



Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2012

GEOGRAPHY – ORDINARY LEVEL

FRIDAY, 8 JUNE – MORNING, 9.30 - 12.20

Examination Number

For the Examiner's Use Only

Part One Short-Answer Questions	Total Mark	Adv. Ex.	App. Ex.
Question 1			
Question 2			
Question 3			
Question 4			
Question 5			
Question 6			
Question 7			
Question 8			
Question 9			
Question 10			
Question 11			
Question 12			
Accumulated Mark			
Disallowed Marks			
Net Mark			

Note: Remember to return this paper with your answer book.

Otherwise, marks will be lost.

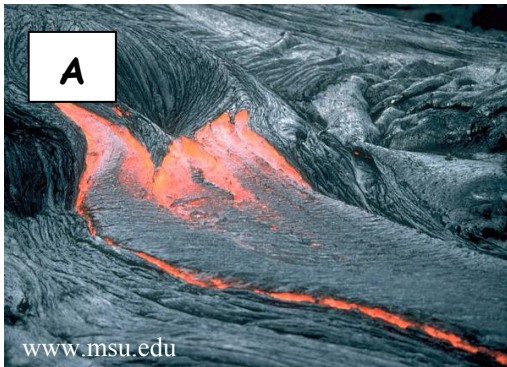
PART ONE – SHORT-ANSWER QUESTIONS – 100 MARKS

Attempt **TEN** questions.

All questions carry equal marks.

THESE QUESTIONS ARE TO BE ANSWERED IN THE SPACES PROVIDED

1. Volcanic Activity



- (i) Examine the photographs above and correctly match each of the letters on the photographs with **one** of the features named in the table below.

Feature	Letter
Lava flow	
Ash cloud	
Geyser	
Crater	

- (ii) Write the name of any volcano in the space below.

[10m]

2. Economic Activities

In the table below, write the category (Primary/Secondary/Tertiary) to which each economic activity named belongs.

One has been completed for you.

Economic Activity	Category
Forestry	
Tourism	
Manufacturing	
Agriculture	
Services	
Mining	Primary

[10m]

3. Physical Processes

Match the explanation of the process with the name of the process by writing the correct letter in each case in the table below.

Letter	Explanation of Process
A	Freezing and thawing of ice, breaks rocks apart.
B	The load wearing away the bank of a river.
C	A bog becoming soaked with water and flowing down hill suddenly.
D	A wave breaking onto a beach and flowing back into the sea.
E	Chemicals in the water wearing away rocks.

Name of Process	Letter
Swash and backwash	
Bog burst	
Freeze-thaw	
Solution	
Abrasion	

[10m]

4. Ordnance Survey Map

Examine the 1:50000 Ordnance Survey map and legend accompanying this paper.

- (i) Calculate the area of the map in square kilometres.
Write the correct answer in the box below.

- (ii) Measure the length of the River Shannon, in kilometres, from where it enters the map at **G 953 040** to the bridge in Carrick-on-Shannon at **M 938 993**.
Write the correct answer in the box below.

[10m]

5. Ordnance Survey Map

Examine the 1:50000 Ordnance Survey map and legend accompanying this paper.

- (i) Name the features which can be found at each of the following grid references.

M 936 996 _____

M 983 953 _____

G 896 017 _____

G 885 013 _____

- (ii) Draw the Ordnance Survey map symbol for an Electricity Transmission Line in the box below.

[10m]

6. Aerial Photograph and Ordnance Survey Map

- (i) Examine the aerial photograph of Carrick-on-Shannon accompanying this paper.

Using accepted notation (right background etc.), write the location of each of the following:

A car park _____

A bridge _____

A church _____

- (ii) Examine the Ordnance Survey map accompanying this paper. Imagine that you are driving from Lisnabrack at **G 943 005** along the R280 towards Drumheckil at **G 961 030**. In what direction would you be travelling?

- (iii) State **one** piece of evidence from the aerial photograph that suggests Carrick-on-Shannon is a tourist town.

[10m]

7. Physical Landforms

Match the landform with the name of the process responsible for its formation, by writing the correct letter, in each case, in the table below.

Letter	Landform
A	V Shaped valley
B	Pyramidal peak
C	Tombolo
D	Wave-cut platform
E	Drumlin

Name of Process	Letter
Glacial deposition	
River erosion	
Marine erosion	
Marine deposition	
Glacial erosion	

[10m]

8. Satellite Images



- (i) Study the satellite images above and match the description below with the correct image, by writing the correct letter, in each case, in the table below.

Description	Letter
A mine in the desert.	
A major ferry port.	
A railway and bus station.	
An industrial estate.	

- (ii) Name **one** use of satellite images.

[10m]

9. Irish Census

Population of Regional Authority Areas in Ireland, 2006-2011			
Region	2006	2011	Population Increase
Border	468,000	514,000	46,000
Dublin	1,200,000	1,270,000	70,000
Mid-East	475,000	530,000	55,000
Midlands	252,000	282,000	30,000
Mid-West	361,000	378,000	17,000
South-East	461,000	497,000	36,000
South-West	621,000	663,000	42,000
West	414,000	445,000	31,000
Total	4,252,000	4,579,000	327,000

Amended from CSO Preliminary Report on the 2011 Census

Study the table above which shows the population of regional authority areas in Ireland and answer the following questions.

- (i) What was the total population of Ireland in 2006?

- (ii) What was the increase in Ireland's total population between 2006 and 2011?

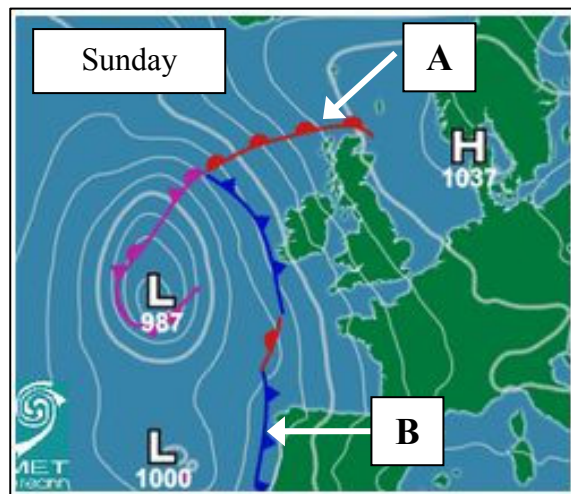
- (iii) Which region, excluding the Dublin region, had the largest population in both 2006 and 2011?

- (iv) Which region had the smallest population increase between 2006 and 2011?

- (v) State **one** reason why the Dublin region was the region with the largest population.

[10m]

10. Weather Charts



Examine the weather chart above and answer the following questions.

- (i) Match the two letters, **A** and **B**, on the weather chart above with the correct front in the table below.

Front	Letter
Cold Front	
Warm Front	

- (ii) What do the letters H and L on the weather chart above stand for?

H _____

L _____

- (iii) What is the lowest barometric pressure over the Atlantic to the south-west of Ireland?

- (iv) What is the name usually given to Ireland's climate?

[10m]

11. Rocks



Examine the photograph above of a basalt area in Ireland and answer the following questions.

- (i) Is basalt an igneous **or** a sedimentary **or** a metamorphic rock?

- (ii) Read the statement below and place an **X** in the correct box.
'Basalt is formed by the cooling of lava on the Earth's surface.'

True	
False	

- (iii) Was this photograph taken in the Burren, Co Clare **or** in the Giant's Causeway, Co Antrim?

- (iv) Read the statement below and place an **X** in the correct box.
'Basalt consists of mainly large crystals.'

True	
False	

- (v) Name **one** use of rocks.

[10m]

12. Regions

Match the description of a region with the example of a region, by writing the correct letter, in each case, in the table below.

Letter	Description of Region
A	A city in a core region.
B	A less developed economic region.
C	A region defined by language and culture.
D	A region defined by climate factors such as temperature and rainfall.
E	A region defined by physical factors such as relief.

Example of Region	Letter
The Alps	
Paris	
Mediterranean	
The South of Italy/Mezzogiorno	
The Basque Region of Spain	

[10m]

PART TWO – STRUCTURED QUESTIONS – 300 MARKS

You must attempt **THREE** questions, as follows:

- **TWO** questions from **Section 1 – Core**:
 - **One** question from Questions 1, 2 and 3
 - AND**
 - **One** question from Questions 4, 5 and 6
- **ONE** question from **Section 2 – Electives**

THESE QUESTIONS ARE TO BE ANSWERED IN THE ANSWER BOOK

SECTION 1 – CORE

Questions 1 to 6

You **MUST** attempt **TWO** questions:

➤ **ONE** from **Patterns and Processes in the Physical Environment**

AND

➤ **ONE** from **Regional Geography**

PATTERNS AND PROCESSES IN THE PHYSICAL ENVIRONMENT

Questions 1 to 3

Attempt **ONE** question

Question 1

A. Ordnance Survey Map

Examine the 1:50000 Ordnance Survey map and legend accompanying this paper. Draw a sketch map of the area shown and on it **show** and **name** the following:

- The River Shannon
- An area of mixed woodland
- Oakport Lough
- The Jamestown Canal
- An area of land over 120 metres above sea level in the north-east of the map.

[30m]

B. Rocks

- (i) Name **one** sedimentary rock and name **one** Irish location where this rock is found.
- (ii) Name **one** metamorphic rock and name **one** Irish location where this rock is found.
- (iii) Describe how sedimentary rocks **or** metamorphic rocks are formed.

[40m]

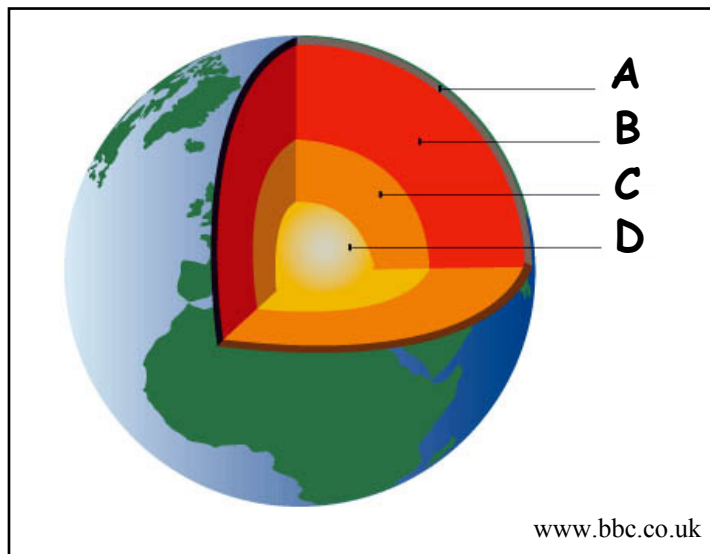
C. Plate Tectonics

- (i) Name **one** tectonic plate on the Earth's crust.
- (ii) What is the name given to the area of earthquakes and volcanoes that stretches around the Pacific Ocean?
- (iii) Describe in detail how volcanoes occur.

[30m]

Question 2

A. Internal Structure of the Earth



- (i) In your answer book, match each of the following names with the correct letter from the diagram above:
- Crust
 - Outer Core
 - Mantle
 - Inner Core.
- (ii) State **two** disadvantages of volcanoes.

[30m]

B. Surface Processes

Answer (i) or (ii).

- (i) Explain, with the aid of diagrams, the formation of any **two** different Irish landforms that you have studied.

OR

- (ii) Describe and explain any **two** processes of mass movement.

[40m]

C. Fold Mountains

- (i) Name **one** fold mountain that you have studied.
- (ii) With the aid of a diagram(s), explain how fold mountains are formed.

[30m]

Question 3

A. Earthquakes

Earthquake rocks Japan

This was one of the most powerful earthquakes recorded in Japanese history, 8.9 magnitude. The tremors were the result of a violent uplift of the sea floor, 80 miles off the coast of the city of Sendai.

The earthquake happened at a depth of 15 miles below the sea floor. This was the sixth largest earthquake in the world since 1900, when seismological records began.

The tsunami moved across the Pacific Ocean at a speed of 500 mph. The largest waves measured 7 metres (nearly 23ft) high in the north-east of Japan.

Edited from www.guardian.co.uk

Read the report above on the earthquake in Japan which occurred in March 2011 and answer each of the following questions.

- (i) What was the magnitude of the earthquake?
- (ii) Name the city close to the earthquake.
- (iii) At what depth did the earthquake occur?
- (iv) What speed did the tsunami reach as it moved across the Pacific Ocean?
- (v) Briefly explain how a tsunami occurs.

[30m]

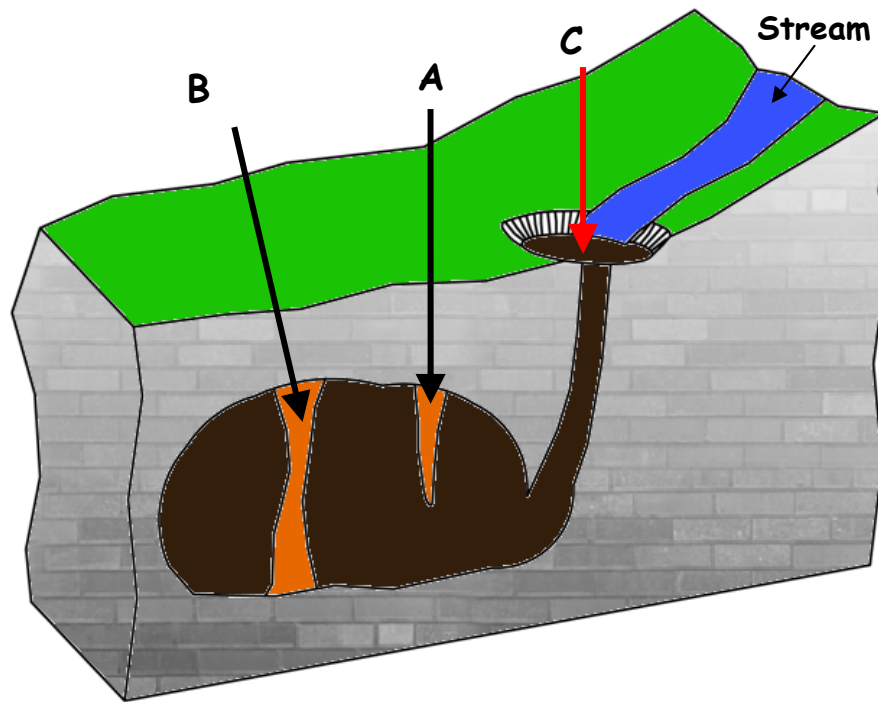
B. Human Interaction

Describe and explain how humans attempt to control **one** of the following surface processes:

- River processes
- Sea processes
- Mass movement.

[30m]

C. Karst Landscape



Study the diagram of a karst landscape above and answer the following questions.

- (i) Name the **three** features marked **A**, **B** and **C**.
- (ii) Name **one** other feature found in karst landscapes.
- (iii) Explain, with the aid of a diagram, how any **one** feature, in a karst region is formed.

[40m]

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

A. Map Skills

Draw a sketch map of a **European** region (**not in Ireland**) that you have studied. On it **show** and **name** the following:

- One named river
- Two named towns or cities
- One named mountain range.

[30m]

B. Agriculture in a Continental / Sub-Continental Region

Explain how any **two** of the following influence the development of agriculture in a **Continental / Sub-Continental** Region (**not in Europe**) that you have studied:

- Relief and soils
- Climate
- Markets.

[30m]

C. Economic Activities in Ireland

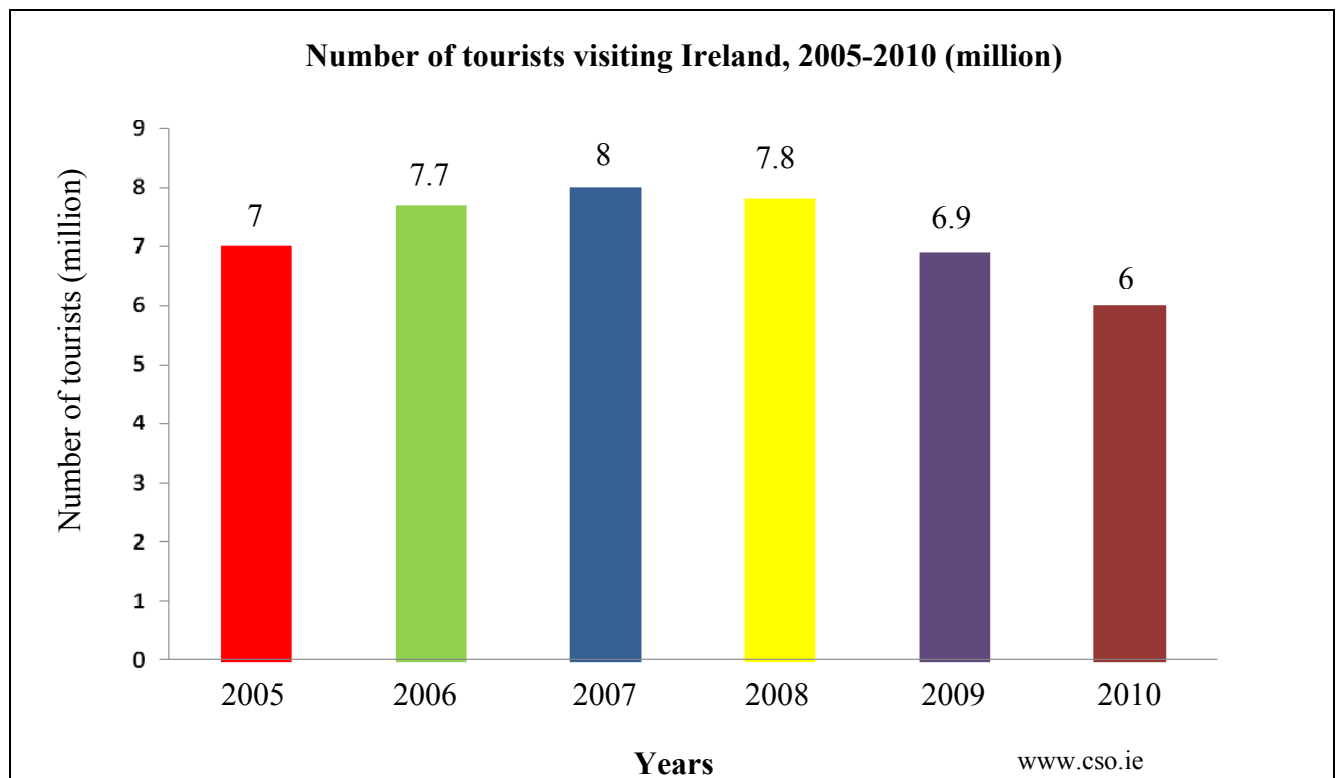
- Tourism
- Transport
- Manufacturing.

Describe the importance of any **two** of the above activities in an **Irish** region that you have studied.

[40m]

Question 5

A. Irish Tourism



Examine the chart above, which shows the number of tourists visiting Ireland from 2005 to 2010 and answer each of the following questions.

- (i) In which year did the greatest number of tourists visit Ireland?
- (ii) In which year did the lowest number of tourists visit Ireland?
- (iii) Calculate the decrease in tourist numbers from the greatest year to the lowest year.
- (iv) Name any **two** Irish tourist attractions.
- (v) Briefly explain why the number of tourists visiting Ireland has fallen in recent years.

[30m]

B. European Union Expansion and Ireland since 2000

- (i) Name **two** countries that joined the European Union since 2004.
- (ii) Explain **one** positive impact of the expansion of the European Union on Ireland.
- (iii) Explain **one** negative impact of the expansion of the European Union on Ireland.

[40m]

C. Urban Regions

Describe **two** reasons for the growth of an urban area in any region that you have studied.

[30m]

Question 6

A. Ireland - Regions

Draw a sketch map of Ireland.

On it **show** and **name** the following:

- One region studied by you
- One named river in the region
- One named mountain in the region
- One named town or city in the region.

[30m]

B. European Region

Explain how any **two** of the following influence the development of manufacturing industry in a **European region** that you have studied:

- Transport
- Raw materials
- Markets
- Government and European Union policies.

[40m]

C. Regional Problems

Describe **two** problems faced by any region that you have studied.

[30m]

SECTION 2 – ELECTIVES

Questions 7 to 12

You **MUST** attempt **ONE** question from:

Patterns and Processes in Economic Activities

OR

Patterns and Processes in the Human Environment

PATTERNS AND PROCESSES IN ECONOMIC ACTIVITIES

Questions 7 to 9

Question 7

A. Aerial Photograph

Examine the aerial photograph accompanying this paper.
Draw a sketch map of the area shown on the aerial photograph.
On it **show** and **name** the following:

- A marina with boats
- An industrial area
- A bridge
- A car park
- Two connecting roads.

[30m]

B. Multinational Companies (MNC)

- Name **one** multinational company operating in Ireland **and** state where it is located.
- Describe **one** reason why the multinational company named in part (i) above chose this location.
- Name **one** product manufactured by this multinational company **and** name **two** markets where the product is sold.
- Explain **two** ways the Irish government encourages multinational companies to set up in Ireland.

[40m]

C. Developing Economy

- Name **one** developing economy you have studied.
- Describe the effects of colonialism on this developing economy.

[30m]

Question 8

A. Unemployment in Ireland

Irish Unemployment Rates (%) for August, 2008 - 2011

Year	Percentage
2008	6.8%
2009	12.4%
2010	13.5%
2011	14.4%

www.cso.ie

Examine the data above on Irish unemployment rates.

- (i) Using **graph paper**, draw a suitable graph to illustrate this data.
- (ii) In your answer book, briefly explain **one** reason for the rise in unemployment in Ireland.

[30m]

B. Ordnance Survey Map

Examine the 1:50000 Ordnance Survey map and legend accompanying this paper.

Imagine you have the task of finding a suitable location to build a new recycling plant for the town.

- (i) State clearly where you would locate the recycling plant using a six-figure grid reference.
- (ii) Explain **one** reason in favour of this location and explain **one** reason against this location.

[30m]

C. Climate Change

‘Many scientists believe that the climate of the world is going through major changes which are caused by the activities of people.’

- (i) Name **two** causes of climate change.
- (ii) Explain any **one** of the causes of climate change named in part (i).
- (iii) Describe **one** effect of climate change on the world today.

[40m]

Question 9

A. Economic Development

Human Development Index (HDI), 2011

Country	Human Development Index	Life expectancy at birth (years)	Expected years of schooling
Ireland	0.908	80.6	18.0
Norway	0.943	81.1	17.3
Ethiopia	0.363	59.3	8.5
Pakistan	0.504	65.4	6.9
Niger	0.295	54.7	4.9

United Nations Development Programme

Examine the table above and answer the following questions.

- (i) Which country had the lowest HDI?
- (ii) Which country had the highest life expectancy?
- (iii) Which country had the lowest expected years of schooling?
- (iv) From the table above, name **one** country that is developing.
- (v) Briefly explain the reason for your choice of country in part (iv).

[30m]

B. Ireland and the European Union

The Irish economy receives funding from the European Union through the following:

- Common Agricultural Policy (CAP)
- Common Fisheries Policy (CFP)
- Regional Development Fund (RDF)
- Social Funding.

Choose any **one** of the above and explain in detail how it benefits the Irish economy.

[30m]

C. Economic Activities and Conflict

‘The exploitation of natural resources and the development of economic activities can result in conflict arising between people.’

- (i) Name an example of **one** such conflict that you have studied.
- (ii) Describe why this conflict has arisen.
- (iii) Describe **one** possible solution to this conflict.

[40m]

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

A. Irish Emigration

Component of annual population change - Emigration

Year	Total
2005	29,000
2007	42,000
2009	65,000
2011	76,000

Amended from CSO figures

Examine the data above on Irish emigration.

- (i) Using **graph paper**, draw a suitable graph to illustrate this data.
- (ii) In your answer book, explain **one** reason for the increase in emigration.

[30m]

B. Development of Towns

Examine the aerial photograph and the 1:50000 Ordnance Survey map and legend accompanying this paper.

Using the Ordnance Survey map **and** the aerial photograph, explain **three** reasons why the town of Carrick-on-Shannon developed at its present location.

[40m]

C. Overpopulation

- (i) Explain the meaning of the term 'overpopulation'.
- (ii) Describe in detail **two** problems caused by overpopulation in any region that you have studied.

[30m]

Question 11

A. Land-Use in Irish towns

Examine the aerial photograph accompanying this paper.

Draw a sketch map of the area shown on the aerial photograph.

On your sketch map **show** and **name** the following:

- An unfinished building
- A row of modern apartments
- A main shopping street
- A church
- A recreational (leisure) area.

[30m]

B. Traffic Problems

Examine the aerial photograph accompanying this paper.

- (i) Using the usual notation (right background etc.), give **two** locations on the aerial photograph where traffic congestion could be a problem in Carrick-on-Shannon.
- (ii) Select **one** of the locations chosen in part (i) and, using evidence from the aerial photograph, explain why traffic congestion might occur at this location.
- (iii) Examine in detail **one** possible solution to this traffic congestion.

[30m]

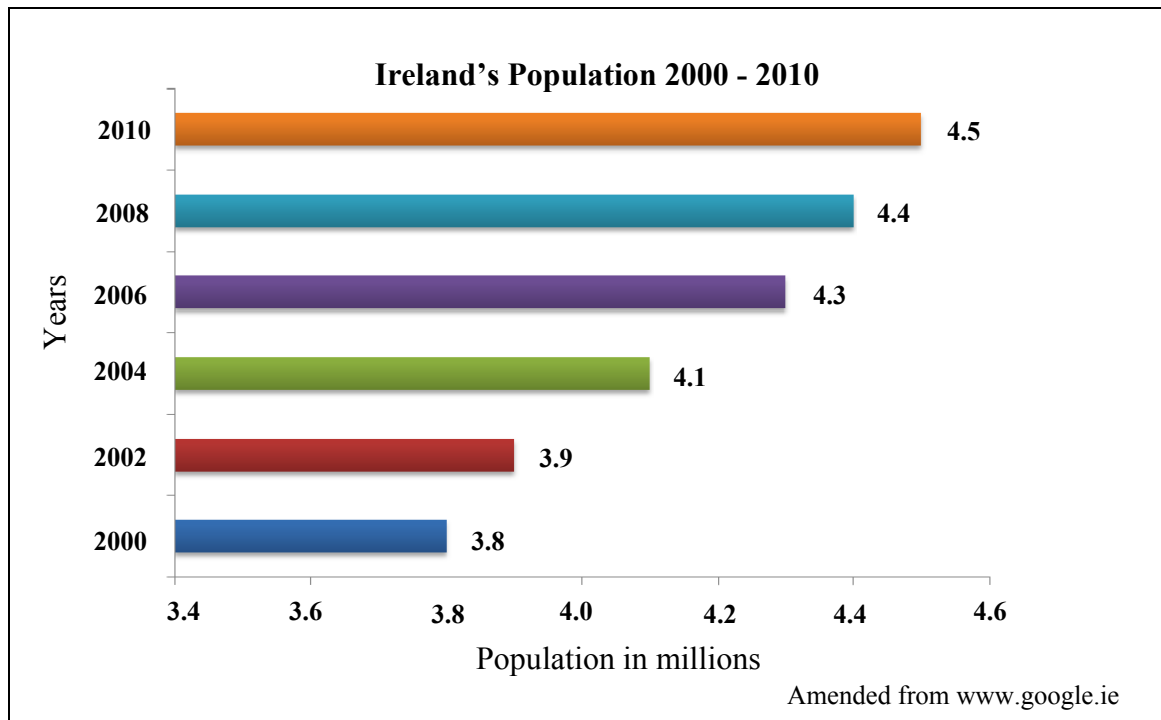
C. Urban Problems

- (i) Name a developing **or** a developed city that you have studied.
- (ii) Explain **two** problems arising from the growth of the city named in part (i).
- (iii) Describe **two** solutions to these problems.

[40m]

Question 12

A. Ireland's Population



Examine the chart above which shows Ireland's population from 2000 to 2010 and answer each of the following questions.

- (i) In which year did Ireland have the lowest population?
- (ii) What was Ireland's population in 2004?
- (iii) By how much has Ireland's population increased between 2000 and 2010?
- (iv) Explain **one** reason for this increase in population.
- (v) Describe **one** problem this increase in population will cause for Irish governments.

[30m]

B. Urban Sprawl

- (i) Explain **two** causes of urban sprawl in any city that you have studied.
- (ii) Explain **two** problems caused by this urban sprawl.

[40m]

C. Population

'One of the greatest challenges facing European governments in the future will be coping with ageing populations.'

Describe the difficulties that an ageing population can cause.

[30m]

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