC (i, ii, iii)**		**Using named examples, examine the environmental costs of coastal development such as those shown in Florida.** **(10)**
Series		Indicative content
		Some basic prompts for students in map – blooms, pollution, marine species at risk, coral damage, fish losses, but 'such as' implies adding more or developing answer with other examples/ideas. 'Examine' implies more than explain so looking to see detail or perhaps some weighing up of economic gain versus environmental/ecological loss. Examples can be at local or regional scale – eg UK seaside resort or Spanish Costa. May concentrate on one aspect such as habitat/fragile coast area eg studland.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two environmental costs of coastal development. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Explains costs (environmental) of development on a named crowded coast, using examples. Lower end descriptive or does not go beyond ideas in resource. Geographical terminology is used with some accuracy. There are some written language errors.
Level 3	8-10	Structured examination of range/detail of environmental costs on a named crowded coast, using appropriate terms and exemplification to show understanding. Written language errors are rare.

Question Number		Question
2.(c) **QWC (i, ii, iii)**		**Describe and explain a programme of fieldwork and research you would use to investigate the impacts of either coastal erosion or coastal flooding, along a stretch of coastline.** **(15)**
Series		Indicative content
		Evidence should focus on planning and methodology of fieldwork and use of research sources and how these can investigate the impacts of coastal erosion or flooding. Rates of erosion/flooding can be measured using secondary data, such as old photos, OS maps, records or newspapers. The Environment Agency and DEFRA measure and record information regularly, as do local councils. A fieldwork snapshot of erosion/wave processes may help establish likely causes and surveys of presence/state of repair of sea defences/protection may indicate rates/impacts,etc. Surveying of landslides/slumping, rockfalls and cliff face features are useful too. Impacts involves consideration of land use and values, amount of development and population density. This may need land use surveys and research into rateable values, to establish degree and likelihood of risks perhaps hazard assessment. Questionnaires to test the perceptions and concerns of local groups may be useful. Engineering consultants and ICZM groups will also carry out research.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two basic ideas about fieldwork or research ideas on coastal erosion or flooding. There are frequent written language errors.
Level 2	5-8	Some structure. Describes some fieldwork and identifies some research sources about the impacts of coastal erosion or flooding. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Structured explanation of fieldwork plans, methodology and use of research sources showing the impacts of coastal flooding or erosion. Uses terms and examples/details. Written language errors are minor.
Level 4	13-15	Structured account which refers to details of students' own fieldwork and use of research sources. Explores a range of impacts using appropriate terms and exemplification to show understanding. Written language errors are rare.

TOTAL: 35 Marks

Section B

Question Number		Question
3.(a) **QWC (i, ii, iii)**		**Comment on how well this information shows the inequalities of living in Winchester and Hackney.** **(10)**
Series		Indicative content
		Looking for how well the information reveals the differing inequalities of a poorer inner city area and a well-off provincial city. Expect some use of data. Well selected/straightforward data items include – house prices, crime data (eg burglary), education (eg A to C passes), environment (eg garden and green spaces) and lifestyle (eg SS claimants). Less useful data includes – some stats (eg income and expectancy are too similar), education (eg GCSE failure). Not comparable items include population heading not given for Hackney, but Parks were? Are chosen comments and photos a fair comparison? Population totals differ.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two basic ideas about inequality. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Range of stereotypical data is identified using most sources provided, with some explanation of differing inequality and may evaluate data. Lower end descriptive or limited range. Geographical terminology is used with some accuracy. There are some written language errors.
Level 3	8-10	Structured account of differing inequality, referring to range of evidence interpreted from evidence provided, with some evaluation. Uses appropriate terms. Written language errors are rare.

Question Number		Question
3.(b) **QWC (i, ii, iii)**		**With reference to one or more named urban areas, examine the impacts of deprivation on people's lives.** **(10)**
Series		Indicative content
		Deprivation (in deprived areas) implies there are social (eg housing/services/ health), economic (eg income/jobs/mobility) and environmental (eg brown agenda) issues. This creates social exclusion, disadvantage and poverty, leading to further decline. Impacts in urban areas are linked to transport, household, opportunity and mobility deprivation – low wages, low car ownership, etc. Environmental impacts show up in poor quality housing, pollution and vandalism. Social impacts include fear and incidence of crime, poor health, low achievement. Political impacts are segregation, poor community life, ghettos. Economic impacts are high level of dependency (DHS benefits), LPFs, unemployment, low income, no transport, poor access to services. Response may be detailed or show range, referring to UK city or districts.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two impacts of deprivation, eg poor housing or educational opportunity. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Explains some of the impacts of deprivation on people's lives. Some use of examples. Lower end descriptive or limited range. Geographical terminology is used with some accuracy. There are some written language errors.
Level 3	8-10	Structured account of impacts of deprivation on people's lives, showing range/detail, using named examples and appropriate terms. Written language errors are rare.

Question Number		Question
3.(c) **QWC (i, ii, iii)**		**Describe the results of your fieldwork and research into how to reduce inequality, and explain how these help you to judge the success of either the urban or rural schemes involved.** **(15)**
Series		Indicative content
		Evidence should focus on the results of an investigation into urban or rural inequality, involving fieldwork and sources, and how these can help assess the improvements involved. Outcomes such as jobs created like improved socio-economic/environmental conditions (going up market, house improvement, filtering, environmental quality improving, new buildings/fabric, provision of transport and services, occupancy rates. Also outputs such as new jobs, new business etc. Research and secondary data based on, rateable values changes (vao.gov), photographs, council/planning data (eg Birmingham.gov) and above all Census returns eg population and employment structure. Additional data from groups like Shelter, university researchers, etc. Judging success implies some sort of before and after comment, or shows positive and negative views of change, perhaps using an analytical technique eg deprivation index.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two ideas about schemes designed to reduce inequality. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Uses the results of an investigation to describe some schemes and how they are reducing inequality. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Uses the results of an investigation to explain how named schemes are successfully reducing inequality. Uses terms and gives examples/details. Written language errors are minor.
Level 4	13-15	Structured account which uses the details of student's own investigations to judge the success of schemes trying to reduce inequality. Uses appropriate techniques, terms and exemplification. Written language errors are rare.

TOTAL: 35 Marks

Question Number		Question
4.(a) **QWC (i, ii, iii)**		**Comment on how true a picture the cartoon is of *a countryside in crisis*.** **(10)**
Series		Indicative content
		Idea of rural decline in remoter rural areas. Really about how economic changes are having social impacts via mobility, housing and opportunity deprivation (see markscheme for question 3(c)). Also linked to wider changes in countryside such as decline in farming (eg loss of subsidies), impact of visitors (eg second homes), new residents (eg pushing up prices) and changing population structure (older, no children). But not true of accessible rural areas where commuter and suburbanised villages are growing and demanding new housing and services such as schools and shops, etc. Also honeypot sites are encouraging development of tourism, with new jobs.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two aspects of crisis in the countryside. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Number of stereotypical issues identified using the resources provided, with some explanation of the changes involved. May suggest differing views/examples of the countryside. Lower end descriptive or limited in range. Geographical terminology is used with some accuracy. There are some written language errors.
Level 3	8-10	Structured account of change and issues in the countryside, interpreted from the cartoon. Offers differing views with examples and uses appropriate terms. Written language errors are rare.

Question Number		Question
4.(b) **QWC (i, ii, iii)**		**With reference to named examples, explain how rebranding strategies such as those shown in Figure 4 might regenerate rural areas.** **(10)**
Series		Indicative content
		Some basic prompts for students in montage – farm diversification, sport and leisure, tourism and rural heritage, - but 'such strategies' implies adding more or developing answer with other examples/ideas. Such schemes might produce new jobs to replace those lost in farming, or help encourage young people to stay, by improving wages. These would generate disposable income creating a virtuous cycle that would support local shops. Farm diversification would make use of unused buildings and improve landscapes. Heritage activity might foster culture, crafts and increased tourism. Transport services might grow (tourist buses and dalesrail) helping locals. Access to services might be extended to mobile library, dial the doc, and the pub's the hub, etc, etc. Such schemes might include promoted rural tourism eg *last of the summer wine* country, technology provision eg rural broadband, adding value locally eg organic farming or rural diversification eg Eden project.
Level	Mark	Descriptor
Level 1	1-4	Little structure. Identifies one or two some examples of rural rebranding strategies using only evidence provided. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-7	Some structure. Explains how some named examples of rural rebranding might work using evidence beyond that provided, using some terms and examples. Lower end descriptive. Geographical terminology is used with some accuracy. There are some written language errors.
Level 3	8-10	Structured account of how named examples of a range of rural rebranding strategies might work, using evidence beyond that provided (in range or detail), using appropriate terms and exemplification. Written language errors are rare.

Question Number		Question
4.(c) **QWC (i, ii, iii)**		**Describe the results of your fieldwork and research into urban rebranding, and explain how these help you to judge the success of the schemes involved.** **(15)**
Series		Indicative content
		Evidence should focus on the results of an investigation into urban rebranding, involving fieldwork and sources, and how these can help assess the success of schemes. Flagship schemes, gentrification, sport and leisure provision all are suitable target schemes. Outcomes such as jobs created like improved socio-economic/environmental conditions (going up market, house improvement, filtering, environmental quality improving, new buildings/fabric, provision of transport and services, occupancy rates. Also outputs such as new jobs, new business etc. Research and secondary data based on, rateable values changes (vao.gov), photographs, council/planning data (eg birmingham.gov) and above all Census returns eg population and employment structure. Additional data from consumer groups, university researchers, DTI etc.
Level	Mark	Descriptor
Level 1	1-4	Little structure. One or two ideas about urban rebranding schemes. Geographical terminology is rarely used. There are frequent written language errors.
Level 2	5-8	Some structure. Uses the results of an investigation to describe some schemes and how they are rebranding urban areas. Some geographical terminology is used. There are some written language errors.
Level 3	9-12	Uses the results of an investigation to explain how named schemes are successfully rebranding urban areas. Uses terms and gives examples/details. Written language errors are minor.
Level 4	13-15	Structured account which uses the details of student's own investigations to judge the success of schemes trying to rebrand urban areas. Uses appropriate techniques, terms and exemplification. Written language errors are rare.

TOTAL: 35 Marks

Unit 3: Contested Planet

Section A

Question Number		Question
1.(a) **QWC (i, ii, iii)**		**Suggest how the contrasting distribution/pattern of major oil exporters and importers shown in Figure 1 could affect the energy security of some nations.** **(10)**
		Indicative content
		Contrast: a basic mismatch between exporters (developing world, OPECs and Russia) and importers (emerging economies and developed world), with a few exceptions e.g. Norway. Energy security depends on ensuring supply. This could be disrupted as transport is necessary (pipelines or shipping). Some areas of export are politically unstable (Russia, Middle East), and some import areas are potentially unstable too (Taiwan, Korea); the possibility of economic instability might be noted in Venezuela. Some might note that a few countries / areas 'hold all the cards' in terms of exports (Venezuela) so there is the possibility of price rises leading to insecurity. Credit examples such as Russian gas.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Basic description of the map with a few contrasts, with a few generalised comments about instability. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Contrasts the map with some accuracy; a range of suggestions given, related to some named areas / examples. Explanations are clear, but there are areas of less clarity. Lacks full range. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Full and accurate contrast; a range of suggestions, showing good understanding of energy security issues, reference made to named examples. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number		Question
1.(b) **QWC (i, ii, iii)**		**The development of alternative energy sources is a possible response to future energy demands. Assess the possible costs and benefits of this approach.** **(15)**
		Indicative content
		Responses should imply an understanding of both development of a range of alternative fuels and power sources. COSTS For alternative sources, the high costs of development and uncertainty over some technologies; the relative inflexibility and physical constraints of some energy sources (wind, solar); difficulties and conflicts resulting from finding land to develop resources on (biofuels, wind). BENEFITS Alternative fuels may be cheaper in some cases, and many are environmentally friendly i.e. could solve some environmental issues as well as supplying energy. May link to wider issues such as climate change. Some alternative sources may be seen as especially appropriate in the developing world.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. One or two general comments, lacks support and very unbalanced. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Clear statements but exemplification is more limited and increasingly the response is unbalanced. Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Some balance across costs and benefits and some exemplification; provides a clear statement with some implied assessment. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Balanced across costs and benefits, supported by a range of examples and real world understanding. Genuine assessment; provides an overview. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number		Question
2.(a) **QWC (i, ii, iii)**		**Suggest how water resources and human wellbeing might be affected by the data in Figure 2.** **(10)**
		Indicative content
		The resource indicates that the poor pay more for water, and this suggests that a greater proportion of their income must be spent on the most basic resource. The effects on human health are likely to focus on an inability of some to meet their basic water needs – and therefore prevalence of disease, dangers of using unsanitary supply. For developed countries, the implication is that basic sanitation is cheap – some might see the irony in this. The effect on water resources are that low costs encourage overuse in developed countries as the costs may not represent the true cost – drainage of aquifers may be mentioned. Whilst individual overuse is unlikely to be an issue in the developing world, total use may still be leading to scarcity.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. One or two basic ideas, likely to lift off the resource and describe the contrast. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Shows understanding of the data, and mentions water resources and human wellbeing linked to some explanations. Lacks balance. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Thorough reasoning of the implications for both humans and resources; balanced and explanatory. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number		Question
2.(b) **QWC (i, ii, iii)**		**Using named examples, assess the role of different players and decision makers in trying to secure a sustainable 'water future'.** **(15)**
		Indicative content
		The examples chosen can be any scale i.e. continents, countries or regions. The response is likely to focus on: • Individuals – the need to conserve water and use it sensibly • Governments – role in securing supply (large water schemes, water transfer infrastructure); possibly laws to enforce metering • Water companies – maintenance of supply through infrastructure; expect some criticism of this role in some parts of the world (TNCs) • NGOs may be mentioned as they often play a key role in the developing world. The question of sustainability should be discussed, and might be defined.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few general ideas; lacks focus on named players / areas. Omits the idea of sustainability. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Unbalanced focus on 1 or 2 players, or on sustainability; examples of a generic nature. Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Range of players and some exemplification; some details but less certain on sustainability. Implied assessment. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. A genuine assessment of roles illustrated through named examples; balanced and likely to provide an overview / judgement. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number		Question
3.(a) **QWC (i, ii, iii)**		**Explain the pattern of alien species invasions, and suggest the possible impacts of alien species on ecosystems.** **(10)**
		Indicative content
		The species have been carried by marine trade on the hulls of ships and in bilge and ballast water, and the movements tend to be between developed areas, reflecting trade patterns. Some areas are not involved, these tend to have less trade. There may be some specific knowledge of individual species from Figure 3 which should be credited, as should other species not shown on Figure 3 (rats). The major disruption is to food chains, as the alien species out-compete existing species reducing their numbers or even causing extinction. This can be directly through predation, or indirectly by occupying ecological niches. There is also the possibility that disease might be spread by new species, and in some cases damage to the physical make up of ecosystems (erosion). Biodiversity can be severely reduced, and in the worst cases ecosystems collapse.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. One or two basic ideas explaining the pattern; lacks understanding of ecosystem processes. Likely to describe the map. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Does explain the pattern with some clarity. Some understanding of impact on ecosystems and uses some geographical terminology, but incomplete; makes reference to map. Explanations are clear, but there are areas of less clarity. Lacks full range. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Sound explanation of pattern, understanding of several processes and through use of geographical terminology; likely to illustrate impact on ecosystems. Descriptive language is precise. Explanations are always clear. Grammar, punctuation and spelling errors are rare.

Question Number		Question
3.(b) **QWC (i, ii, iii)**		**Evaluate the relative importance of global and local threats on one named global ecosystem.** **(15)**
		Indicative content
		The question requires both scales of threat to be covered, which could be accomplished using the same, or different examples from within the named global ecosystem. In terms of global threats, the likely focus will be on climate change as an overarching threat to forests, coral and others. This threat may be occurring now, or projected to occur. Resource demand may also be considered globally. At a local level threats are likely to be associated with development and exploitation of resources (perhaps directly, or indirectly e.g. oil), possibly pollution. Tourism is a possibility, in terms of coral or forest destruction, plus urbanisation and other economic development. Expect marine or terrestrial examples of global ecosystems (biomes).
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Generalised comments on one or two threats, possibly related to 'forests' but little or no depth. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some range of general threats, mention of local and global but unbalanced. Exemplification thin in terms of detail. Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors. **Max 8** for areas with no reference to a biome.
Level 3	9-12	Structure is good. A range of threats, both local and global, linked to named areas / ecosystems; some balance and some depth; implied evaluation. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Genuine evaluation of a range of threats; provides an overview of balance of threats for named areas; detailed real world exemplification. Judgements present. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number		Question
4.(a) **QWC (i, ii, iii)**		**Explain how membership of Intergovernmental Organisations gives some countries political and economic power.** **(10)**
		Indicative content
		In terms of economic power there is a link to trade blocs (EU / NAFTA) and possible protection of key markets, whilst at the same time facilitating intra-regional trade. The WTO quad countries can influence trade decisions to their advantage. Voting power at the IMF may be said to influence the economic policies of other countries – which could mean 'friendly' policies towards TNCs based in the superpowers. Political influence in through the UN, where a veto for the big powers prevents unwanted decisions, and some might argue that NATO provides a 'big stick', which, though rarely used is present nonetheless. G8 provides a western club with which to spread influence and largesse some might argue. Credit mention of other IGOs not on the list, plus arguments against the position (China, India).
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. Description of the resource, with a few general comments about power; lack of real understanding. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Uses some examples to illustrate power, but may be unbalanced and somewhat general; does understand the basic idea. Explanations are clear, but there are areas of less clarity. Lacks full range. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Balanced across pol / eco and uses real world examples to illustrate the links; up to date knowledge. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number		Question
4.(b) **QWC (i, ii, iii)**		**Using examples, assess the view that the relationship between superpowers and the developing world is a neo-colonial one.** **(15)**
		Indicative content
		Good candidates may briefly outline colonial rule, and how power was maintained. Neo-colonialism may be related to theory in terms of dependency theory or similar ideas. Arguments in favour of the statement may mention issues such as debt, trade relationships and terms of trade, and the nature of aid (tied etc) or economic policies applied to debtor countries (SAPs, HIPC). Expect details of named examples in strong responses. Some might argue that force is still used when it is seem as necessary. On the other hand aid may be given out of genuine concern, and debt has been written down in some cases; fair trade might be seen as a solution.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. One of two basic ideas relating to the relationship; lacks a clear understanding May drift from superpowers / developing world. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some understanding of the question; describes the relationships with less certain detail; a series of statements. Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Some examples which address some parts of the relationship; likely to provide sound real world support for the statement without going beyond it. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Focussed on superpower / developing world relationships; illustrates the neo-colonial position; uses real world examples to argue both for and against. Provides and overview / assessment. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number		Question
5.(a) **QWC (i, ii, iii)**		**Explain the message of the cartoon, and state how far you agree with its message.** **(10)**
		Indicative content
		The cartoon shows a person blindfolded walking the tightrope between poverty and development; the cannon fires various 'barriers' to development. Some might see development as a difficult balancing act, others may see the developed world as arming the cannon; the tightrope to development is perilous. For very poor countries, especially in Africa, the cartoon may seem to ring true; expect some examples such as healthcare workers from Ghana / RSA, debt, trade in bananas and cotton (Mali) to illustrate the difficulties of development. Aids / HIV in Bostwana/Uganda might feature. Better candidates might argue against the cartoon, citing examples such as China, India and earlier NICs as examples of successful economic development, or argue that development can happen if a different path is taken (Kerela, Cuba). Forces not seen on the cartoon, such as government corruption might be mentioned.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few basic ideas; descriptive of the cartoon and literal in interpretation; focus on war or similar. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Explains message clearly; likely to provide some support for the cartoon without moving far beyond it. Explanations are clear, but there are areas of less clarity. Lacks full range. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Explain the message clearly; balanced account which sees both sides, and supports both with brief examples of development and lack of development. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number		Question
5.(b) **QWC (i, ii, iii)**		**Assess the view that economic development is not possible without causing environmental degradation.** **(15)**
		Indicative content
		Accept a wide range of examples as the level of development is not indicated. The basic idea is that development produces externalities – China and India might be used as recent examples of this (Asian Brown Cloud, Chinese soil erosion); many other examples such as Amazonia might feature, as well as developed countries and their industrialisation, or recent high transport / energy consumption. Expect some reference to the idea that development can be made more sustainable, although to what extent this is actually the case is debateable. Reference might be made to Scandinavia, or other countries which have moved towards renewable energy or protected areas. Some small scale bottom-up schemes in the developing world might be seem as having a low eco impact. Accept arguments based on the idea that green growth might be an alternative path.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few ideas only; a basic understanding of development and a few references to environmental issues only. Generalised. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some ideas on development; likely to agree with the statement and provide some evidence to support it, but limited depth Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Sound understanding of development and its impact; some terminology present in an account which uses some examples effectively; implied assessment. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	13-15	Carefully structured. Genuine assessment with supporting evidence; cogent discussion of the issue; provides an overview. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Section B

Question Number		Question
6.(a) **QWC (i, ii, iii)**		**Explain the factors that have led to Latin America's rapid adoption of GM farming technology.** **(10)**
		Indicative content
		Perceived benefits include higher yields, and possibly lower chemical input costs (although both have been questioned), therefore higher profits. Argentina approved quickly, seeing the export potential of the crops (and a way out of a weak economy); Brazil was more or less forced to approve as the crops were so widely grown anyway – pressure from farmers/ companies led to the change. The lack of a regulatory framework and democratic debate might be seen as allowing rapid adoption. The involvement of TNCs could be seen as a key factor, as some argue they have used Latin America as a huge experiment. Food insecurity might be made as an argument for rapid adoption (although little is consumed in the countries), as might as might a desire to modernise the rural sector to increase its economic contribution. **Synoptic linkages** 1.2 Population growth; the need to feed growing populations. 4.3 The issue of food insecurity. 1.3 Globalisation – the ability spread new ideas quickly; import the necessary technology; pressure/incentives from TNCs; these countries are not the poorest, so are 'connected'. 3.6 Range of linkages to technology, including its availability in NIC/RIC countries, compared to LDCs and the desire to have technology by government; lack of regulatory control (Brazil).
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. General ideas from the resources; identifies some factors without a thorough range. Lacks synoptic linkages. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-7	Structure is satisfactory. Some range of factors and some structure but incomplete; occasional reference to wider linkages but not in depth. Explanations are clear, but there are areas of less clarity. Lacks full range. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	8-10	Structure is good. Thorough range of factors in a structured account with strong synoptic links. Effective use of resources, but goes beyond these. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Question Number		Question
6.(b) **QWC (i, ii, iii)**		**Assess the human and environmental impacts of GM farming in Latin America. (18)**
		Indicative content
		Note impacts can be positive. Arguments that GM exports have strengthened the macro-economy of Latin America are possible, although their dependency (pie chart) could be a weakness with long term human consequences if prices fall (this is mentioned), or export markets shrink due to concerns by importers. Figure 4 and 5 might suggest an increased dependency on food imports, which could lead to food insecurity (Figure 9 has a mixed message, as some countries are making progress, but others are not) – the poor are likely to be worst affected by high imported food costs. Increased use of chemicals (Figure 12) may have human health impacts, although in theory pesticide use should fall (it appears not to have). Of concern is the consolidation of farms and loss of small farms and farmers – most likely to low wage labourers or migration to cities (urbanisation/megacity problems). Environmentally erosion and soil exhaustion are problems, as is the concern over superweeds which hikes up pesticide use. On the other hand some GM crops are associated with low tillage farming – it may be a lack of technical knowledge in Latin America that causes greater environmental issues than are necessary. Deforestation for land seems to be a direct result of GM crops and spiralling production. **Synoptic linkages** 1.2 Migration of people to urban areas. 1.3 Questions over the costs and benefits of globalised trade. 2.3 Rural inequality – social polarisation and marginalisation of some farmers. 3.3 Biodiversity and the threat of economic development. 3.6 The neutrality of technological innovation in terms of impacts.
Level	Mark	Descriptor
Level 1	1-5	Structure is poor or absent. Basic ideas; likely to be very unbalanced and use limited 'headline' data from the resources to provide an extreme view. Descriptive language is basic. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	6-10	Structure is satisfactory. Some balance e.g. human and environmental are considered by +/- are not, and some use of resources, but lacks wider links; statements not assessment. Descriptive language generally accurate. Explanations are clear, but there are areas of less clarity. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	11-15	Structure is good. Uses the full range of resource data, and some synoptic links but not fully developed; broadly balanced with some structure and implied assessment. Some balance across costs and benefits and some exemplification; provides a clear statement with some implied assessment. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.
Level 4	16-18	Carefully structured. A balanced assessment which makes full use of the resources and synoptic linkages, to provide a genuine assessment; makes evidenced judgements. Descriptive language is well employed and precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are very rare.

Question Number		Question
6(c) **QWC (i, ii, iii)**		**To what extent does GM technology provide a technological fix that is economically sustainable?** **(12)**
		Indicative content
		Expect a definition of sustainable, in terms of long terms economic security, plus other facets. Arguments might focus on the idea of dependency – Latin America as a low cost producer of cattle feed and other commodities for the benefit of the rich 'north'; the long term trend of falling commodity prices may be seen as likely to apply to soybeans as it does to cotton. Will this produce long term economic security? The technology is that of western TNCs and so problems that arise might only be solved by those companies, who may have no real interest in solving them. The misuse of land resources can be seen as unsustainable in the long-run as they are likely to become useless, causing falling yields and eventually leading to economic decline. The industrialisation of farming is likely to lead to a depopulated, ageing countryside and booming, young urban areas with the well known issues of Latin American megacities – neither seems economically sustainable. Counter arguments might focus on the fact that wealth has been created and that revenue is likely to lead to investment. **Synoptic linkages** 1.1 The high inputs of GM might be seem to be resource heavy and contributing to climate change. 1.2 The potential for unbalanced population structures resulting from migration. 3.5 Approaches to development – whether this technology heavy option is better or worse than more appropriate technologies, or alternative methods (organic) / development models. 3.5/1.3 Dependency on western technology and the motives of the TNCs involved; the question of trade sustainability. 3.6 The costs / benefits of technological fixes.
Level	Mark	Descriptor
Level 1	1-4	Structure is poor or absent. A few general ideas; may not fully understand the issue of economic sustainability; likely to be one sided and bland. Lift-offs with no structure. Explanations are over simplified and lack clarity. Geographical terminology is rarely used with accuracy. There are frequent grammar, punctuation and spelling errors.
Level 2	5-8	Structure is satisfactory. Some sound ideas; may not be fully balanced but has some support from resources and some wider ideas but not fully developed. Explanations are clear, but there are areas of less clarity. Lacks full range. Geographical terminology is used with some accuracy. There are some grammar, punctuation and spelling errors.
Level 3	9-12	Structure is good. Balanced view, with some depth from both the resources and wider linkages; an overview which does address the issue of 'to what extent'. Descriptive language is precise. Explanations are always clear. Geographical terminology is used with accuracy. Grammar, punctuation and spelling errors are rare.

Unit 4: Geographical Research

Question Number	Question
1. **QWC** **(i, ii, iii)**	**Discuss the relationship between the nature of tectonic hazards and human responses to them.** **(70)**
	Indicative content
	Investigating the types of relationship between the nature (causes and effects) of tectonic hazards, and the range of responses by different individuals, communities, countries and international bodies including do nothing, adapt and mitigate. **By examining a range** of tectonic case studies, across volcanic, earthquakes and tsunamis which are selected to illustrate the range of causes and impacts. **Better candidates** will clearly identify the type of society for any case study and choose a range of scales as well as different levels of development. They may introduce models e.g. Parks model, the Disaster Management Cycle or Kates perceptual model. They may refer to the IDNDR, the UN International Strategy for Disaster Reduction. They may introduce a time element and look at areas that have witnessed change in the relationship, e.g. Iceland. Both direct and indirect relationships (linkages) may be covered. They may use a wider range of case studies.

D **Introducing, defining and focusing on the question**		**Definitions of** tectonic hazards, societies and responses and relationship. **Justification of focus by** case study selection, or concepts (scale, time, location).
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R **Researching and methodology**		A **balanced range** of case studies by scale, location and possibly over time, showing **detailed knowledge**, locations should feature and be contrasted, most likely by development level.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A **Analysis application and understanding**		**Understanding and application of the key ideas** The nature of hazards is determined by physical processes at contrasting plate boundaries, which determines the degree of hazard. Magnitude and frequency of hazards are linked to response. There should be a focus on the specific response strategies involved in adjustment: modifying loss burden, modifying the event and modifying human vulnerability linked to the type of society. Spatial patterns of different specific tectonic events related to different plate margins may result in different responses (the type of hazard varies). Responses may alter temporally: during pre/during/post event. Response depends largely on knowledge, technology and the availability of financial resources.
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C **Conclusions and evaluation**		Should include a meaningful assessment of the title. Look for ongoing evaluations during report. Should return to main case studies developed in the report. Credit those who go beyond simplistic viewpoint that societies need to know the causes of hazards to respond to them.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing** **QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology such as hazard salience, liquefaction, recurrence levels, secondary hazard, event profile, asthenosphere, vulnerability, quasi-natural. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

Question Number	Question
2. **QWC (i, ii, iii)**	**To what extent can Britain's physical geography during the Quaternary be determined through the study of relict glacial and periglacial landforms?** **(70)**
	Indicative content
	Investigating the nature of the Quaternary in Britain; details of a cycle of interglacial and glacial periods linked to both glacial and periglacial landforms of a range of types in different locations. **By examining a range** of examples/case studies of landforms from named locations within the British Isles; details of a landform types and extent should be expected. **Better candidates** will define key terms from the question (glacial and periglacial landforms; the Quaternary and possibly named periods within it such as the Holocene, Devensian and Ipswichian) and examine how past climate produced erosional and depositional glacial features such as cirques, U-shaped valleys, till and moraines; as well as periglacial features such as pattered ground and solifluction deposits. They may consider physical geography in terms of climate, the extent of ice cover or tundra, ice flow patterns and possibly introduce a time element. They may also consider that only recent Quaternary events are well preserved due to subsequent erosion of previous landforms.

D **Introducing, defining and focusing on the question**		**Definitions of** glacial and periglacial, relict landforms, physical geography and the Quaternary. **Justification of focus by** case studies, located examples and concepts (time).
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R Researching and methodology		A **balanced range** of case studies by type (both periglacial and glacial), location and possibly over time, showing **detailed knowledge**, named locations should feature and they should be from more than one location to achieve some balance.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A **Analysis application and understanding**		**Understanding and application of the key ideas** Ice extent during the Devensian (possibly the Younger Dryas) can be reconstructed through erosional glacial features (Lakes, Scotland) and extent of periglacial deposits (Southern England and the Midlands). Exact climate is difficult to determine from landforms; they are indicative; types of permafrost might be mentioned. Some aspects of physical geography, for instance ice movement, might be determined from erosional features (striations, erratics, drumlins). 'Extent' is largely determined by survival and identification of evidence, much of which has been removed or altered by later activity. Recent research suggests rapid climate fluctuations occurred in the Quaternary. Other evidence (ocean/ice cores, pollen) might be used to complete the climate record.
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C **Conclusions and evaluation**		Should include a meaningful assessment of the title. Look for ongoing evaluation during the report. Should return to case studies and examples developed in the report. Credit those who make a judgement linked to the question, for instance that upland erosional glacial landforms leave the clearest evidence for past climates/subsequent physical processes have removed much of the landform record/mention of non-landform evidence used in combination with landform evidence.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing** **QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology such as type of landforms and their associated weathering, erosion and depositional processes, named periods within the Quaternary. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

Question Number	Question
3. **QWC (i, ii, iii)**	**To what extent do food security issues vary spatially and temporally?** **(70)**
	Indicative content
	Investigating the spatial pattern of a range of food security issues, their causes and how to manage them. The causes of inequality and attempts to improve the situation in marginal areas should be assessed. Food security issues can change over time, with countries moving in and out of shortage/famine (Ethiopia and other SSAf countries); long term improvement might reduce issues, or decline make them worse. Spatial areas can shift due to economic and environmental factors – climate change and other forms of environmental degradation may be mentioned, as well as changing population, food supply technologies and policies. **By examining a range of case studies** from countries at different level of development which will show the range of food security issues from over nutrition to under nutrition. **Better candidates will** have a wider/more balanced range of food security types and may investigate direct and indirect factors, long and short time scales and urban and rural contrasts.

D **Introducing, defining and focusing on the question**		**Definitions of** food security issues. **Justification of focus** for example by case study or concepts selection.
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R Researching and methodology		A **balanced range** of case studies with knowledge of specifics/depth and range of selected and appropriate case studies. MEDC/LEDC/NIC locations should feature and be contrasted.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A **Analysis application and understanding**		**Understanding and application of the key ideas** Identifying the vulnerable groups affected by food security issues. The spatial variations in food security issues from under to over nutrition; the spatial shifts that occur and the causes of these. Changing patterns over time - increasing or decreasing food security and its causes. The causes of food insecurity are complex, ranging from physical processes of land degradation and desertification, exacerbated by human over-exploitation, to population pressure and political processes. The role of management in securing food supplies from intergovernmental to individual actions with options ranging from technology dependent, to low cost bottom up schemes, plus environmental schemes and international politically sensitive economic reforms and initiatives like the WTO and MDGs.
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C Conclusions and evaluation		Should include a meaningful assessment of the title. Should return to main case studies developed in the report. Look for ongoing evaluations during report. Credit those who go beyond simplistic viewpoint that food supplies/security vary greatly.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology eg as food miles, famine, globalisation of food tastes, under and over nutrition, sustainable food supplies, land degradation, fair trade. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

Question Number	Question
4. **QWC (i, ii, iii)**	**Discuss the ways in which cultural values affect how societies use the environment.** **(70)**
	Indicative content
	Investigating the types of linkage between any societies' culture and their use of their environment. It is to establish the role of cultures such as consumerism in creating a distinctive geographical effect and to see the conflicts between environmentalism and consumerism. **By examining a range of case studies** from countries at different levels of development, urban and rural environments. Case studies may vary from exploited landscapes, derelict/relict industrial landscapes, urban regeneration area to conservation landscapes in both cities and rural areas. India and China and Poland may feature to show latest trends in environmental use in recently industrialising/reindustrialising areas. How differing ethnic groups in cities use effectively the same cityscape but customise it could feature. Antarctica could be used to show a unique decision by various cultures to use the environment in a distinct way. **Better candidates may identify:** environment at a larger scale than the immediate locality of any society and include ecological footprints. They will use a wider range of case studies and perhaps include a temporal element. They may differentiate local and external sources of culture, including globalisation.

D **Introducing, defining and focusing on the question**		**Definitions of** culture, society, environment. **Justification of focus by** case study selection or concepts, for example by type of culture, society or environment.
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R Researching and methodology		A **balanced range** of case studies with knowledge of specifics/depth and range of selected and appropriate case studies. MEDC/LEDC/NIC locations should feature and be contrasted.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A Analysis application and understanding		**Understanding and application of the key ideas** Complex relationship between factors of frequency and magnitude and response-undoubtedly important but not always critical if finances, technology and effective governance available. Other factors involved - perception, economic development etc. Different groups have different responses spatially and temporally.
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C Conclusions and evaluation		Should include a meaningful assessment of the title. Should return to main case studies developed in the essay. Look for ongoing evaluations during essay. Credit those who go beyond simplistic viewpoint that culture is important.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing** **QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology such as epidemiology, morbidity, pandemic, diffuse pollution, diffusion models, MDGs, pathways, source, sink. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

Question Number	Question
5. **QWC (i, ii, iii)**	**Explain why international initiatives are increasingly needed to cope with the risks of disease and pollution.** **(70)**
	Indicative content
	By examining the reasons for why range of initiatives is increasingly needed to reduce health risks with a focus on international efforts. Reasons may be split into physical/human or environmental/economic/social. Expect factors of: role of transport and increased personal mobility spreading disease, increased urban concentrations, poverty and vulnerability, reliance on aid globalisation. Models including diffusion, epidemiology transition may be adapted and applied. Some key international initiatives relating to pollution and health risk: Global: Ozone depletion - 1987 Montreal Protocol, Acid rain - 1985 Sulphur Protocol, 1999 Gothenburg Protocol, Greenhouse gases - Kyoto 1997, Agenda 21 and Millennium Development Goals, Role of WHO and United Nations generally. Role of NGOs and pressure groups ranging from Oxfam and Make Poverty History Campaign to Bill Gates Foundation and RED movement. Regional/transboundary agreements eg North Sea Conferences for pollution or EU Health and Safety initiatives. **The usual case studies may feature :** AIDs, SARs, Malaria, Bird Flu; transboundary pollution examples; emergency disease relief. **Better candidates** will look at a range of successful/unsuccessful policies/initiatives, and try to evaluate them. They may go beyond international agreements and consider local initiatives, which did not use international strategies for successful management of risk: Uganda and Thailand which have had some success in coping with the AIDs epidemic albeit with some international aid. Re-emerging diseases such as TB and Flu pandemics may feature.

D **Introducing, defining and focusing on the question**		**Definitions of** risks and international initiative. **Justification of focus by** case study selection or concepts for example to show that health risk pollution may be tackled at source, pathway or sink, over different time and spatial scales).
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R Researching and methodology		A **balanced range** of case studies with knowledge of specifics/depth and range of selected and appropriate case studies MEDC/LEDC/NIC locations should feature and be contrasted.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A Analysis application and understanding		**Understanding and application of the key ideas** Range of factors involved - environmental, social, economic. Increasing international initiatives from end of 20th Century: Think global, act local - Agenda 21 Growth of international agreements as health risk and pollution became more international in 21st Century. Role of pressure groups eg Greenpeace and World Aids Movement
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C Conclusions and evaluation		Should include a meaningful assessment of the title. Should return to main case studies developed in the essay. Look for ongoing evaluations during essay. Credit those who go beyond simplistic viewpoint that international agreements are increasing without explaining why.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing** **QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology such as epidemiology, morbidity, pandemic, diffuse pollution, diffusion models, MDGs, pathways, source, sink. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

Question Number	Question
6. **QWC (i, ii, iii)**	**How can models contribute to the effective management of rural landscapes experiencing demands from leisure and tourism?** **(70)**
	Indicative content
	The essay is concerned with managing rural landscapes affected by leisure and tourism in the most effective, possibly sustainable way. Models such as carrying capacity, resilience, Doxeys model of sociological impact may all be used by managers to establish present demands and project into the future. A critical examination of these models and their application is required together with a range of real case studies where they might be applicable. The concept of carrying capacity (perceptual, physical, economic, ecological) is critical to most management plans although is often difficult to measure. **By examining a range of case studies at differing scales** from large Wilderness areas such as Antarctica and Annapurna to urban fringe locations; from large scale National Parks and Reserves such as Yosemite, Lake District or Amboseli to small scale country parks or theme parks. **Better candidates** will examine a larger range of scales/locations and link these specifically to managing for sustainable futures. They will be more evaluative of any models used and apply them explicitly to their case studies. They may identify positive and negative direct and indirect effects, long and short term impacts and how management may alter over time.

D **Introducing, defining and focusing on the question**		**Definitions of** rural landscapes affected by tourism, models and management. **Justification of focus by** case study selection or concepts to be covered.
Level	Mark	Descriptor
	0	• No attempt to introduce report
Level 1	1-2	• Limited introduction • Vague definitions of key terms and/or framework
Level 2	3-5	• Some reference to title • Some definitions of key terms and/or some framework
Level 3	6-8	• Some framework/focus: either by concepts and/or case studies • Incomplete definitions of key terms
Level 4	9-10	• Clear reference to title – develops a focus • Indication of framework, either by concepts and/or case studies • Accurate definitions of key terms

R Researching and methodology		A **balanced range** of case studies with knowledge of specifics/depth and range of selected and appropriate case studies. MEDC/LEDC/NIC locations should feature and be contrasted.
Level	Mark	Descriptor
	0	• Case studies/concepts missing • No evidence of research
Level 1	1-4	• Basic research • Limited case study material/concepts or lacks relevance or selection
Level 2	5-7	• Range of case studies/concepts but lacks selection • Lacks methodology/sourcing
Level 3	8-11	• Some range (scale/location) of all/mostly relevant case studies used • Some indication of methodology
Level 4	12-15	• Wide range of relevant case studies used (by scale and or location) • Relevant concepts, and/or theories used • Factual, topical evidence • Indication of methodology i.e. how evidence was sampled/selected

A Analysis application and understanding		**Understanding and application of the key ideas** There are conflicting demands generated by leisure and tourism in rural landscapes. There are varying impacts generated by leisure and tourism Several models may be used to evaluate impacts, for example the carrying capacity model, resilience, distance decay, and Doxeys. Managers or rural landscapes, at any scale, may use some of the concepts generated in models to measure impacts and plan their area. Effective management depends on reconciling different groups over different time scales. Models may help predict trends and help decisions whether to increase or decrease usage of an area.
Level	Mark	Descriptor
	0	• Descriptive report lacking in detail, lacks application to question
Level 1	1-8	• Descriptive • Very limited appreciation of values/perspectives • Any maps/diagrams are rarely used to support answer
Level 2	9-12	• Simple explanations • Generalised material • Limited appreciation of values/perspectives • Any maps/diagrams are sometimes used to support answer
Level 3	13-16	• Most of the research is used to support the question • Some conceptual understanding • Some appreciation of values/perspectives • Any maps/diagrams are usually used to support answer
Level 4	17-20	• All research applied directly to question set • High conceptual understanding • Cogent argument • Appreciation of different values/perspectives about the question • Any maps/diagrams are used to support answer

C Conclusions and evaluation		Should include a meaningful assessment of the title. Should return to main case studies developed in the report. Look for ongoing evaluations during report. Credit those who go beyond simplistic viewpoint that the statement is correct.
Level	Mark	Descriptor
	0	• No conclusion or evaluation within report
Level 1	1-4	• An attempt at an evaluation of the question even if no end conclusion
Level 2	5-7	• Vague conclusion, related tenuously to report • Very limited evaluations
Level 3	8-11	• Meaningful, based on content of report • Selective recall of content of report • Some evaluation, either ongoing or in final conclusion
Level 4	12-15	• Clearly stated • Thorough recall of content/case studies used in essay • Ongoing evaluation throughout report • Understands the complexity of the question

Q **Quality of written communication and sourcing** **QWC (i, ii, iii)**		As per generic mark scheme for report style writing. Specialist geographical terminology such as pleasure periphery, resilience, fragility, carrying capacity, honeypot, fringe, wilderness, sustainability. Source type/s used.
Level	Mark	Descriptor
	0	• Basic standards of quality of written communication not met
Level 1	1-2	• Very basic quality of written communication • Frequent spelling and punctuation errors • Low level syntax • Occasional use of geographical vocabulary • Referenced/acknowledged material: lacks evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 2	3-5	• Basic syntax, some errors of punctuation and spelling • Disjointed organisation and sequencing although may have some subsections • Some errors in punctuation and spelling • Some use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but rarely incorporated into text or rarely support argument • Referenced/acknowledged material: rare evidencing/sourcing from wide range of sources(texts, journals, internet, DVDs etc)
Level 3	6-8	• Generally clearly written with some report style sub sections • Some organisation and sequencing • Good standard of punctuation and spelling • Some good use of appropriate geographical vocabulary • May have diagrammatic/cartographic use but not always incorporated into text/support argument • Referenced/acknowledged material: occasional evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)
Level 4	9-10	• Coherent structure and sequencing with obvious report style sub sections • Excellent standards of spelling and punctuation • Geographical vocabulary used correctly • Diagrams/maps, if used, incorporated into text and support argument • Referenced/acknowledged material: obvious evidencing/sourcing from wide range of sources (texts, journals, internet, DVDs etc)

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