



# Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2011

## GEOGRAPHY – ORDINARY LEVEL

FRIDAY, 10 JUNE – MORNING, 9.30 - 12.20

Examination Number

For the Examiner's Use Only

Part One Short-Answer Questions	Total Marks	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			
<b>Net Mark</b>			

**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. Coastal Landforms**



www.bushyparkcottage.com



www.crikey-adventure-tours.com



www.cache.marriott.com



www.geography.org.uk.

(i) Examine the photographs of coastal landforms above and correctly match each of the letters on the photographs with **one** of the named landforms in the box below.

Landform	Letter
Sea arch	
Blowhole	
Cliff	
Beach	

(ii) Which of the landforms named above was formed by the process of deposition?

\_\_\_\_\_

**[10 marks]**

## 2. Rocks

Match the description of the rock with the name of the rock by writing the correct letter in the box provided.

Letter	Description of Rock
<b>A</b>	Contains grains of sand which were cemented together.
<b>B</b>	Was formed from the fossils of many sea creatures and contains calcium carbonate.
<b>C</b>	Contains tiny crystals and was formed on or near the surface of the earth; is found in the Giants Causeway.
<b>D</b>	Was once limestone or chalk but changed due to heat or pressure.
<b>E</b>	Contains large crystals and was formed within the crust; is found in the Wicklow mountains.

Name of Rock	Letter
Limestone	
Granite	
Sandstone	
Basalt	
Marble	

[10 marks]

## 3. Processes of the Earth

Match the explanation of the process with the name of the process by writing the correct letter in the box provided.

Letter	Explanation of Process
<b>A</b>	A form of erosion where the material being carried erodes the surface with a sandpaper effect.
<b>B</b>	A form of weathering where repeated freezing and thawing cause the rocks to break up.
<b>C</b>	A slow form of mass movement on gentle slopes.
<b>D</b>	Where one crustal plate sinks under another into the earth's mantle.
<b>E</b>	A form of erosion where the material being carried is rounded and broken by colliding with other pieces of material.

Name of Process	Letter
Freeze thaw	
Soil creep	
Abrasion	
Attrition	
Subduction	

[10 marks]

#### 4. Earthquakes

**Number of Earthquakes Worldwide 2006 to 2010**

<b>Magnitude</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
8.0 to 9.9	2	4	0	1	1
7.0 to 7.9	9	14	12	16	21
6.0 to 6.9	142	178	168	144	151
<b>Estimated deaths resulting from earthquakes</b>	6605	712	88,011	1790	226,896+

www.usgs.gov

Study the table above and answer the following questions:

(i) In what year was the largest number of earthquakes of magnitude between 8.0 and 9.9?

---

(ii) In what year did the greatest estimated number of deaths occur?

---

(iii) How many earthquakes of the strongest magnitude occurred over the period shown?

---

(iv) What is the name of the scale used for measuring the strength of an earthquake?

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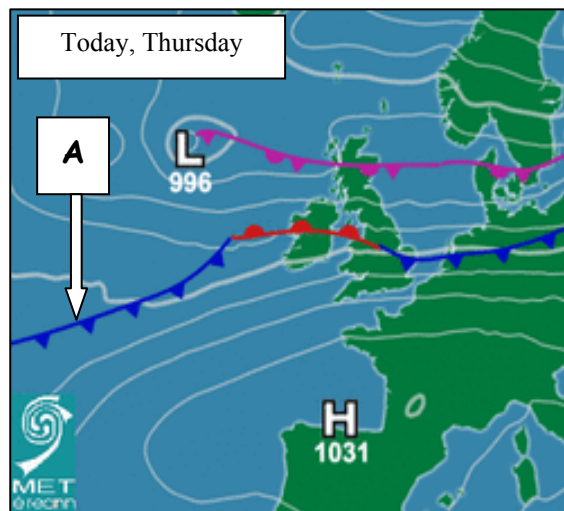
(v) Read the statement below and place an **X** in the correct box.

“Earthquakes occur where plates collide.”

True	
False	

**[10 marks]**

## 5. Weather Charts



Examine the weather chart above and answer the following questions:

- (i) Name the type of weather front at A.

- (ii) What is the barometric pressure over the Atlantic to the north-west of Ireland?

- (iii) Lines joining places of equal barometric pressure are called:  
Place an **X** in the correct box below.

Contours	<input type="checkbox"/>
Isohels	<input type="checkbox"/>
Isobars	<input type="checkbox"/>

- (iv) Read the statement and place an **X** in the correct box below.  
“An anticyclone is an area of high pressure.”

True	<input type="checkbox"/>
False	<input type="checkbox"/>

- (v) Read the statement and place an **X** in the correct box below.  
“According to the weather chart, southern Europe is experiencing dry settled weather.”

True	<input type="checkbox"/>
False	<input type="checkbox"/>

**[10 marks]**

## 6. Ireland's Climate

**Monthly and annual mean temperature at Valentia Observatory, 1961 – 1990**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual Mean
Temp °C	6.8	6.6	7.6	8.9	10.9	13.3	14.8	14.8	13.5	11.5	8.7	7.6	10.4

www.met.ie

Examine the table above showing the monthly and annual mean temperature at Valentia Observatory from 1961 to 1990 and answer the following questions:

(i) Which month had the lowest mean temperature?

\_\_\_\_\_

(ii) Which **two** months were the warmest?

Month 1 \_\_\_\_\_

Month 2 \_\_\_\_\_

(iii) What was the **Annual Mean** temperature recorded over the period 1961 to 1990?

\_\_\_\_\_

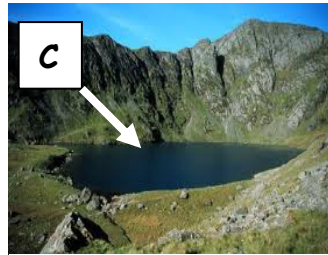
(iv) What is the name given to Ireland's climate type?

\_\_\_\_\_

**[10 marks]**

## 7. Glacial Landforms

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



www.swisseduc.ch

Wikimedia.org

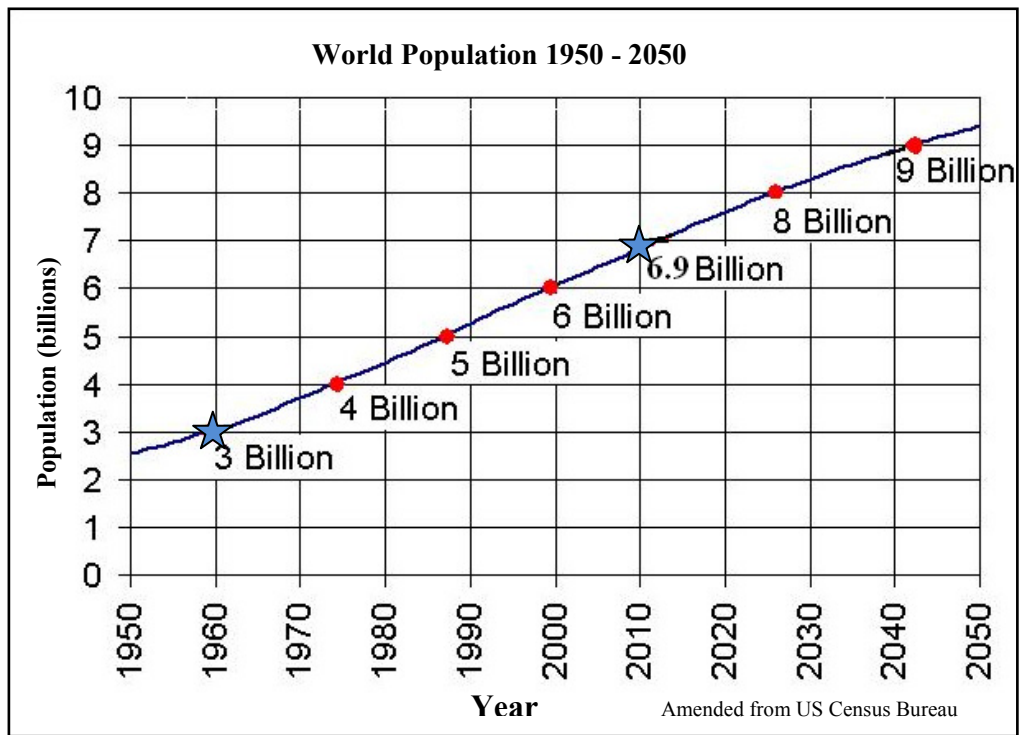
Landform	Letter
U-Shaped valley	
Pyramidal peak	
Erratic	
Corrie lake	

- (ii) Name **one** way in which glacial landscapes benefit the economy in areas in which they are found.

---

**[10 marks]**

## 8. Population



Examine the trend graph above and answer the following questions:

(i) What was the population of the world in 1960?

---

(ii) What was the population of the world in 2010?

---

(iii) What was the increase in population between 1960 and 2010?

---

(iv) State **one** reason why population increased between 1960 and 1990.

---

(v) State **one** impact of the population increase between 1960 and 1990.

---

[10 marks]



## 9. Regions

Match the description of the region with the example of the region by writing the correct letter in the box provided.

Letter	Description of Region
A	A region defined by language and culture.
B	A region with a well developed economy.
C	A once prosperous region based on coal mining and heavy industries but has declined.
D	A region defined by climate factors such as temperature and rainfall.
E	A region defined by physical factors such as rock type.

Example of Region	Letter
Paris Basin	
Mediterranean	
South Wales or Sambre Meuse	
The Burren	
Irish Gaeltacht	

[10 marks]

## 10. Ordnance Survey Map

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

- (i) Measure the **distance** in kilometres along the N86 from the Garda Station at Q 446 009 to where the road leaves the map at Q 530 013.  
Write the correct answer in the box below.

- (ii) Imagine that you are hiking along the Dingle Way (Slí Chorca Dhuibhne), beginning at Q 456 020 toward the Garfinny River at Q 474 037. In what **direction** are you travelling?  
Write the correct answer in the box below.

[10 marks]

## 11. Ordnance Survey Map

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

- (i) Name the feature/symbol which can be found at each of the following grid references:

Q 442 010 \_\_\_\_\_

Q 441 005 \_\_\_\_\_

- (ii) Name the feature formed by coastal deposition in grid square V 48 98.

Feature \_\_\_\_\_

- (iii) Calculate the total area of the map in square kilometres.

Total Area \_\_\_\_\_

- (iv) State **one** reason why there is no evidence of settlement in the area at Q 50 04.

\_\_\_\_\_

[10 marks]

## 12. Aerial Photograph and Ordnance Survey Map

- (i) Examine the aerial photograph of Dingle/An Daingean accompanying this paper and answer the following questions:

Is the aerial photograph vertical or oblique? \_\_\_\_\_

Write the location of the following, using accepted notation (right background etc.):

A football pitch \_\_\_\_\_

A bus depot / garage \_\_\_\_\_

- (ii) State **one** piece of evidence from the aerial photograph that suggests that Dingle/An Daingean is a port.

\_\_\_\_\_

- (iii) Using **both** the aerial photograph and the Ordnance Survey map, name the area of water in the left foreground of the aerial photograph.

\_\_\_\_\_

[10 marks]

## **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 coastline
- The Milltown River
- A lighthouse
- A named area of land above 400 metres
- A corrie lake.

[30 marks]

#### B. Surface Processes

Answer (i) or (ii).

(i) Select any **one** of the following surface processes:

- Marine action
- River action
- Glacial action.

Explain with the aid of a diagram(s) the formation of any **two** Irish landforms resulting from your selected process.

**OR**

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

[40 marks]

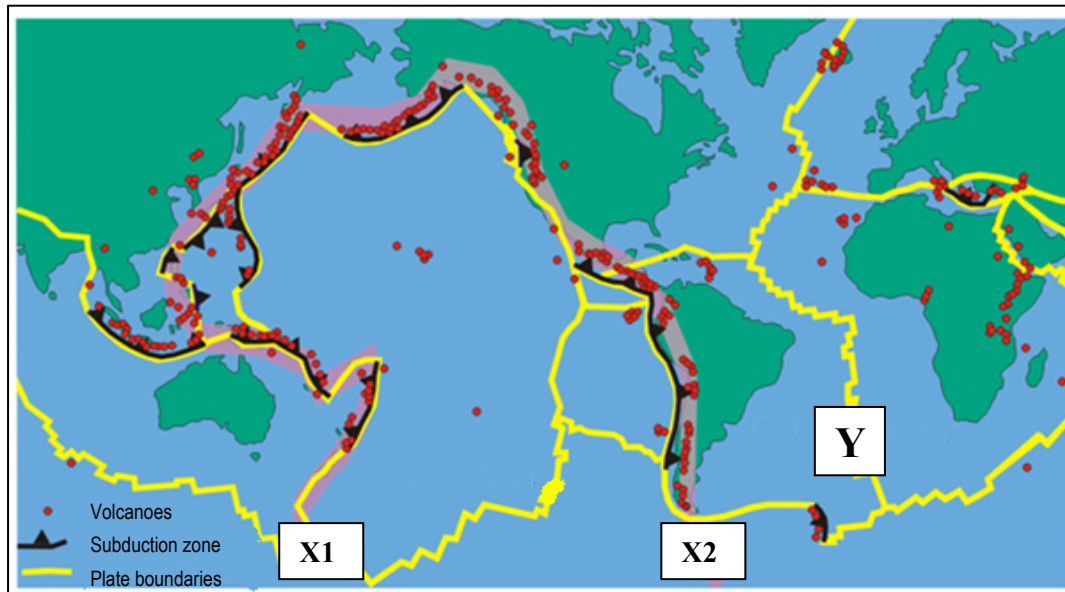
#### C. Volcanoes

Explain, with the aid of a diagram(s), how volcanic eruptions occur.

[30 marks]


## Question 2

### A. Plate Tectonics



Amended from [www.atlas.nrcan.gc](http://www.atlas.nrcan.gc)

Examine the map above and answer the following questions:

- (i) What is the name given to the region from **X1**, along the shaded line,  to **X2**?
- (ii) Name the ridge running north from **Y**.
- (iii) Name any **two** volcanoes.
- (iv) Name any **two** crustal plates.
- (v) Briefly explain what is meant by subduction.

[30 marks]

### B. Rocks

- (i) Name **one** example of an igneous rock **OR** **one** example of a metamorphic rock.
- (ii) Name a specific location in Ireland where the rock you named above is found.
- (iii) Describe how igneous rocks **OR** metamorphic rocks are formed.

[40 marks]

### C. Human Interaction

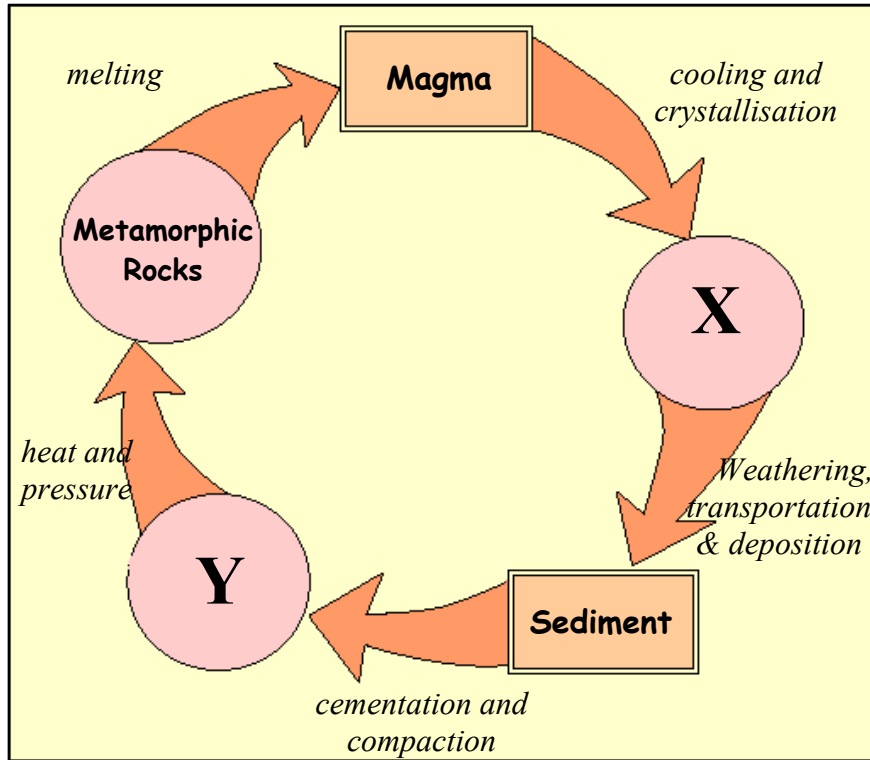
Describe and explain how humans attempt to control **one** of the following surface processes:

- River processes
- Sea processes
- Mass movement.

[30 marks]

### Question 3

#### A. Rock Cycle



Amended from [www.ags.ou.edu](http://www.ags.ou.edu)

Examine the diagram of the rock cycle above and answer each of the following questions:

- Name the category of rock formed at **X**.
- Give an example of the category of rock formed at **X**.
- Name the category of rock formed at **Y**.
- Give an example of the category of rock formed at **Y**.
- Name any **two** ways rocks are used.

[30 marks]

#### B. Karst Landscape - Limestone

- Name an example of a Karst region in Ireland.
- Explain, with the aid of a diagram(s), how **one surface** feature in a Karst region is formed.
- Explain, with the aid of a diagram(s), how **one underground** feature, in a Karst region is formed.

[40 marks]

#### C. Plate Tectonics

Describe and explain what happens at plate boundaries.

[30 marks]

## REGIONAL GEOGRAPHY

### Questions 4 to 6

Attempt **ONE** question

#### Question 4

##### A. Ireland – Regions

Draw a sketch map of Ireland.

On it **show** and **name**:

- Two named regions studied by you
- One named river
- One named mountain range.

[30 marks]

##### B. Economic Activity – Irish Region

Name an **Irish** region you have studied and explain any **two** of the following:

- The reasons why **tourists** are attracted to this region
- The type of **farming** practiced in this region
- The importance of **transport** in this region.

[40 marks]

##### C. Continental / Sub-Continental Regions

Describe the development of manufacturing industry in any **one Continental / Sub-Continental** region (**not in Europe**) that you have studied.

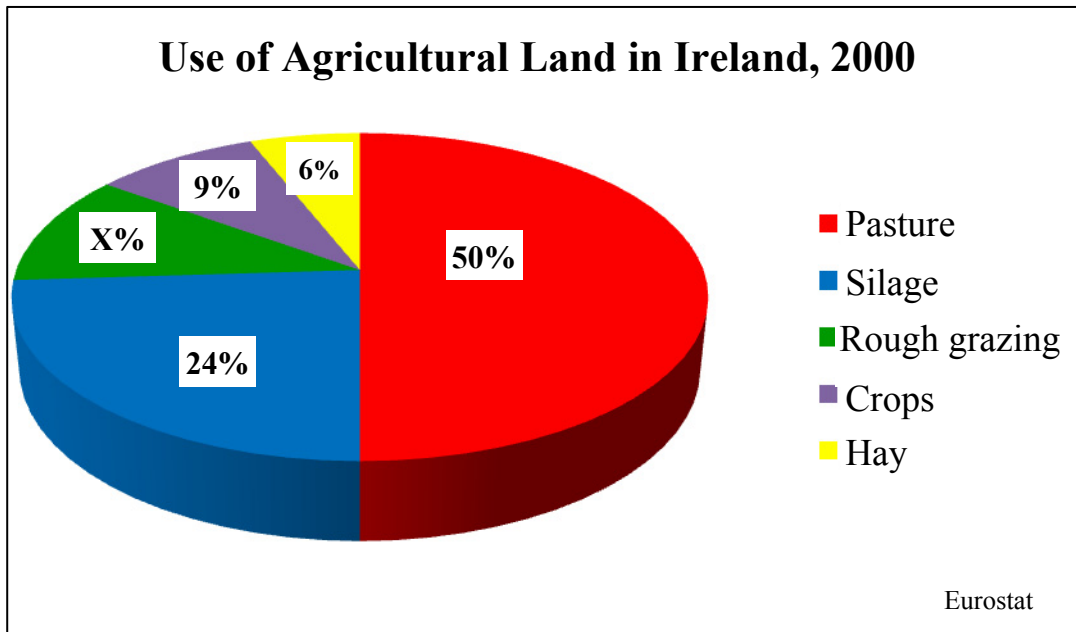
Clearly state the name of the region in your answer.

[30 marks]



## Question 5

### A. Irish Agriculture



Examine the chart above and answer each of the following questions:

- (i) What percentage of agricultural land was used for the production of hay in 2000?
- (ii) Calculate **X**, the percentage of agricultural land used for rough grazing in 2000.
- (iii) What total percentage of agricultural land was used for the production of pasture and silage combined?
- (iv) Name **one** crop, not named in the chart above, that is grown in Ireland.
- (v) Give a brief description of pastoral farming.

**[30 marks]**

### B. Manufacturing Industry in Ireland

Explain how any **two** of the following influence the development of manufacturing industry in an **Irish** region you have studied:

- Transport
- Raw materials
- Markets
- Government and EU policies.

Clearly state the name of the region in your answer.

**[30 marks]**

### C. Agriculture in Europe

Explain how physical **and** economic factors influence the development of agriculture in a **European** region (not in Ireland) that you have studied.

Clearly state the name of the region in your answer.

**[40 marks]**

## Question 6

### A. Continental / Sub-Continental Region

Draw a sketch map of a **Continental / Sub-Continental** region (**not in Europe**) which you have studied.

On it **show** and **name**:

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

[30 marks]

### B. European Regions – Transport



Describe the development of transport in any **one European** region (not in Ireland) which you have studied.

Clearly state the name of the region in your answer.

[40 marks]

### C. Cultural Regions

A region's culture can be defined by any of the following:

- Religion
- Language
- Music/Dance
- Games.

Describe and explain the importance of culture in **any** region studied by you.

Clearly state the name of the region in your answer.

[30 marks]

**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. Ordnance Survey Map

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

- The entire N86 National Secondary Road
- The ferry route in Dingle Harbour
- An area of Coniferous Plantation
- A Tourist Information centre
- An Independent Holiday Hostel.

[30 marks]

##### B. Developed Economy

- (i) Name **one** developed economy where tourism **OR** financial services contribute to that economy.
- (ii) Describe **one** reason for the growth of tourism **OR** financial services in the developed economy named.
- (iii) Explain **one** benefit that tourism **OR** financial services bring to the economies of developed countries.
- (iv) Explain **one** problem caused by tourism **OR** financial services.

[40 marks]

##### C. Renewable Energy

- (i) Name **two** sources of renewable energy which are suitable for use in Ireland.
- (ii) Explain why the **two** sources named above, are suitable for use in Ireland.

[30 marks]

## Question 8

### A. Irish Trade

Ireland's Main Trading Partners - 2009 €m

Trading Partners	Imports	Exports
Great Britain and Northern Ireland	13,617	13,511
Other EU countries	12,889	37,466
USA	7,839	17,585
Rest of World	10,490	14,962
<b>Total</b>	<b>44,835</b>	<b>83,524</b>

www.cso.ie

Study the table above and answer the following questions:

- (i) What was the total value of imports in 2009?
- (ii) What was the total value of exports in 2009?
- (iii) Calculate the difference between total value of imports and total value of exports in 2009.
- (iv) What trading partners received the most Irish exports in 2009?
- (v) State **one** reason why this is the case.
- (vi) Name any **two** products exported from Ireland.

[30 marks]

### B. Industrial Location

Examine the aerial photograph accompanying this paper.

It is proposed to build a fish processing factory on the green field site in the centre foreground of the aerial photograph.

- (i) Describe **two** advantages this site has for the location of a fish processing factory.
- (ii) Describe **one** problem that might arise as a result of building a fish processing factory on this site.

[30 marks]

### C. Environmental Pollution



bionomicfuel.com



wordpress.com



Pollution of the environment is a problem which can occur as a result of economic activities.

- (i) Name **two** economic activities that could cause environmental pollution.
- (ii) Explain **one** way that these economic activities cause environmental pollution.
- (iii) Explain **one** solution to environmental pollution.

[40 marks]

## Question 9

### A. World Energy

**World Energy Consumption, 2007**

Type of Energy	Percentage
Oil	36%
Coal	28%
Natural Gas	24%
Other	12%

BP Statistical Review, 2007

Examine the data above regarding world energy consumption in 2007.

- (i) Using **graph paper**, draw a suitable graph to illustrate this data.
- (ii) In your answer book, name **two** types of energy which are not named in the table above.

[30 marks]

### B. Multinational Companies

- (i) Name **one** multinational company (MNC) operating in Ireland **and** state where it is located.
- (ii) Name **one** raw material used by this multinational company **and** state where the raw material is sourced.
- (iii) Name **one** product manufactured by this multinational company **and** name **two** markets where the product is sold.
- (iv) Explain **one** reason why some multinational companies leave Ireland to locate elsewhere.

[40 marks]

### C. Ireland and the European Union

- (i) Name any **one** European Union policy which affects Ireland's economy.
- (ii) Describe and explain **two** effects of this policy on Ireland's economy.

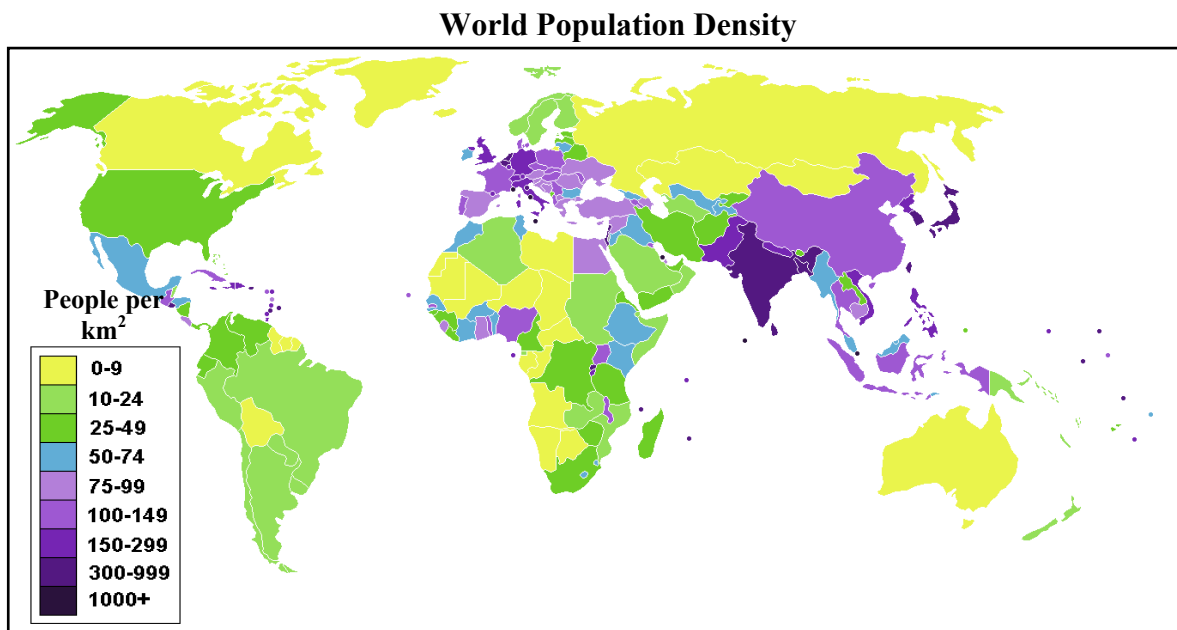
[30 marks]

# PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

## Questions 10 to 12

### Question 10

#### A. World Population



Amended from [www.spearheadresearch.org](http://www.spearheadresearch.org)

Study the map above showing world population density and answer the following questions:

- (i) In what category of population density is Ireland?
- (ii) Name any **one** country in the 0-9 category of population density.
- (iii) Explain briefly what is meant by population density.
- (iv) Explain briefly **one** negative effect of **high** population density.
- (v) Explain briefly **one** negative effect of **low** population density.

[30 marks]



**B. Transport in Urban Areas**

- (i) Name **one** traffic problem experienced by cities that are growing rapidly.
- (ii) Name **one** city that has such a problem.
- (iii) Explain **two** reasons why this problem has developed.
- (iv) Explain **one** solution to this problem.

**[40 marks]**

**C. Population**

- (i) Explain the term 'birth rate'.
- (ii) Explain how any of the following factors influences birth rates:
  - Medical technology
  - Culture and society
  - Income levels.

**[30 marks]**

## Question 11

### A. Population

**Population of Selected Irish Counties, 2006**

County	Population
Co Dublin	1,200,000
Co Cork	500,000
Co Galway	230,000
Co Waterford	100,000

Amended from cso.ie

Examine the data above showing approximate figures for the population of a number of Irish counties.

- (i) Using **graph paper**, draw a graph to illustrate this data.
- (ii) In your answer book, briefly explain why Co Dublin has the largest population.

**[30 marks]**

### B. Migration

- (i) Explain **two** reasons why people migrate from rural areas to cities.
- (ii) Explain **one** effect this has on the rural areas they have left behind.
- (iii) Explain **one** reason why large numbers of people are emigrating from Ireland in recent times.

**[40 marks]**

## C. Urban Issues



- (i) Examine the photographs of urban issues shown above and match each of the letters on the photograph with **one** of the urban issues listed below.

Write your answer in your answer book.

- Cities of the future
- Urban transport
- Urban problems
- Heritage issues.

- (ii) Describe any **one** of the urban issues listed above.

[30 marks]

## Question 12

### A. Land-Use

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:

- A port area
- A carpark
- A main shopping street
- A roundabout
- A housing estate.

[30 marks]

### B. Population Density and Distribution

Study the Ordnance Survey map and legend accompanying this paper and answer the following questions:

- (i) Give a 4 figure grid reference for an area on the map which has a **high** population density.
- (ii) Explain in detail, using map evidence, why there is a **high** density of population at this location.
- (iii) Give a 4 figure grid reference for an area on the map with a **low** population density.
- (iv) Explain in detail, using map evidence, why there is a **low** density of population at this location.

[40 marks]

### C. Urban Functions

Describe how the functions of **any** urban area studied by you have changed over time.

Clearly state the name of the urban area in your answer.

[30 marks]

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