



# Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2014

**GEOGRAPHY – HIGHER LEVEL**

**FRIDAY, 6 JUNE – MORNING, 9.30 - 12.20**

**Examination Number**

**For the Examiner's Use Only**

<b>Part One</b> Short-Answer Questions	<b>Total Mark</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, you will lose marks.**

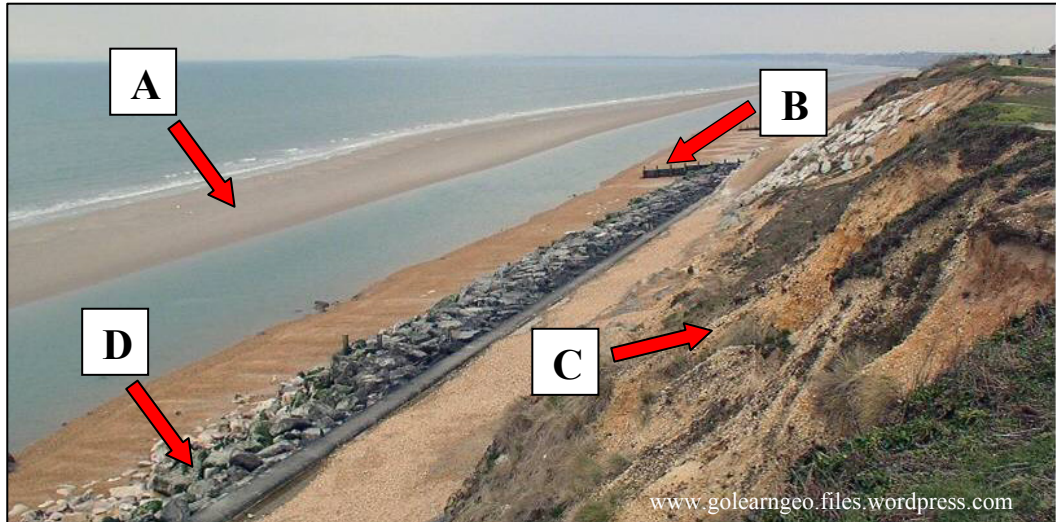
## PART ONE – SHORT-ANSWER QUESTIONS – 80 MARKS

Attempt **TEN** questions.

All questions carry equal marks.

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

### 1. Coastal Features



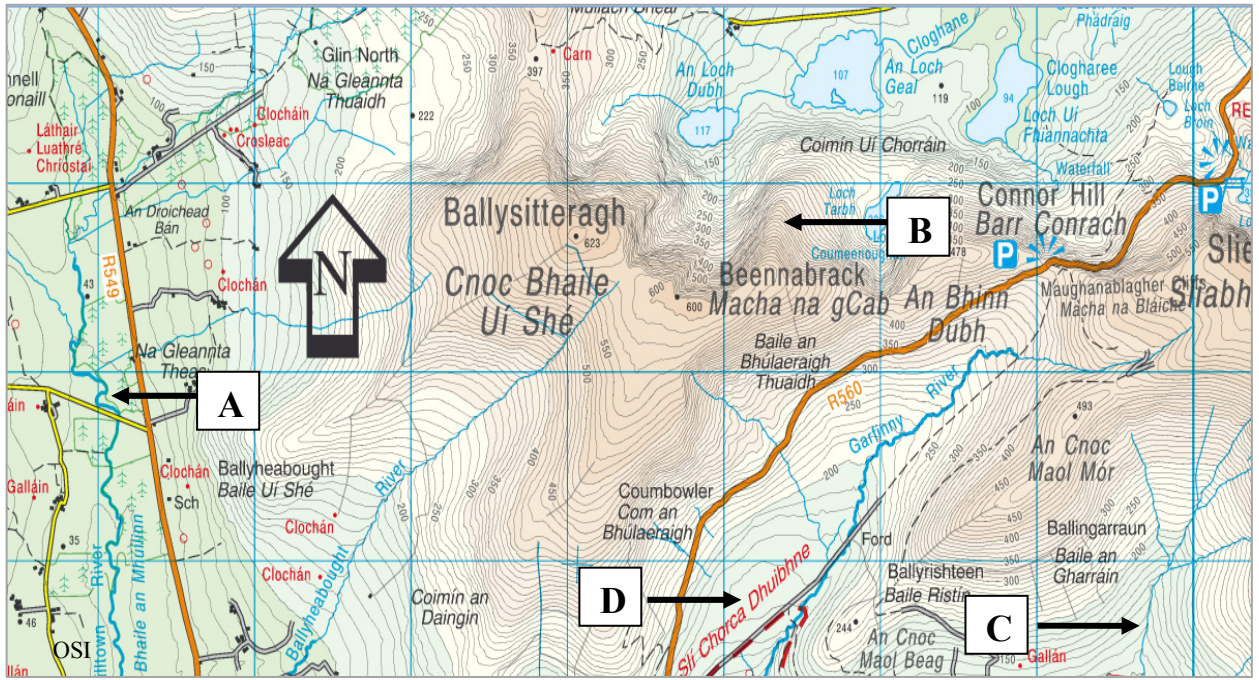
Examine the photograph above and answer each of the following questions.

- (i) Match each of the letters **A**, **B**, **C** and **D** with the feature that best matches it in the table below.
- (ii) Indicate whether each of the features is a natural or human feature, by ticking the correct box in the table below.

Feature	(i) Letter	(ii) Natural	(ii) Human
Groyne			
Offshore bar			
Rock armour			
Cliff			

[8m]

## 2. Glacial and Fluvial Landforms



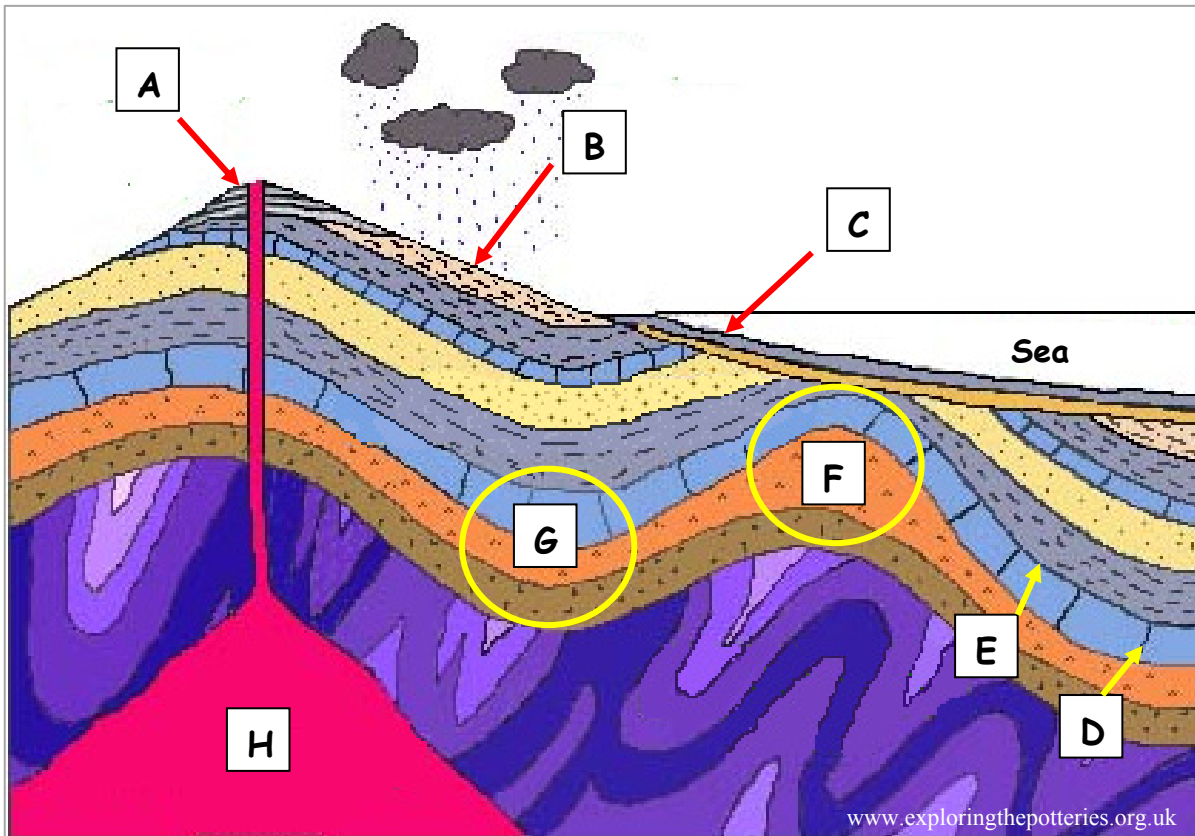
Examine the Ordnance Survey map extract above.

- (i) Match each of the letters **A**, **B**, **C** and **D** with the landform that best matches it in the table below.
- (ii) Indicate whether glacial processes or fluvial processes are most associated with the formation of each landform, by ticking the correct box in the table below.

Landform	(i) Letter	(ii) Glacial Processes	(ii) Fluvial Processes
U-shaped valley			
Meander			
Arête			
V-shaped valley			

[8m]

### 3. Patterns and Processes in the Physical Environment

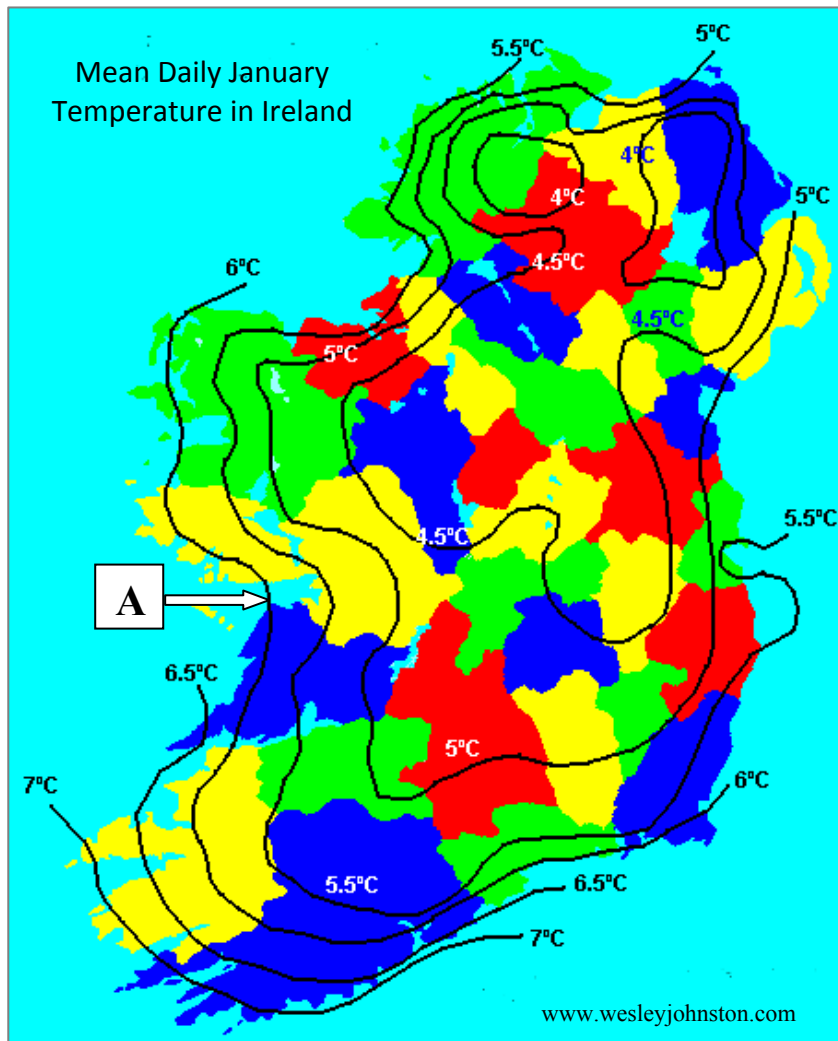


Examine the diagram above. Match each of the letters **A, B, C, D, E, F, G** and **H** with the feature or process that best matches it in the table below.

Feature / Process	Letter
Joint	
Syncline	
Volcano	
Coastal deposits	
Bedding plane	
Magma chamber	
Weathering	
Anticline	

[8m]

4. Weather

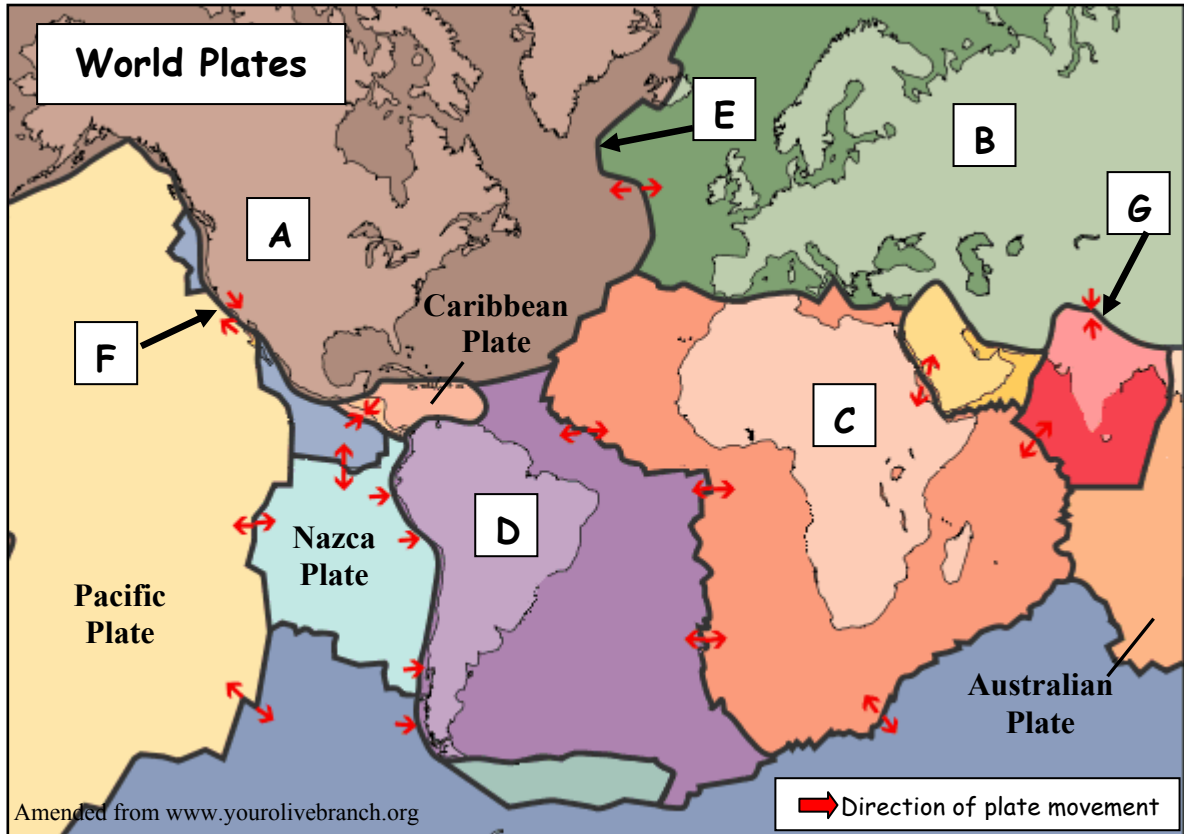


Examine the map above and answer each of the following questions.

- (i) What is the mean daily temperature at A? \_\_\_\_\_
- (ii) Calculate the approximate mean daily temperature range in Co. Kerry.  
\_\_\_\_\_
- (iii) What is the name given to lines on a weather map that join places of equal temperature?  
\_\_\_\_\_
- (iv) Explain briefly why temperatures in the west of Ireland are usually higher than temperatures in the midlands in January.  
\_\_\_\_\_  
\_\_\_\_\_

[8m]

5. Plate Tectonics



Examine the map above and answer each of the following questions.

(i) Name each of the plates A, B, C and D.

A \_\_\_\_\_

B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

(ii) Name the type of plate boundary at E and at F.

E \_\_\_\_\_

F \_\_\_\_\_

(iii) Circle the correct option in each of the following statements.

Volcanic mountains are formed at E. *True*      *False*

Fold mountains are formed at G. *True*      *False*

[8m]

**6. Regions**

The table below contains information on regions, regarding their type, specific example and general location.

Complete the table by inserting the most appropriate terms from the list below, in their correct position in the table.

One row of the table is completed for you.

- Mediterranean                      Ireland                      Paris Basin                      Basque Lands
- Berlin                                      Northern Spain                      Southern Europe
- North European Plain                      Germany                      County Meath

Type of Region	Specific Example	General Location
Geomorphological	Paris Basin	North European Plain
Urban		
Climate		
Administrative		
Cultural		

[8m]

**7. Ordnance Survey Map**

Examine the 1:50 000 Ordnance Survey map and legend that accompany this paper and answer each of the following questions.

- (i) Give a six-figure grid reference for a mast shown on the Ordnance Survey map.

\_\_\_\_\_

- (ii) Calculate the area of the Ordnance Survey map located in subzone X.

\_\_\_\_\_

- (iii) What is the aspect of the slope in grid box X 22 90?

\_\_\_\_\_

- (iv) Measure the straight line distance, in kilometres, from the 18 hole golf course at X 297 924 to the parking at X 232 903.

\_\_\_\_\_

[8m]

**8. Aerial Photograph and Ordnance Survey Map**

Examine the aerial photograph, the 1:50 000 Ordnance Survey map and legend that accompany this paper and answer each of the following questions.

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

X 265 934                       X 255 930

- (ii) Name the main road that passes through the large roundabout in the left background of the aerial photograph.

\_\_\_\_\_

- (iii) State **one** way that the physical landscape impedes the development of Dungarvan as a port.

\_\_\_\_\_

- (iv) Name the religious antiquity in the right background of the aerial photograph.

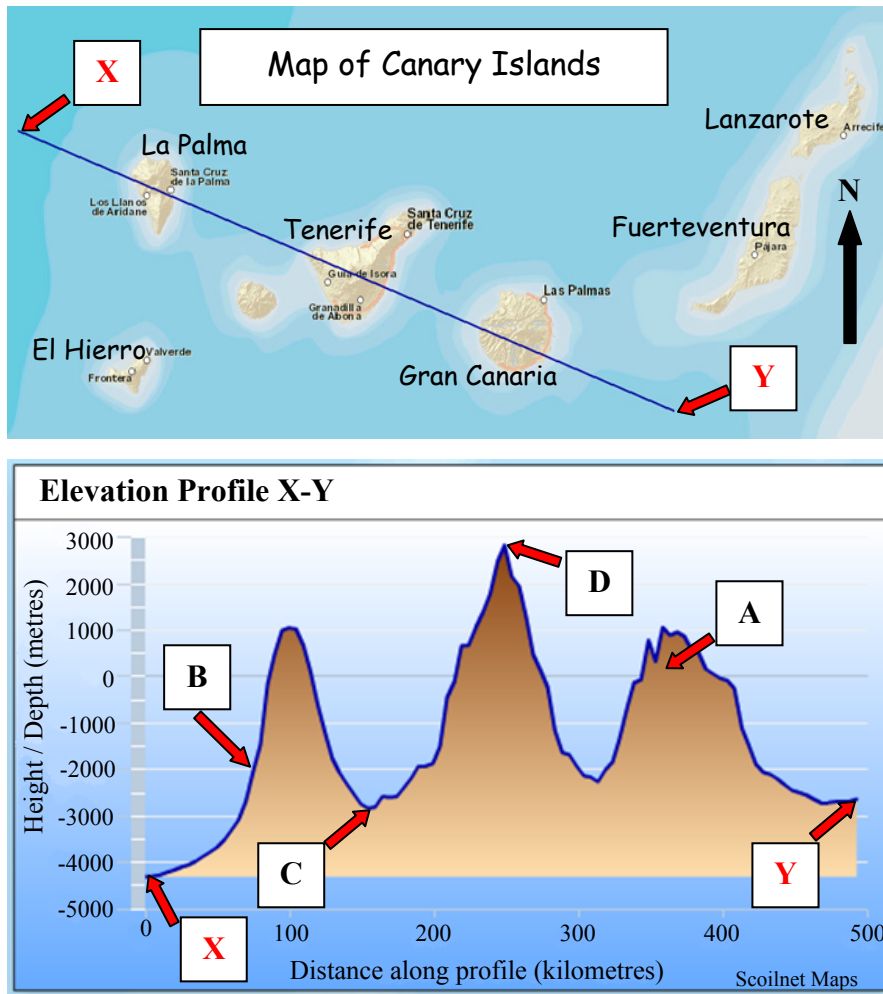
\_\_\_\_\_

[8m]



## 9. Map Skills

The line X-Y on the map of the Canary Islands below indicates the line of a cross-section. An elevation profile of the line X-Y is also shown.

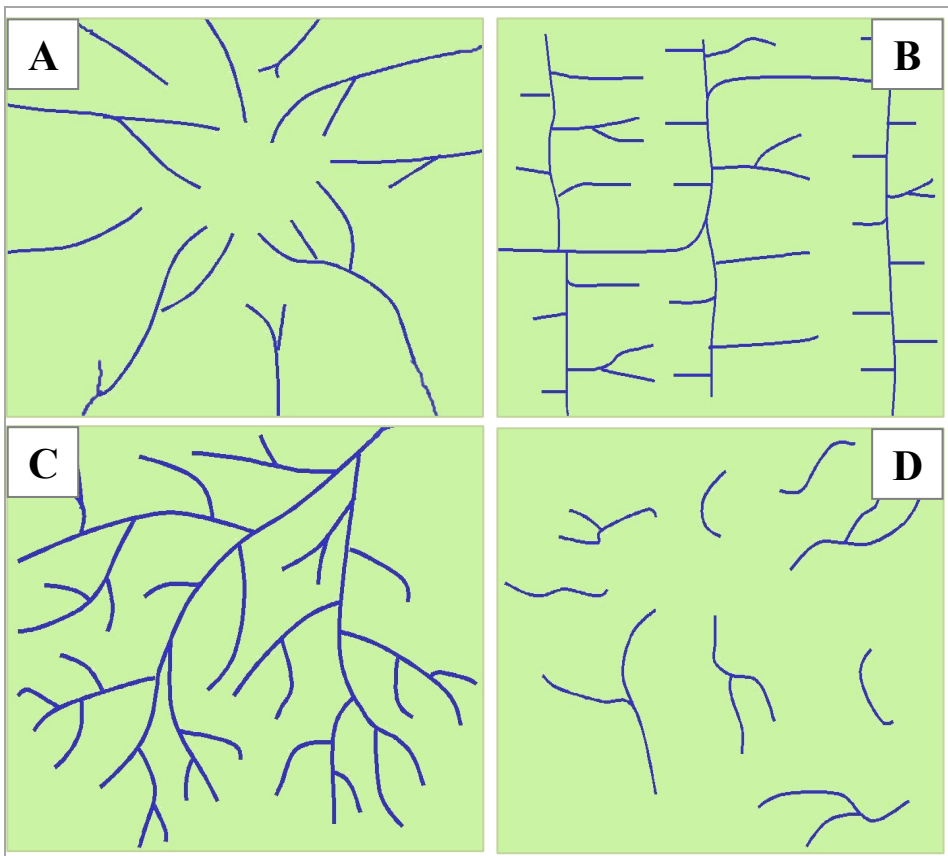


Examine the map of the Canary Islands and the elevation profile X-Y, and answer each of the following questions.

- (i) Name the island at **A** on the elevation profile. \_\_\_\_\_
- (ii) What is the depth of the ocean at **B** on the elevation profile? \_\_\_\_\_
- (iii) Calculate the difference in elevation between point **C** and point **D** on the profile, to the nearest 1000 metres.  
\_\_\_\_\_
- (iv) Briefly explain **one** economic advantage of living on a volcanic island.  
\_\_\_\_\_  
\_\_\_\_\_

[8m]

10. Pattern Recognition



www.jsu.edu

Examine the diagrams above showing fluvial drainage patterns. Match each of the letters **A**, **B**, **C** and **D** with the correct drainage pattern in the table below.

Drainage Pattern	Letter
Dendritic	
Deranged	
Trellis	
Radial	

[8m]

## 11. Statistical Interpretation

<b>Irish Population and Migration Estimates</b>		
	<b>Year ending:</b>	
	<b>April 2012</b>	<b>April 2013</b>
<b>Natural increase</b>	44,900	<b>Y</b>
<b>Net migration</b>	-34,400	-33,100
<b>Population change</b>	<b>X</b>	7,700
<b>Total population</b>	4,585,400	4,593,100

Amended from CSO Population and Migration, August 2013

Examine the table above which shows Irish population and migration estimates for years ending April 2012 and April 2013 and answer each of the following questions.

- (i) What was the estimated increase in total population between April 2012 and April 2013?

\_\_\_\_\_

- (ii) Calculate **X**, the estimated population change for year ending April 2012.

\_\_\_\_\_

- (iii) Calculate **Y**, the estimated natural increase for year ending April 2013.

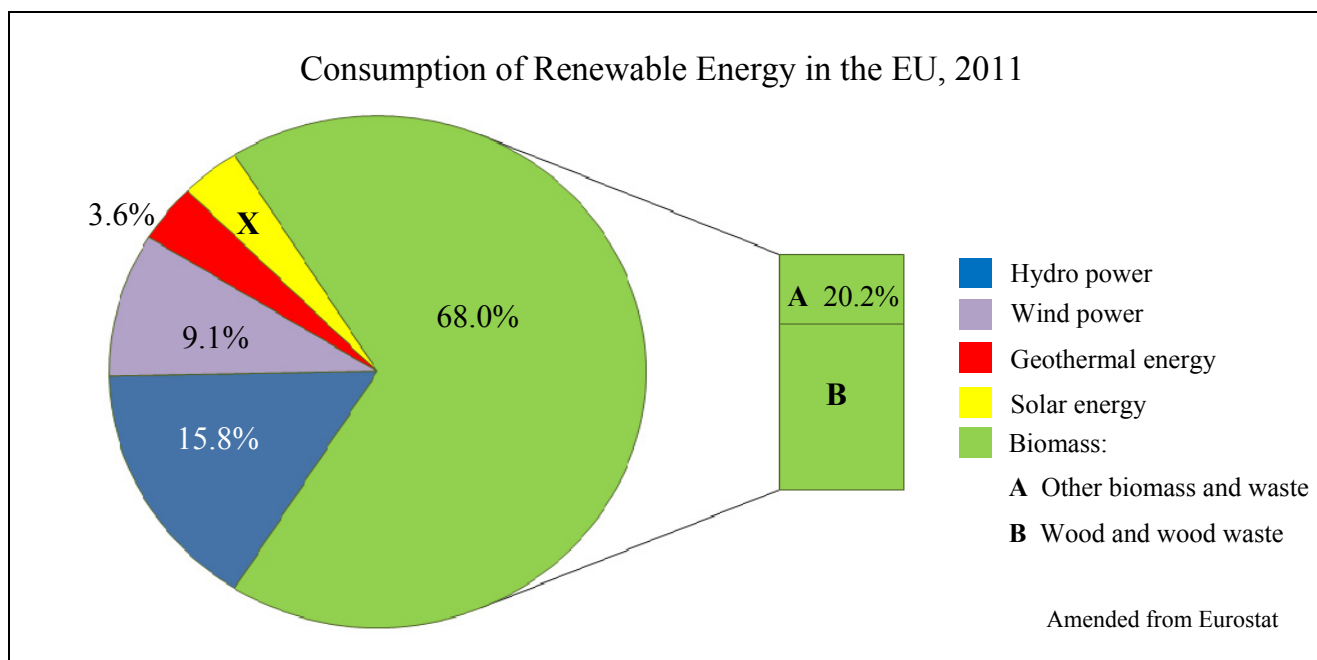
\_\_\_\_\_

- (iv) Explain briefly what is meant by net migration.

\_\_\_\_\_  
\_\_\_\_\_

[8m]

## 12. Graphical Interpretation



Examine the chart above which shows the consumption of renewable energy in the European Union (EU) in 2011 and answer each of the following questions.

- (i) What was the percentage of hydro power consumed?

\_\_\_\_\_

- (ii) Calculate **X**, the percentage of solar energy consumed.

\_\_\_\_\_

- (iii) Calculate **B**, the percentage of biomass generated from wood and wood waste.

\_\_\_\_\_

- (iv) Explain briefly what is meant by geothermal energy.

\_\_\_\_\_

\_\_\_\_\_

[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 1:50 000 Ordnance Survey map and legend that accompany this paper.  
Draw a sketch map of the area shown to half scale.

On it, correctly show and label each of the following:

- The complete course of the Colligan River
- Locate a gorge on the Colligan River and mark it with an X on the sketch map
- The Cunnigar sand spit
- An area of land above 300 metres.

[20m]

##### B. Rocks

Explain the formation of igneous rocks with reference to Irish examples.

[30m]

##### C. Human Interaction with Surface Processes

Human activity impacts on surface processes.

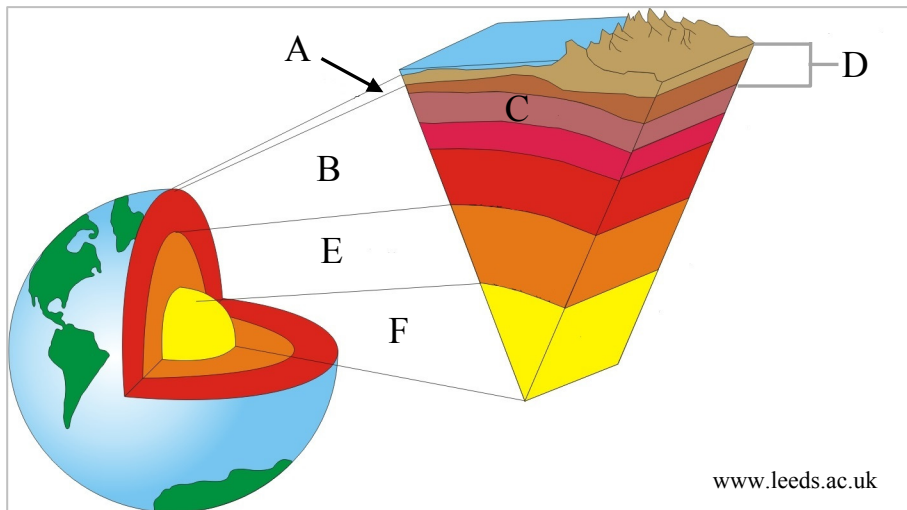
Examine this statement with reference to **one** of the following:

- The impact of dams on river processes
- The impact of coastal defence work on coastal processes
- The impact of human activity on mass movement.

[30m]

## Question 2

### A. Internal Structure of the Earth



Examine the diagram above showing the internal structure of the earth and answer each of the following questions.

- (i) Name each of the layers of the earth **A, B, C, D, E** and **F**.
- (ii) Describe briefly the main difference between the composition of layer **C** and layer **D**.
- (iii) Explain briefly why plates move.

[20m]

### B. Landform Development

Answer (i) or (ii).

- (i) Explain the formation of **one** landform of erosion **and one** landform of deposition that you have studied.

**Or**

- (ii) Describe and explain **two** processes of mass movement that you have studied.

[30m]

### C. Rocks and Landscapes

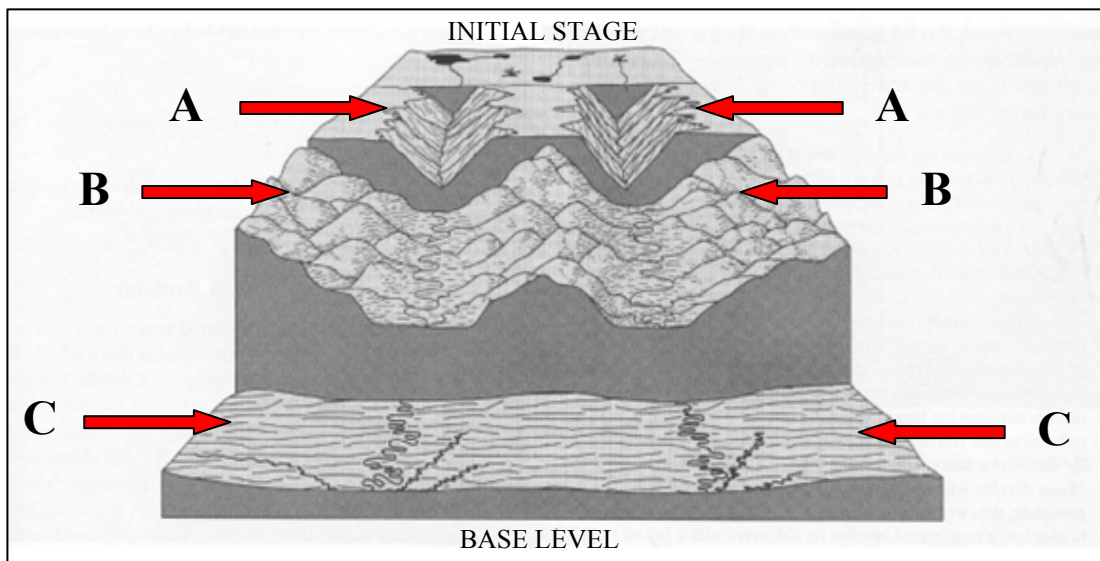
Examine how different rock types produce distinctive landscapes, with reference to examples that you have studied.

[30m]



### Question 3

#### A. Landscape Development



Amended from [www.clasfaculty.ucdenver.edu](http://www.clasfaculty.ucdenver.edu)

Examine the diagram above which shows the stages in the cyclical development of a fluvial landscape and answer each of the following questions.

- (i) Name each of the stages **A**, **B** and **C**.
- (ii) Name **one** fluvial landform from each of the stages **A**, **B** and **C**.
- (iii) Explain briefly what is meant by peneplain.
- (iv) Explain briefly what is meant by base level.

[20m]

#### B. Plate Tectonics

Describe and explain destructive plate boundaries.

[30m]

#### C. Sedimentary Structures

Examine how sedimentary structures, such as bedding planes and joints, influence the development of landforms.

[30m]

## REGIONAL GEOGRAPHY

### Questions 4 to 6

Attempt **ONE** question

#### Question 4

##### A. Map Skills

Draw an outline map of **Ireland**.

On it, show and name different examples of each of the following:

- The outline of a named geomorphological region
- A named urban centre in a peripheral region
- The outline of a named cultural region
- The outline of a named core region.

[20m]

##### B. European Union

Examine how enlargement of the European Union impacts on existing member states.

[30m]

##### C. Population Dynamics

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

[30m]

## Question 5

### A. Irish Trade

Irish External Trade, 1996 to 2012

Year	Exports €million	Imports €million	Trade Surplus €million
1996	38,609	28,480	10,129
2000	83,889	55,909	27,980
2004	84,410	51,105	33,305
2008	86,394	57,585	28,809
2012	91,688	49,151	<b>X</b>

Amended from CSO

Examine the table above and answer each of the following questions.

- (i) In which years did Ireland's imports exceed €55 billion?
- (ii) Calculate **X**, the value of Ireland's trade surplus in 2012.
- (iii) What was the percentage increase in Ireland's trade surplus between 2000 and 2004?
- (iv) Explain briefly **one** advantage of having a trade surplus.
- (v) Name **two** Irish agricultural exports.

[20m]

### B. European Regions

Examine the importance of relief to the economic development of any **two** contrasting **European** regions (not in Ireland) that you have studied.

[30m]

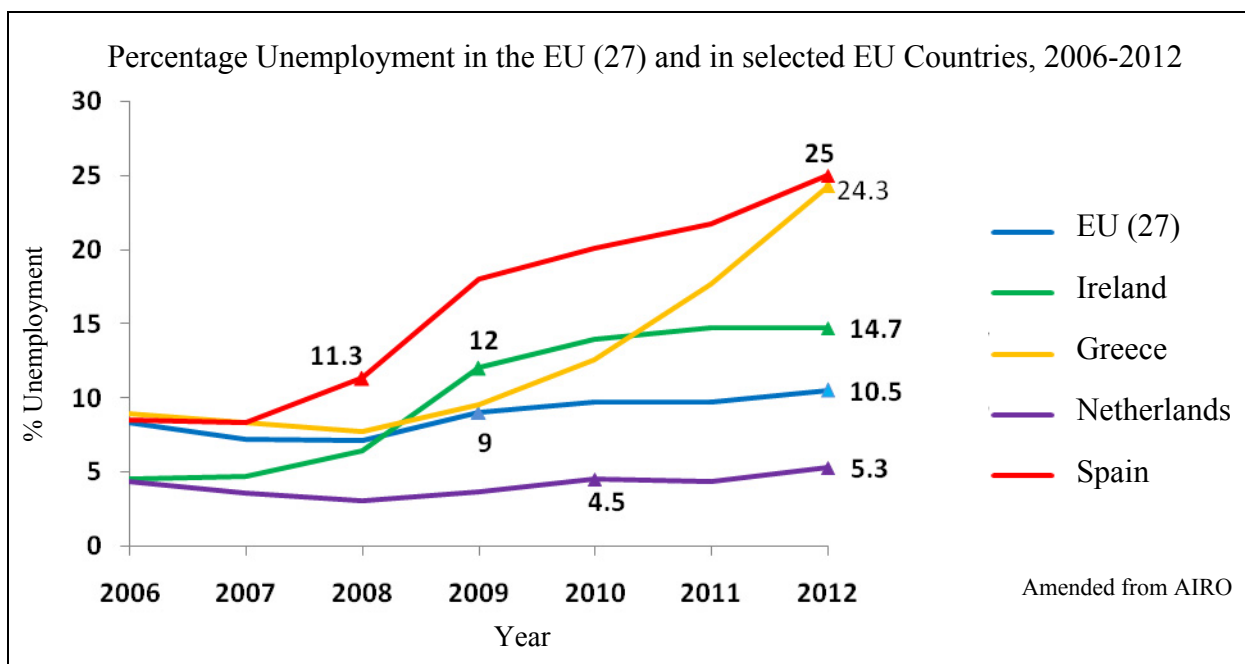
### C. Economic Activity

Discuss the factors that influence the development of secondary economic activity in a **Continental / Sub-Continental** region (not in Europe) that you have studied.

[30m]

## Question 6

### A. European Union Unemployment



Examine the graph above and answer each of the following questions.

- Which country had the highest percentage unemployment between 2008 and 2012 **and** which country had the lowest percentage unemployment between 2008 and 2012?
- Which country had the most significant increase in percentage unemployment between 2010 and 2012?
- Name **two** countries where the percentage unemployment decreased between 2006 and 2007.
- Calculate the increase in the percentage unemployment in the EU (27) between 2009 and 2012 **and** state **one** reason for this increase.
- Explain briefly **one** economic effect of increased unemployment.

[20m]

### B. Socio-Economic Regions

Economic activity in core regions differ from those in peripheral regions.  
Examine this statement with reference to examples that you have studied.

[30m]

### C. Agriculture in Ireland

Account for the development of agriculture in an **Irish** region that you have studied, with reference to any **two** of the following factors:

- Relief
- Climate
- Markets.

[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. Economic Development

The Human Development Index (HDI) Data for Selected Countries, 2012

HDI Rank	Country	HDI 2012	Life expectancy at birth (years)	Gross National Income Per Capita (\$)
1	Norway	0.955	81.3	\$48,688
3	USA	0.937	78.7	\$43,480
26	UK	0.875	80.3	\$32,538
85	Brazil	0.730	73.8	\$10,152
101	China	0.699	73.7	\$7,945
136	India	0.554	65.8	\$3,285
146	Pakistan	0.515	65.7	\$2,566
175	Afghanistan	0.374	49.1	\$1,000

www.undp.org

Examine the table above and answer each of the following questions.

- Calculate the difference in Gross National Income between the USA and China.
- Name the country with the lowest life expectancy at birth **and** name the country with the highest life expectancy at birth.
- Explain briefly **one** reason why life expectancy at birth is higher in some countries.
- Life expectancy and income levels are two factors used to calculate the Human Development Index. Name a third factor.
- Explain briefly **one** use of the Human Development Index.

[20m]

##### B. Renewable Energy

Examine the economic and environmental advantages of using renewable energy sources.

[30m]

##### C. Developed Economy

Examine the development of **one** of the following with reference to a developed economy that you have studied:

- Footloose industries
- Financial services
- Mass tourism.

[30m]

## Question 8

### A. Aerial Photograph

Examine the aerial photograph accompanying this paper.  
Draw a sketch map of the aerial photograph, half the length and half the breadth.  
On it, correctly show and label each of the following:

- A recreational area
- A large commercial/industrial building
- A bridge
- An area of waste ground suitable for development.

[20m]

### B. Multinational Company

With reference to **one** multinational company that you have studied, describe and explain any **two** of the following:

- Sourcing of raw materials and components
- Location of processing units
- Location of markets.

[30m]

### C. Ireland and the European Union

Examine the impact of European Union policy on the Irish economy.

[30m]

## Question 9

### A. European Inflation

Average Annual European Inflation Rates, 2002 and 2012

Country	2002	2012
Germany	1.4%	2.1%
Ireland	4.7%	1.9%
Italy	2.6%	3.3%

Amended from CSO

Examine the data in the table above showing the average annual percentage inflation rates for a number of European countries in 2002 and 2012.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) Explain briefly **one** effect of a high inflation rate.

[20m]

### B. Location of Economic Activity

Examine the 1:50 000 Ordnance Survey map and legend that accompany this paper. Explain **three** reasons why a multinational company would be attracted to this area using evidence from the Ordnance Survey map to support each reason.

[30m]

### C. Conflict of Interest

Examine how conflict can arise between economic interests and environmental interests regarding the exploitation of resources, with reference to **two** examples that you have studied.

[30m]



## **PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT**

### **Questions 10 to 12**

#### **Question 10**

##### **A. Settlement Patterns**

Examine the 1:50 000 Ordnance Survey map and legend that accompany this paper.  
Draw a sketch map of the area shown to half scale.

On it, correctly show and label each of the following:

- The built up area of Dungarvan
- An area of linear/ribbon rural settlement
- An area of dispersed rural settlement
- An area of clustered rural settlement.

**[20m]**

##### **B. Changing Urban Functions**

Examine how the functions of urban centres can change over time, with reference to Irish example(s).

**[30m]**

##### **C. Migration**

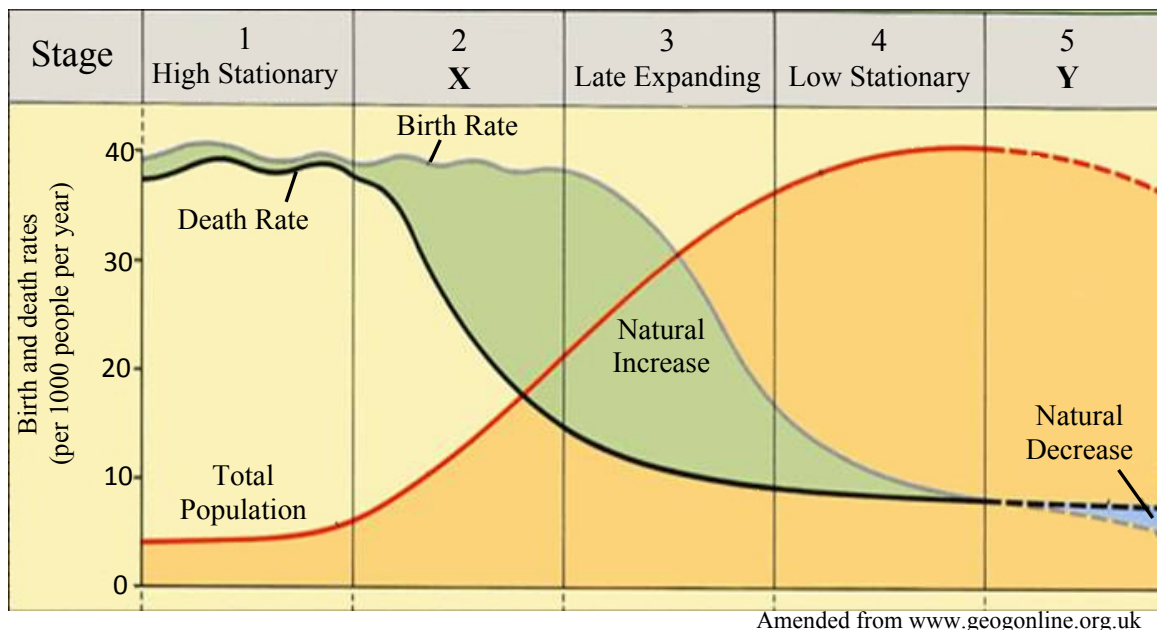
With reference to a developed region that you have studied, explain the impact of rural to urban migration on donor and receiver regions.

**[30m]**

## Question 11

### A. Population Dynamics

The Demographic Transition Model



Examine the diagram above showing the Demographic Transition Model and answer each of the following questions.

- In which stage of the Demographic Transition Model is the total population at its lowest?
- Name **X**, Stage 2 of the Demographic Transition Model **and** name an example of a country in this stage.
- Name **Y**, Stage 5 of the Demographic Transition Model **and** name an example of a country in this stage.
- Explain briefly **one** problem facing countries in Stage 5 of the Demographic Transition Model.
- Explain briefly what is meant by natural increase.

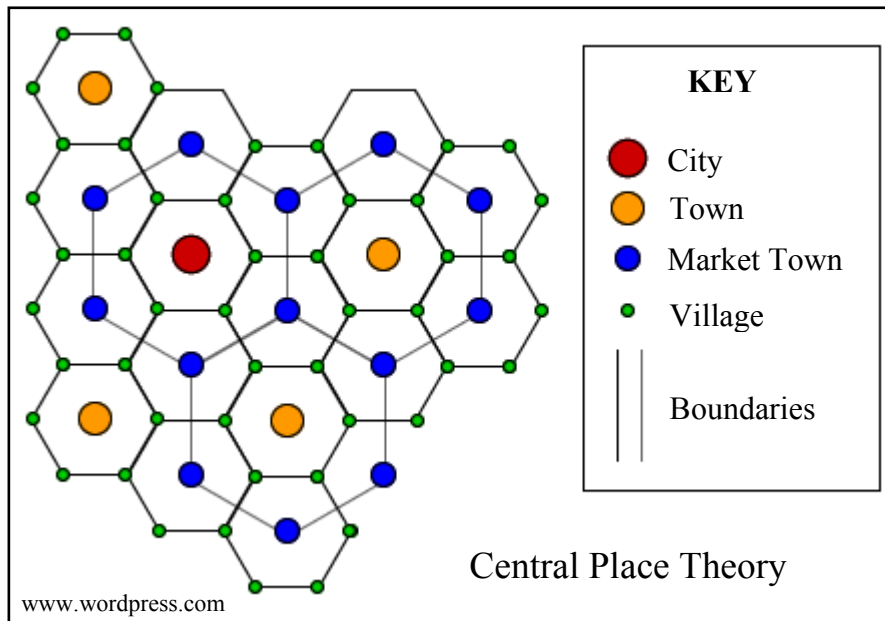
[20m]

### B. Population Distribution

Examine the 1:50 000 Ordnance Survey map and legend that accompany this paper. Explain **three** reasons why the area north of Northing 97 is less attractive to human settlement, using evidence from the Ordnance Survey map to support each reason.

[30m]

C. Central Place Theory



Explain the importance of hierarchy and hinterland in Central Place Theory.

[30m]

## Question 12

### A. Population Dynamics

Dependency Ratio for a number of Irish regions, 2011

Region	Dependency Ratio
Galway City	35
Galway County	54
Cork City	42
Cork County	52
Waterford City	49
Waterford County	55

Amended from CSO

Examine the data above showing dependency ratios in a number of Irish regions in 2011.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) Explain briefly **one** reason why dependency ratios are usually higher in rural areas.

[20m]

### B. Urban Functions

Examine the aerial photograph accompanying this paper.

Describe and explain **three** different functions of Dungarvan, using evidence from the aerial photograph to illustrate each function.

[30m]

### C. Population

Examine the influence/impact of **one** of the following on population growth:

- Society and culture
- Income levels
- Technology.

[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. Views of development and underdevelopment are subject to change.  
Discuss. [80m]
14. Examine how land ownership patterns have impacted on development. [80m]
15. We live in an interdependent global economy. Actions or decisions taken in one area have an impact on other areas.  
Discuss this statement with reference to global warming. [80m]

## Geoecology

**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. Explain how soil characteristics impact on soil development. [80m]
17. Soil profiles are the result of the operation of soil-forming processes.  
Discuss. [80m]
18. Biomes are altered by human activity.  
Discuss. [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. Examine the importance of religion as a cultural indicator. [80m]
20. The existence of different cultural groups within state borders can lead to conflict. Discuss. [80m]
21. Examine the strategies that have been or could be implemented to aid the survival of minority languages. [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. Examine the uneven distribution of temperature over the earth's surface. [80m]
23. Exchanges of water between oceans and atmosphere, over the earth's surface, impact on precipitation and its distribution patterns. Discuss. [80m]
24. Climate characteristics impact on economic development. Discuss. [80m]

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