



# Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2011

**GEOGRAPHY – HIGHER LEVEL**

**FRIDAY, 10 JUNE – MORNING, 9.30 - 12.20**

**Examination Number**

**For the Examiner's Use Only**

<b>Part One</b> Short-Answer Questions	<b>Total</b> <b>Marks</b>	<b>Adv. Ex.</b>	<b>App. Ex.</b>	<b>App. Adv.</b>
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.**

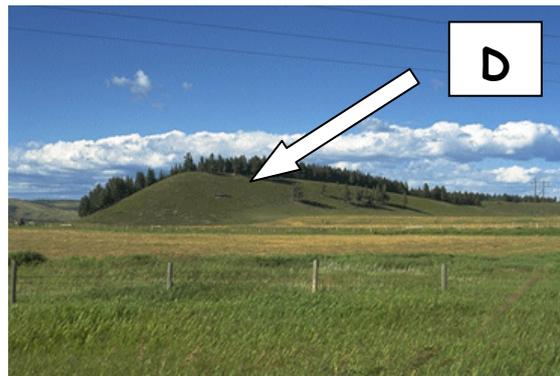
**PART ONE – SHORT-ANSWER QUESTION – 80 MARKS**

Attempt **TEN** questions.

All questions carry equal marks.

**THESE QUESTIONS ARE TO BE ANSWERED IN THE SPACES PROVIDED**

**1. Glaciation**



Examine the photographs above showing glacial features.

- (i) Insert the correct letter in the spaces below to identify **each** of the glacial features in the photographs above.
- (ii) State whether **each** feature was formed by the process of erosion or the process of deposition.

Photograph	Letter	Process Erosion/Deposition
Boulder clay		
Erratic		
Striations		
Drumlin		

[8m]

## 2. Ordnance Survey Map

Using the 1:50000 Ordnance Survey map and legend that accompany this paper, write the correct answer for **each** of the following, in the space provided:

- (i) What type of antiquity is found at grid reference Q 457 015?

\_\_\_\_\_

- (ii) What is the altitude above sea level of the antiquity named in part (i)?

\_\_\_\_\_

- (iii) Has the tourist information centre at Q 444 010 regular opening hours?  
Tick the correct answer.

Yes  No

- (iv) Is the landform in grid square Q 46 02 a plateau or a conical hill?  
Tick the correct answer.

Plateau  Conical hill

[8m]

## 3. Aerial Photograph and Ordnance Survey Map

Using the aerial photograph, the 1:50000 Ordnance Survey map and legend that accompany this paper, write the correct answer for **each** of the following, in the space provided:

- (i) Name the road which enters the aerial photograph in the right background and runs to the roundabout in the centre middleground.

\_\_\_\_\_

- (ii) Name the road which enters the aerial photograph in the right foreground and runs to the roundabout in the centre middleground.

\_\_\_\_\_

- (iii) Over which of the following points was the camera when the aerial photograph was taken? Tick the correct box.

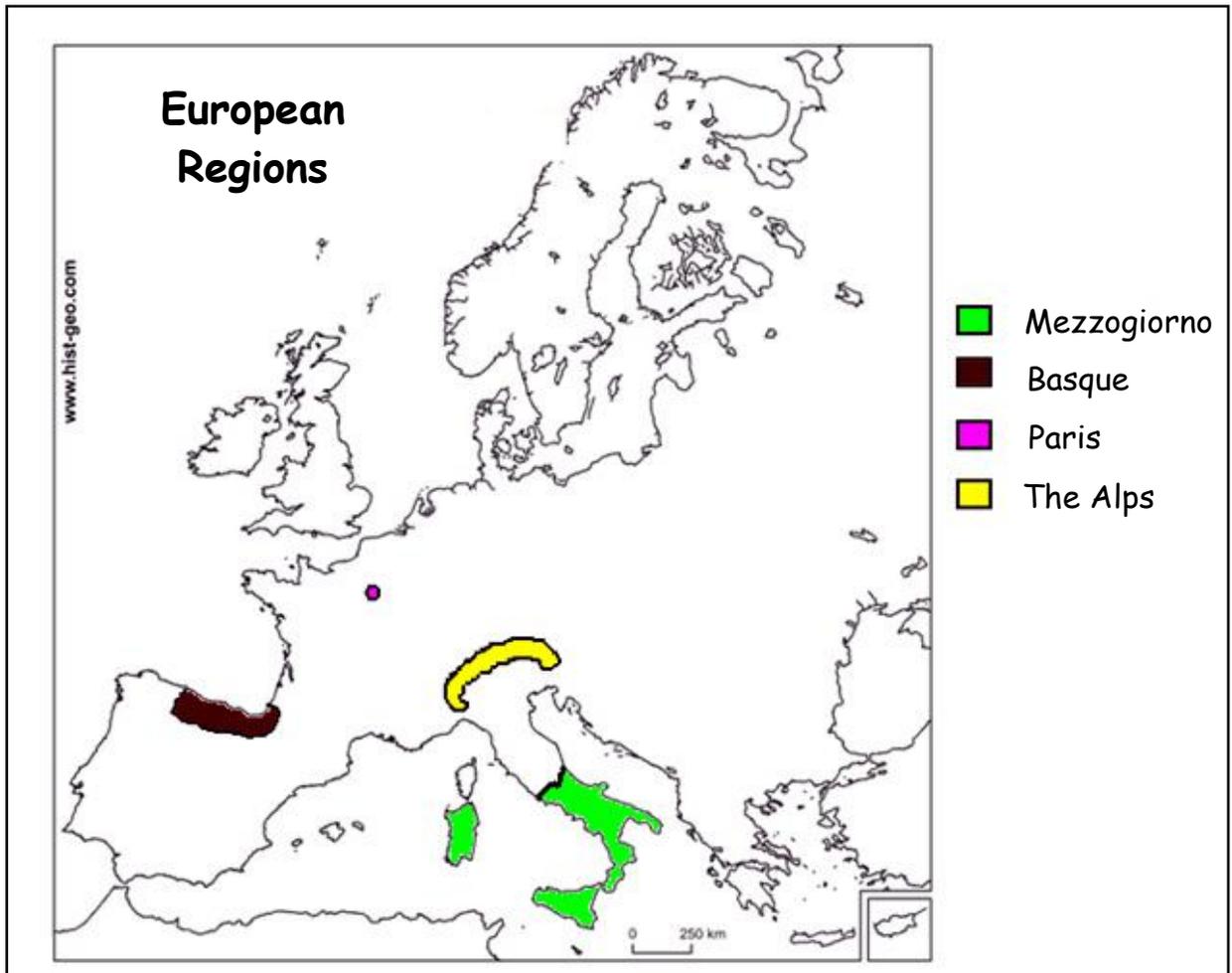
V 435 999  Q 446 007  Q 445 020

- (iv) In which direction was the camera pointed when the aerial photograph was taken?

\_\_\_\_\_

[8m]

4. Types of Region



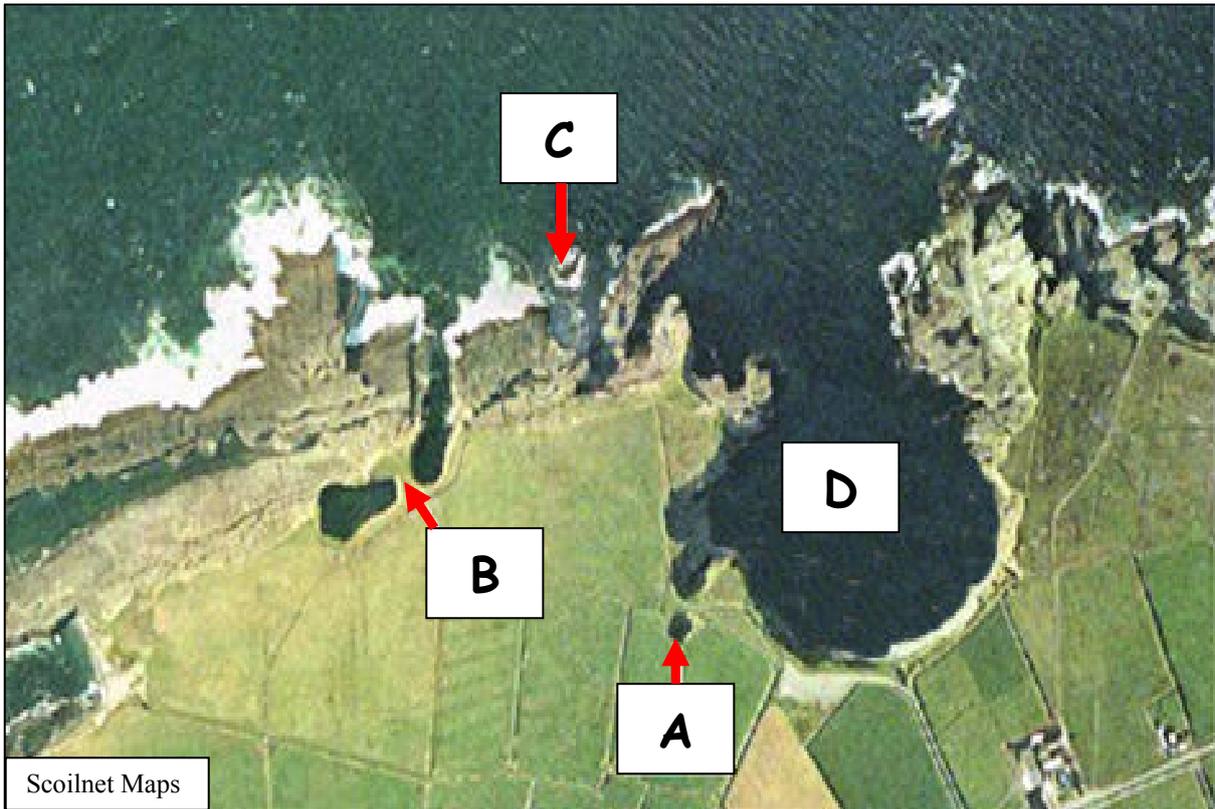
Examine the map above.

Match **each** region shown on the map above with the type of region which **best** describes it in the table below.

Region Type	Name of Region
Cultural region	
Physical region	
Peripheral region	
Urban region	

[8m]

5. Coastal Landforms



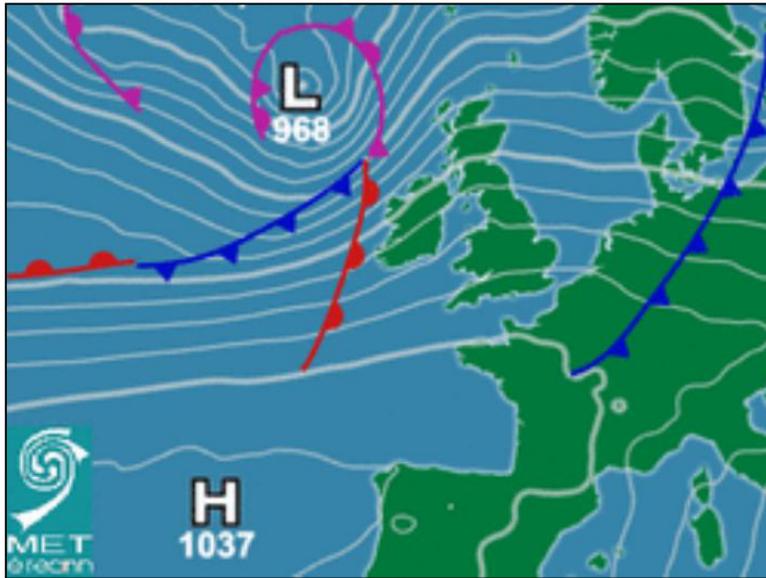
Examine the aerial photograph above.

Match **each** of the letters **A** to **D** with the correct landform in the table below.

Landform	Letter
Sea stack	
Blowhole	
Bay	
Sea arch	

[8m]

6. Weather Chart



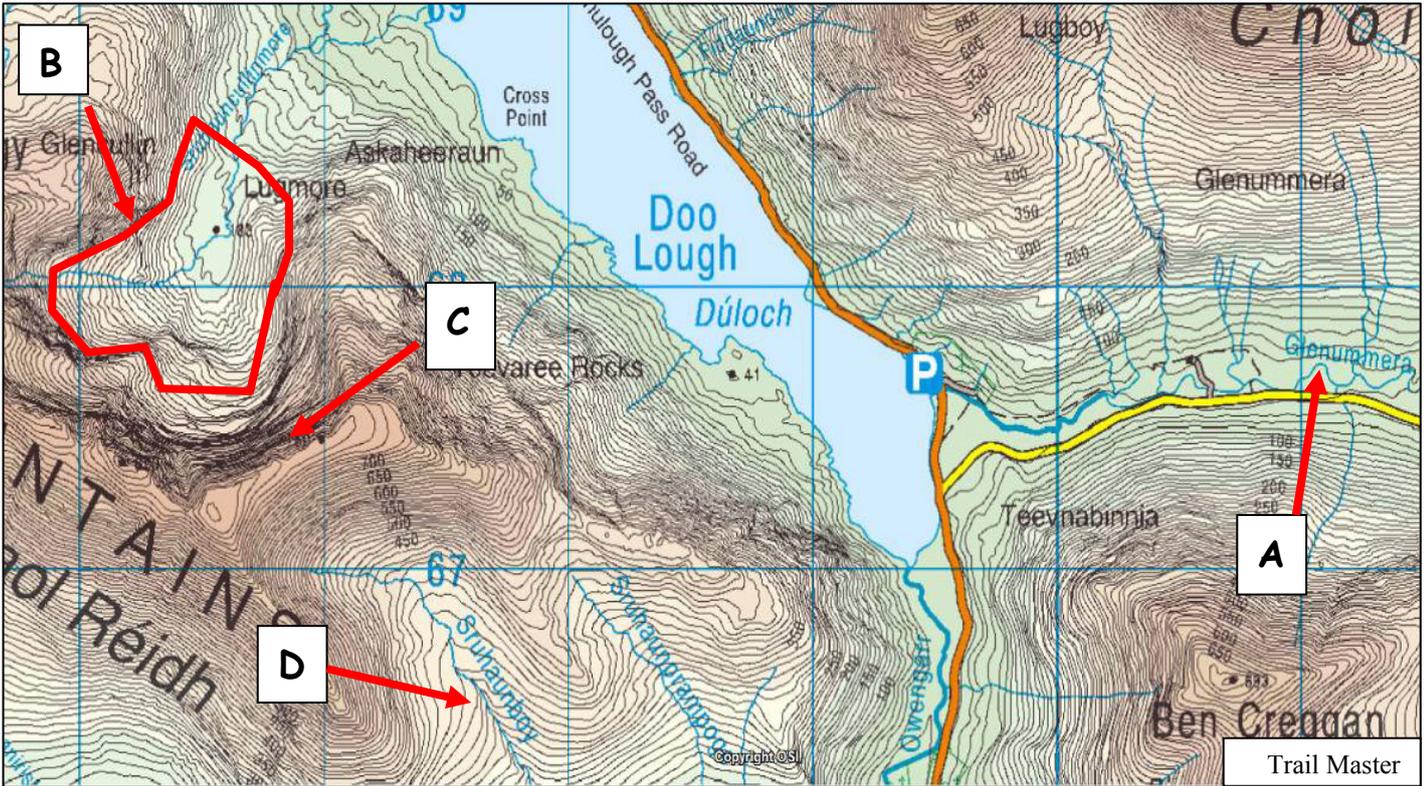
Examine the Irish weather chart above.

State whether **each** of the following statements is true or false by ticking the correct box.

- (i) The weather over the Iberian Peninsula is very calm. True  False
- (ii) There is a cold front over central and northern Europe. True  False
- (iii) There is an anticyclone affecting Ireland and Great Britain. True  False
- (iv) Winds are light over Ireland. True  False

[8m]

7. Landforms



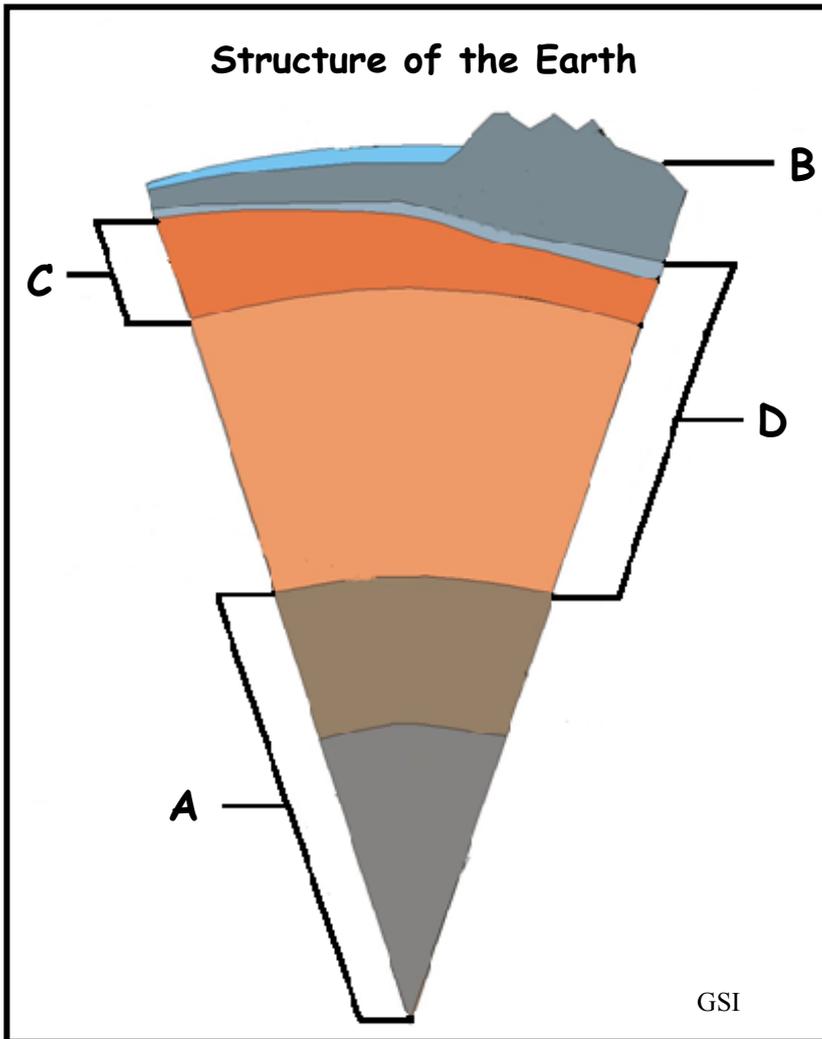
Examine the Ordnance Survey map extract above.

- (i) Match **each** of the letters **A** to **D** with the correct landform in the table below.
- (ii) State whether fluvial processes or glacial processes were responsible for the formation of **each** landform by ticking the correct box.

Landform	Letter	Fluvial Processes	Glacial Processes
V-shaped valley			
Corrie/Cirque			
Arête			
Meander			

[8m]

8. The Structure of the Earth

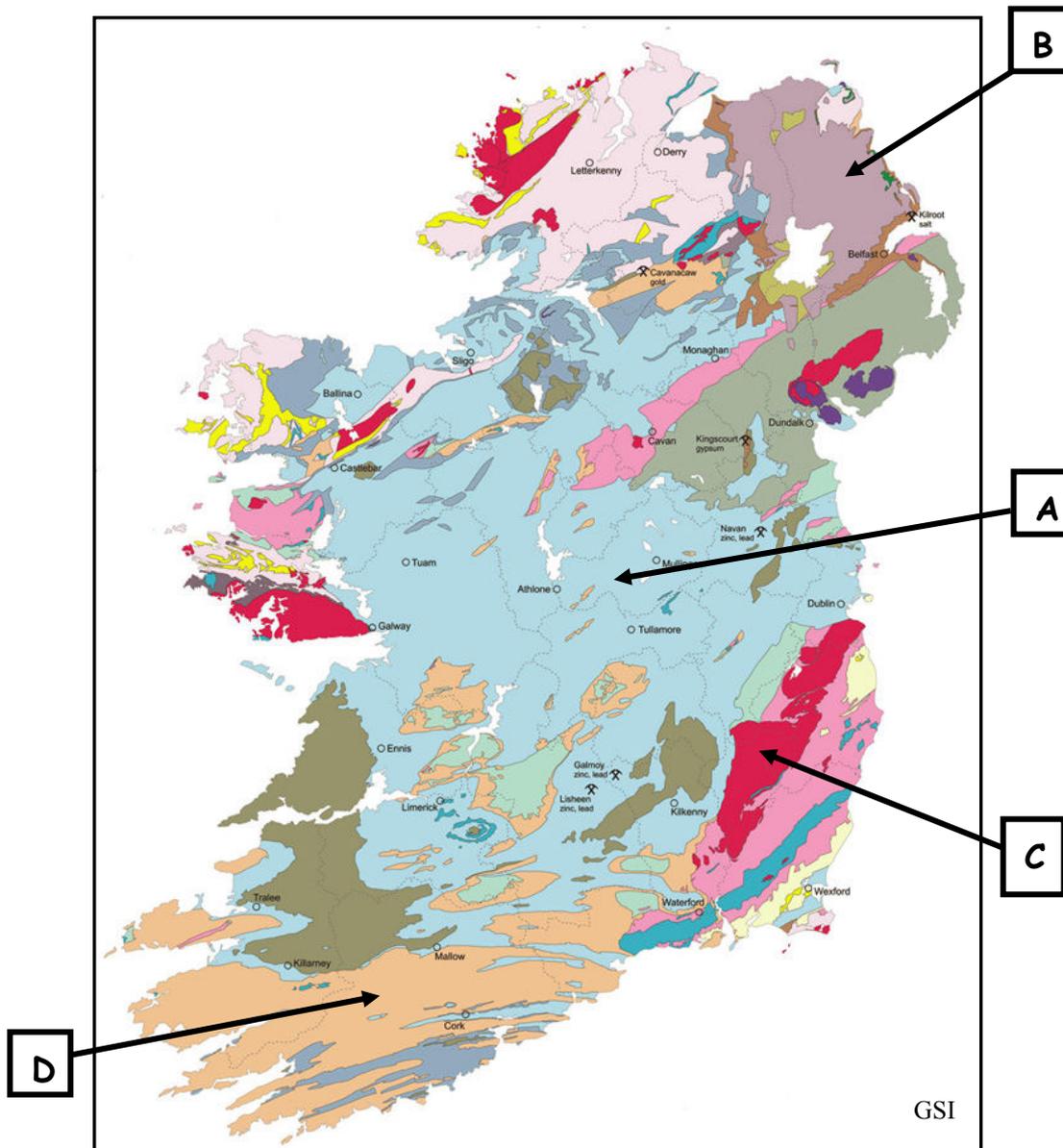


Examine the diagram above which shows the structure of the earth. Match **each** of the letters **A** to **D** with its correct name in the table below.

Name	Letter
Mantle	
Asthenosphere	
Core	
Crust	

[8m]

9. Rock Type

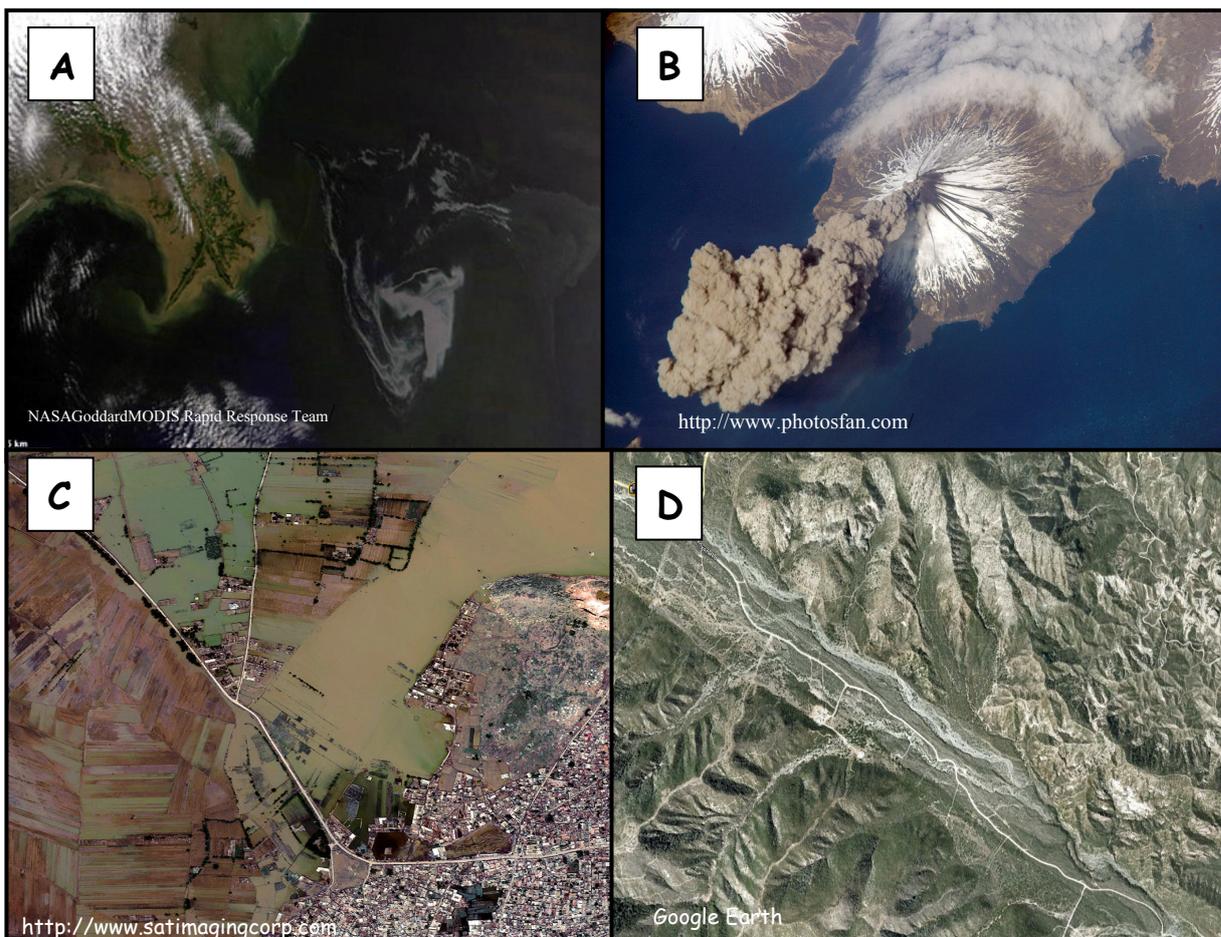


Examine the geological map of Ireland above.  
Match **each** of the letters **A** to **D** with its correct rock type in the table below.

Rock Type	Letter
Basalt	
Limestone	
Sandstone	
Granite	

[8m]

10. Satellite Interpretation



Examine the satellite images above.  
Match **each** of the letters **A** to **D** with its correct description in the table below.

Description	Letter
Oil slick in the Gulf of Mexico.	
Flooding in Pakistan, August 5, 2010.	
Erupting volcano in Alaska.	
San Andreas Fault in California.	

[8m]

## 11. Energy capacity in Ireland

Examine the table below which shows the generating capacity of renewable energy in Ireland in mega watts (mw) and answer the questions that follow:

Generating capacity of renewable energy (mw)			
Year	Wind	Hydro	Biomass
2003	212	240	12
2004	343	240	17
2005	495	234	18
2006	746	234	25
2007	783	235	27
2008	1,027	237	30
2009	1,264	239	X
Total	4,870	1,659	162

Sustainable Energy Ireland

- (i) What was the generating capacity for wind in 2009?

\_\_\_\_\_

- (ii) Briefly explain **one** reason why there has been an increase in the use of wind energy in Ireland for generating electricity.

Reason \_\_\_\_\_

\_\_\_\_\_

- (iii) Calculate X, the generating capacity for biomass in 2009.

\_\_\_\_\_

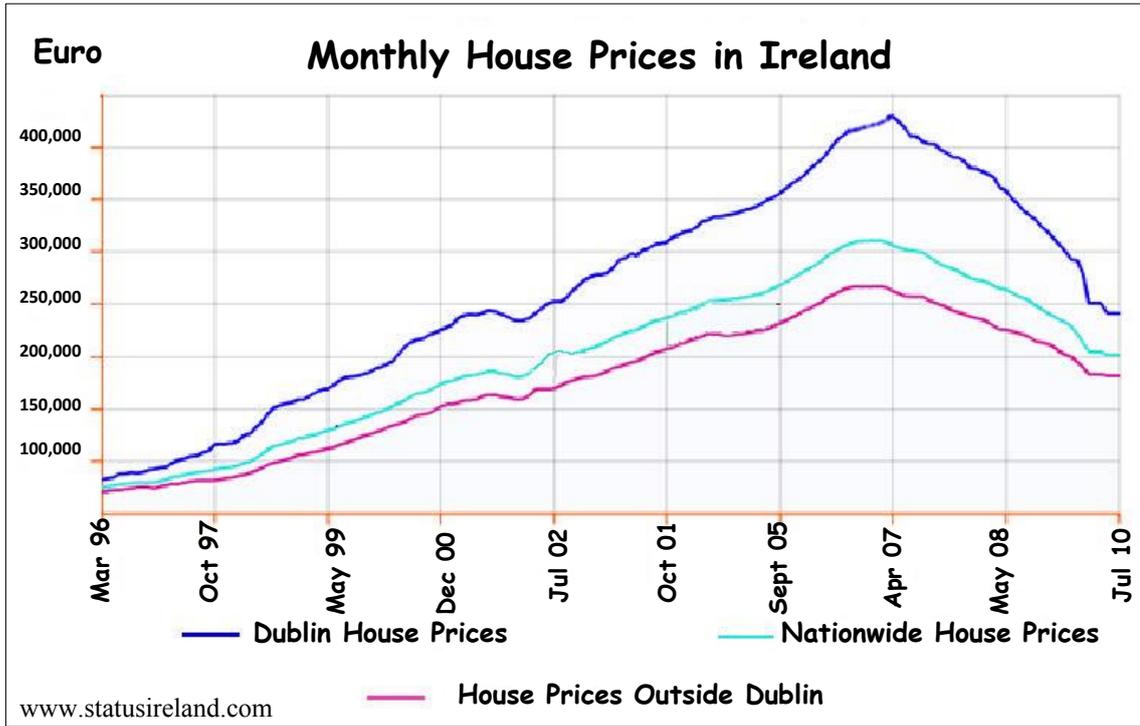
- (iv) Name **two** other sources of renewable energy not named in the table above.

1. \_\_\_\_\_

2. \_\_\_\_\_

[8m]

12. Graphical Interpretation



Examine the trend graph above and answer the following questions:

- (i) Where were house prices lowest in July 2010?

\_\_\_\_\_

- (ii) What was the house price in Dublin in July 2002?

\_\_\_\_\_

- (iii) When did house prices in Dublin reach their peak?

\_\_\_\_\_

- (iv) Briefly explain **one** reason for the collapse in house prices after 2007.

Reason \_\_\_\_\_

\_\_\_\_\_

[8m]

## **PART TWO – STRUCTURED and ESSAY QUESTIONS – 320 MARKS**

You must attempt **FOUR** 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**
- **ONE** question from **Section 3 – Options**

***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 that accompany this paper.  
Draw a sketch map **to half scale** of the area shown.

On it, **mark** and **name** each of the following:

- The complete course of the Garfinny River
- A section of coast with coastal cliffs
- A beach
- An area of land over 600 metres east of easting 50.

[20m]

##### B. Volcanoes

Discuss the positive impacts of volcanic activity.

[30m]

##### C. Human Interaction

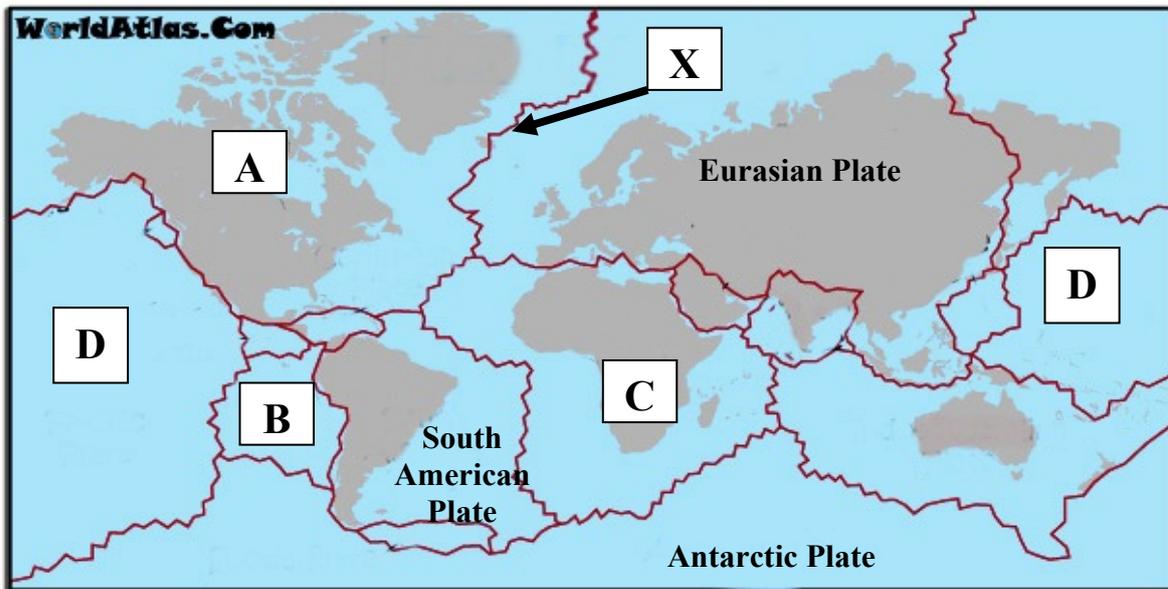
Explain, with reference to example(s) that you have studied, how human activities have impacted on the operation of any **one** of the following surface processes:

- Mass movement processes
- River processes
- Coastal processes.

[30m]

## Question 2

### A. Plate Tectonics



Examine the map above showing the major crustal plates of the earth and answer the following questions:

- (i) Name the plates **A**, **B**, **C** and **D**.
- (ii) Name the plate boundary at **X**.

[20m]

### B. Landform Development

The area shown on the 1:50000 Ordnance Survey map which accompanies this paper has been shaped by fluvial, glacial, coastal and mass movement processes.

**Answer (i) or (ii).**

- (i) Name **one** landform on the Ordnance Survey map that was formed by fluvial **or** glacial **or** coastal processes **and** give a six figure grid reference for its location.  
Describe and explain with the aid of diagram(s) the processes involved in the formation of this landform.

**OR**

- (ii) Identify an area on the Ordnance Survey map which has very steep slopes **and** give a six figure grid reference for its location.  
Describe and explain **one** mass movement process which might operate in an area such as this.

[30m]

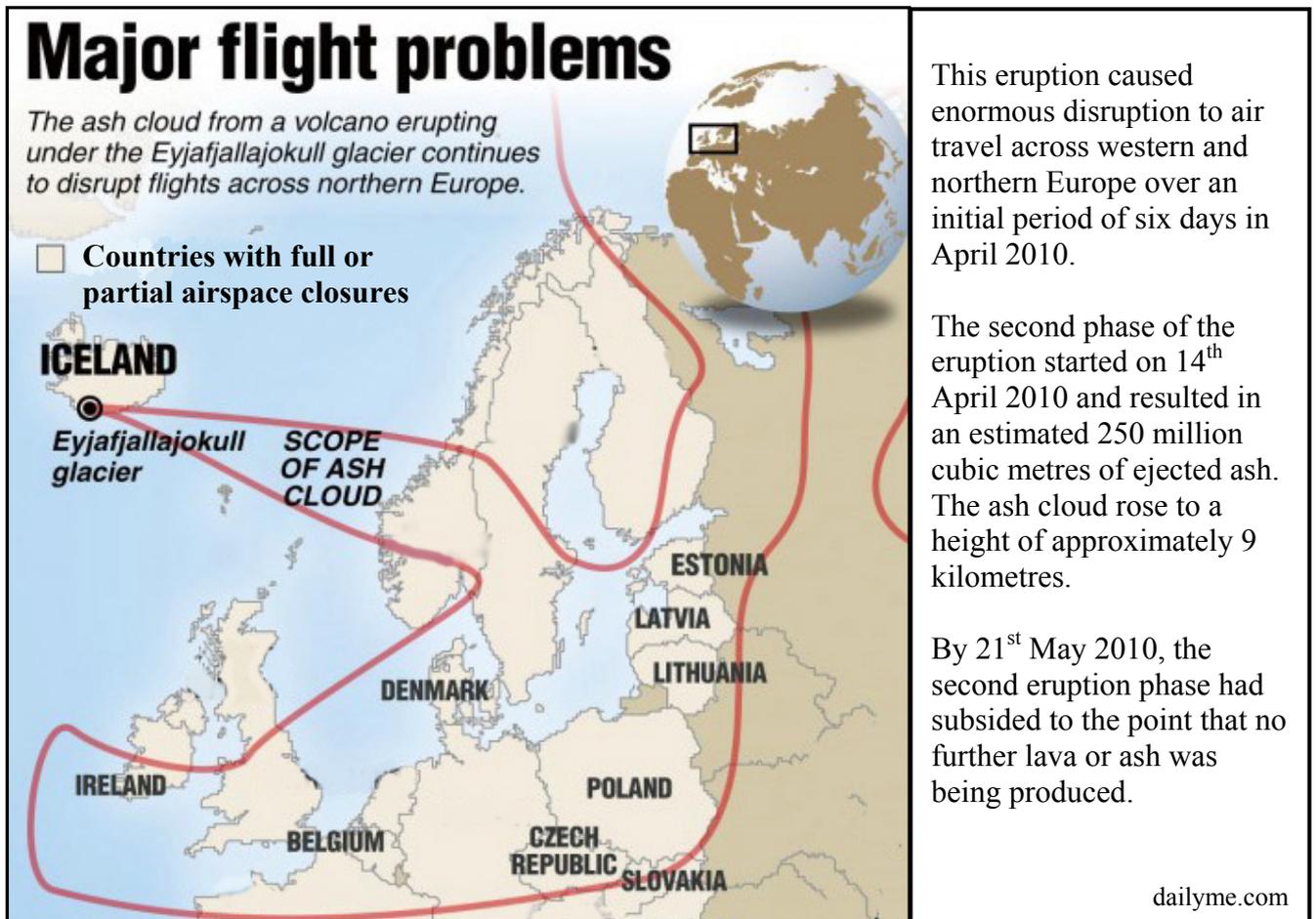
### C. Human Interaction

Explain, with reference to **one** human interaction with the rock cycle, that you have studied, how humans benefit economically from this interaction.

[30m]

### Question 3

#### A. Volcanoes



Examine the data above relating to the Eyjafjallajökull volcano which erupted in April 2010 and answer the following questions:

- (i) What approximate height did the volcanic ash cloud rise to?
- (ii) How many cubic metres of ash were ejected by the volcano?
- (iii) Name **two** countries not named on the map which had full or partial airspace closures.
- (iv) Briefly explain why volcanic activity occurs in Iceland.

[20m]

#### B. Igneous Rock

Explain the formation of **two** igneous rocks, with reference to examples from Ireland.

[30m]

#### C. Isostatic Changes

Explain how isostatic changes have impacted on the Irish landscape, using examples that you have studied.

[30m]

## REGIONAL GEOGRAPHY

### Questions 4 to 6

Attempt **ONE** question

#### Question 4

##### A. Map Skills

Draw an outline map of a **Continental / Sub-Continental** region (not in Europe) that you have studied.

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

- (i) Two physical features
- (ii) Two urban centres.

[20m]

##### B. Agriculture in Ireland

Contrast the development of agriculture in **two Irish** regions that you have studied.

[30m]

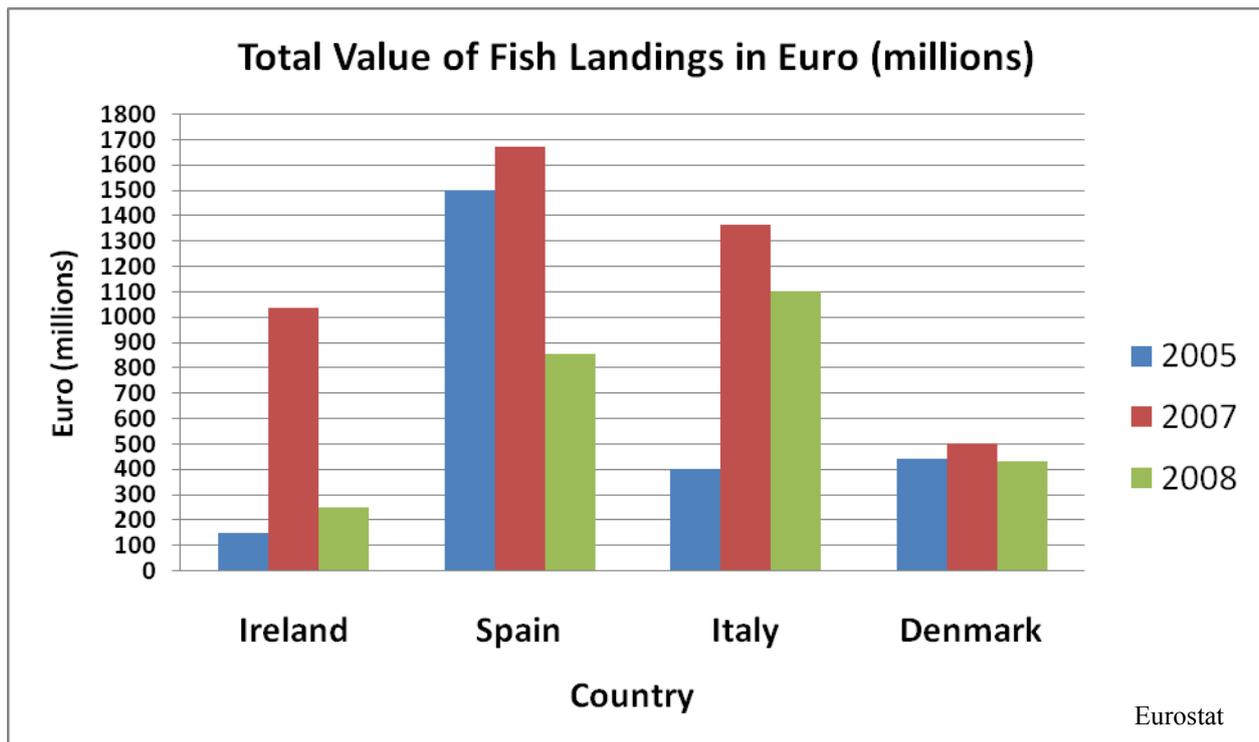
##### C. Urban Regions

Discuss the factors which influenced the development of **one** urban area in a **European** region (not in Ireland) that you have studied.

[30m]

## Question 5

### A. European Fishing



Examine the data in the chart above and answer the following questions:

- (i) Which country had the highest value of fish landings in 2007?
- (ii) What was the value of fish landings in Italy in 2005?
- (iii) Calculate the difference between the value of Spain's fish landings in 2005 and the value of Italy's fish landings in 2005?
- (iv) Name **two** major Irish fishing port.
- (v) Briefly explain **one** challenge that the Irish fishing industry will face in the future.

[20m]

### B. European Union

Examine the economic impact of enlargement of the European Union on Ireland.

[30m]

### C. Concept of a Region

A region is an area on the earth's surface which can be defined by one or more criteria. Explain this statement with reference to example(s) that you have studied.

[30m]

## Question 6

### A. Irish Tourism

Places of origin of tourists visiting Ireland, in thousands (000s)					
Year	Britain	Mainland Europe	North America	Rest of World	Total
2004	1,718	825	656	167	3,366
2005	1,662	950	614	139	3,365
2006	1,765	1,114	670	163	3,712
2007	1,778	1,378	687	150	3,993
2008	1,596	1,216	614	164	3,590
2009	1,118	1,115	555	143	X

Fáilte Ireland

Examine the data in the table above and answer the following questions:

- (i) How many tourists from North America visited Ireland in 2007?
- (ii) Where did the greatest number of tourists come from in 2008?
- (iii) Calculate X, the total number of tourists visiting Ireland in 2009?
- (iv) Name any **two** Irish tourist attractions.
- (v) Briefly explain why the number of tourists visiting Ireland is decreasing.

[20m]

### B. Population Distribution

Describe and explain the distribution of population in a **Continental / Sub-Continental** region (not in Europe) that you have studied.

[30m]

### C. Manufacturing Industry

Describe and explain the development of manufacturing industry in an **Irish** 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. Unemployment Rate**

**United States unemployment rates (%), 2005 - 2010**

<b>Year</b>	<b>Percentage</b>
2005	5.5%
2006	5.2%
2007	4.8%
2008	4.6%
2009	7.2%
2010	9.3%

www.indexmundi.com

Examine the data in the above table showing unemployment rates in the United States from 2005 to 2010.

- (i) Using **graph paper**, draw a suitable graph to illustrate this data.
- (ii) Name **two** measures a government could take to lower unemployment.

**[20m]**

**B. Ordnance Survey Map**

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

- (i) Identify, by grid reference, a suitable site for a fish processing plant.
- (ii) Explain **two** reasons why you chose this site. Use map evidence to support your answer.

**[30m]**

**C. Developing Economies**

Examine the impact of colonialism on the economy of a developing country that you have studied.

**[30m]**

## Question 8

### A. Aerial Photograph

Examine the aerial photograph of Dingle/An Daingean accompanying this paper.

Draw a sketch of the aerial photograph, **half the length** and **half the breadth**.

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

- The harbour area
- Two connecting roads/streets
- A commercial area
- A recreational area.

[20m]

### B. Multinational Companies

Describe and explain the operation of **one** multinational company that you have studied.

[30m]

### C. Environmental Impact

Pollution does not recognise boundaries and therefore can impact on the environment locally, nationally or internationally.

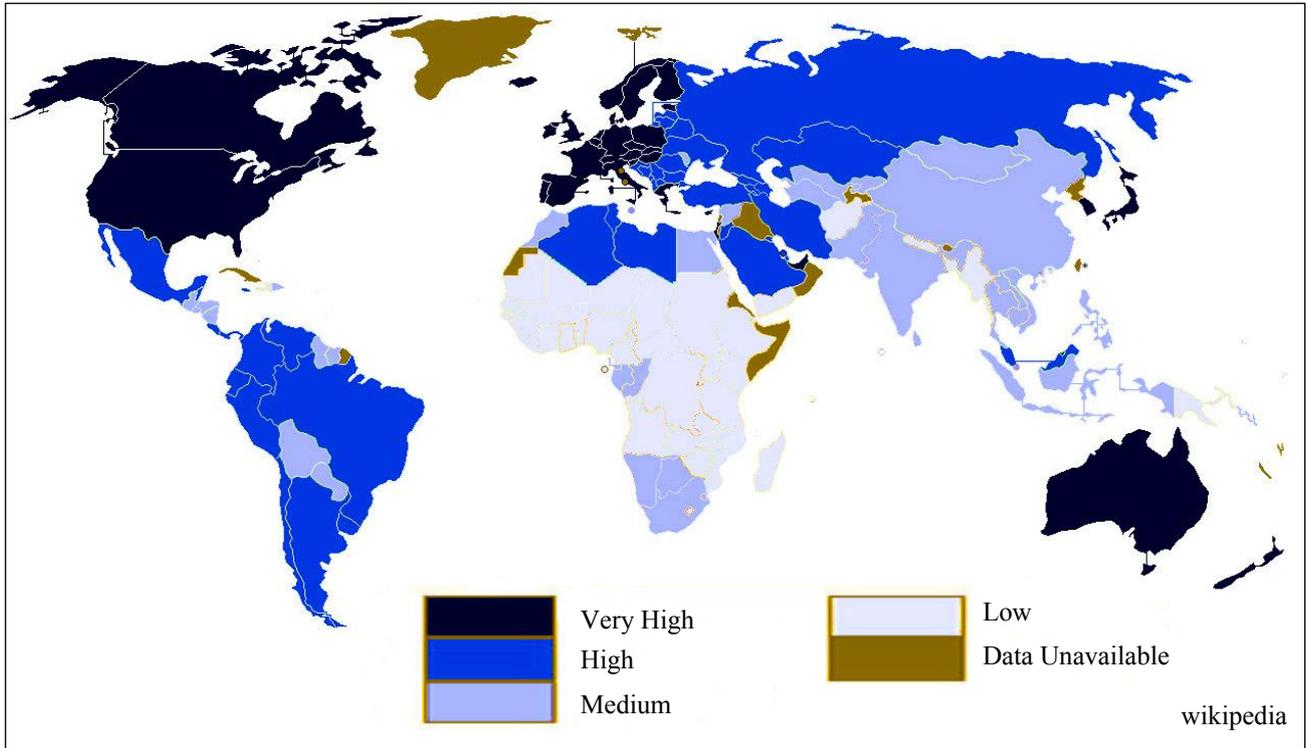
Examine the above statement with reference to example(s) that you have studied.

[30m]

## Question 9

### A. Human Development Index

United Nations Human Development Index, 2010



Examine the world map above which shows United Nations Human Development Index (HDI) for 2010 and answer the following questions:

- (i) In which category of HDI is Ireland?
- (ii) Name **two** countries outside Europe with a very high HDI.
- (iii) Which continent shows the greatest proportion of low HDI?
- (iv) State **two** reasons why some countries have a low HDI.

[20m]

### B. Developed Economies

Examine the development of services in a developed economy that you have studied.

[30m]

### C. European Union

Examine the impact of any **one** European Union policy on the Irish economy.

[30m]

## PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

### Questions 10 to 12

#### Question 10

##### A. Aerial Photograph

Examine the aerial photograph of Dingle/An Daingean accompanying this paper. Draw a sketch of the aerial photograph, **half the length** and **half the breadth**.

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

- The Central Business District
- Residential land-use
- Educational land-use
- An example of traffic management.

[20m]

##### B. Migration

Outline the effects of rural to urban migration in a developing region that you have studied.

[30m]

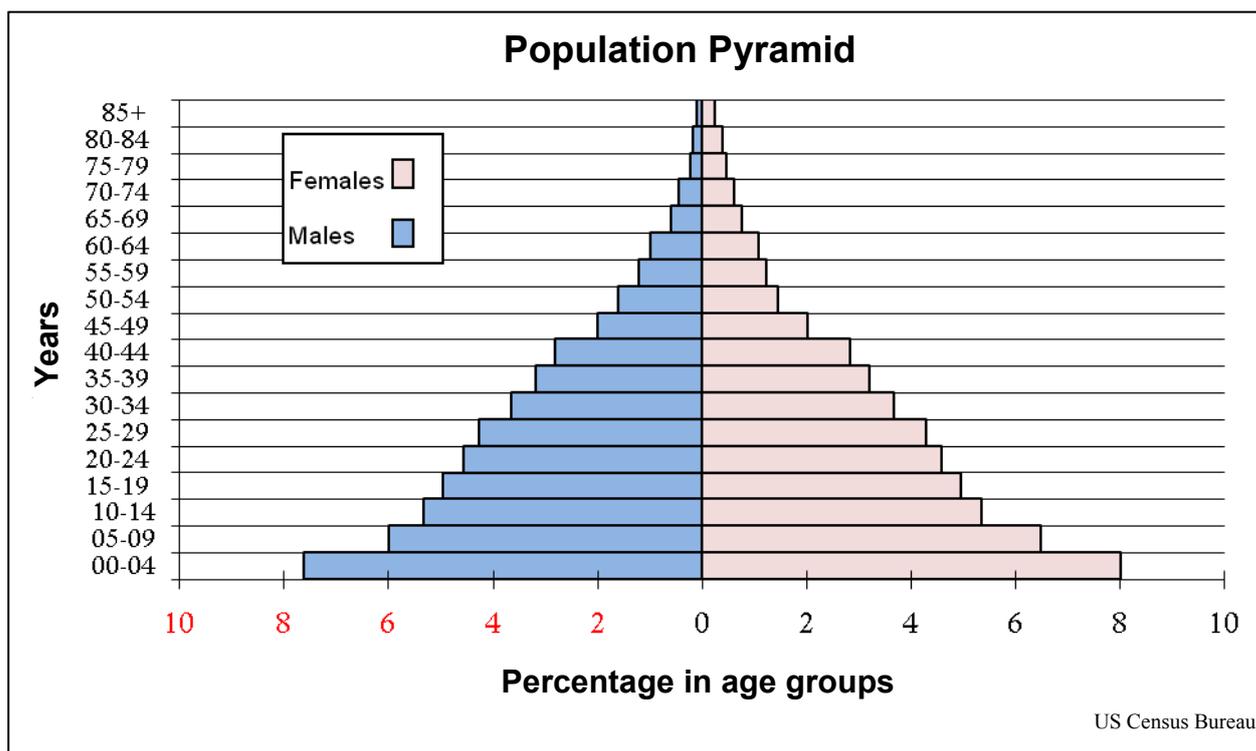
##### C. Dynamics of Settlement

Describe and explain the land-use zones in **any** city that you have studied.

[30m]

## Question 11

### A. Population Pyramid



Examine the population pyramid above and answer the following questions:

- What is the percentage of males in the 5 - 9 age group?
- What is the percentage of females in the 0 - 4 age group?
- What is the total percentage of the population in the 45 - 49 age group?
- State whether the pyramid above represents a developed or a developing region.
- State **two** ways the structure of a population pyramid for a developing region differs from the structure of a population pyramid for a developed region.

[20m]

### B. Urban Expansion

As cities expand they impact on the surrounding rural areas.  
Discuss this statement with reference to example(s) that you have studied.

[30m]

### C. Population Density

Examine the 1:50000 Ordnance Survey map and legend accompanying this paper.  
Explain, using evidence from the map, why the area to the east of easting 44 and north of northing 03 has such a low population density.

[30m]

## Question 12

### A. Population Structure

**Percentage of Population aged 65 years and over**

Country	1998	2008
Belgium	16	17
Ireland	11	11
United Kingdom	15	16

Eurostat

Examine the data in the table above showing the percentage of population, aged 65 years and over, in a number of European countries.

- (i) Using **graph paper**, draw a suitable graph to illustrate this data.
- (ii) Name **two** problems faced by countries where the proportion of people aged 65 years and over is increasing.

[20m]

### B. Overpopulation

Discuss the causes of overpopulation referring to examples that you have studied.

[30m]

### C. Aerial Photograph and Ordnance Survey Map

Using the aerial photograph, the 1:50000 Ordnance Survey map and legend that accompany this paper, explain **three** reasons for the development of the urban area of Dingle/An Daingean at this site.

[30m]

## **SECTION 3 – OPTIONS**

**Questions 13 to 24**

Attempt **ONE** question

**Note:** It is better to discuss **three** or **four** aspects of the theme in some detail, rather than to give a superficial treatment of a large number of points.

## Global Interdependence

**Note:** It is better to discuss **three** or **four** aspects of the theme in some detail, rather than to give a superficial treatment of a large number of points.

13. Examine the way which aid can have both positive and negative impacts on developing countries.

[80m]

14. The developed world can often be accused of shortcomings in its view towards developing nations.  
Examine this statement referring to differing views of 'development'.

[80m]

15. Examine the importance of utilising natural resources in a sustainable way, with reference to examples that you have studied.

[80m]

## Geocology

**Note:** It is better to discuss **three** or **four** aspects of the theme in some detail, rather than to give a superficial treatment of a large number of points.

16. Soil characteristics are affected by their immediate environment and by a combination of processes operating in that environment.  
Examine any **three** soil processes that affect soil characteristics.

[80m]

17. Examine the characteristics of any **one** biome that you have studied under **three** of the following headings:

- Climate
- Soils
- Flora
- Fauna.

[80m]

18. The development of economic activities can alter biomes.  
Discuss this statement with reference to appropriate examples that you have studied.

[80m]

## Culture and Identity

**Note:** It is better to discuss **three** or **four** aspects of the theme in some detail, rather than to give a superficial treatment of a large number of points.

19. Multiculturalism is common in the modern world.  
Examine how multiculturalism may lead to conflict or may be a unifying force. [80m]
20. Examine the effects of political boundaries on cultural groups. [80m]
21. Examine how migration can impact on racial patterns. [80m]

## The Atmosphere Ocean Environment

**Note:** It is better to discuss **three** or **four** aspects of the theme in some detail, rather than to give a superficial treatment of a large number of points.

22. Exchanges of water between ocean and atmosphere vary over the surface of the earth and this gives rise to distinctive weather conditions.  
Discuss this statement with reference to examples that you have studied. [80m]
23. Climate characteristics have an influence on economic development.  
Discuss this statement with reference to agriculture. [80m]
24. Account for the distinctive nature of **one** global climate that you have studied. [80m]

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