



Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2010

GEOGRAPHY – HIGHER LEVEL

FRIDAY, 11 JUNE – MORNING, 9.30 to 12.20

Examination Number

For the Examiner's Use Only

Part One Short-Answer Questions	Total Marks	Adv. Ex.	App. Ex.	App. Adv.
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				

N.B. Remember to return this paper with your answer book.

Otherwise, marks will be lost.

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. Surface Processes



Insert the correct letter in the spaces below to identify the process at work in each of the photographs above.

Photograph	Letter
Freeze-thaw	
Abrasion	
Human activity	
Carbonation	

[8m]

2. Ordnance Survey Map

Examine the 1:50,000 Ordnance Survey map and legend that accompanies this paper. Write the correct answer for **each** of the following in the spaces below:

- (i) Give the correct name for **one** type of boundary shown on the map.

- (ii) Give the correct name for a 'Waymarked Walk' shown on the map.

- (iii) Give a six-figure grid reference for a 'Mast' shown on the map.

- (iv) What Antiquities are found at the following grid references?

S 430 284 _____ S 419 197 _____

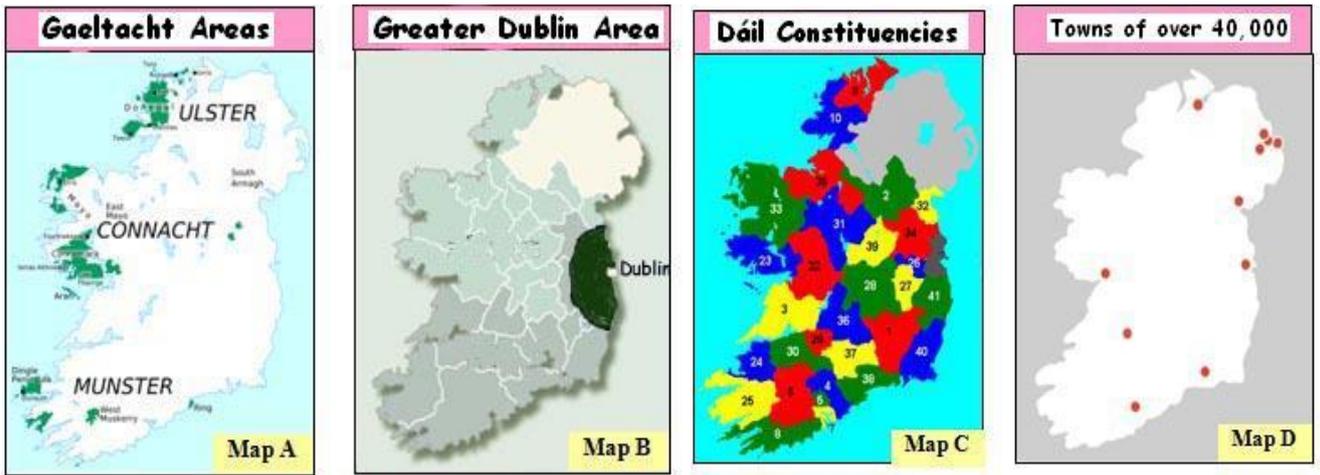
- (v) Give a six-figure grid reference for the railway station in Carrick-on-Suir.

- (vi) The point S 396 218 is the confluence point of which **two** rivers?

River 1 _____ River 2 _____

[8m]

3. Types of Region



Match each map to a type of region it represents by writing the correct letter in the table below.

Region Type	Letter
Urban region	
Cultural region	
Core region	
Political region	

[8m]

4. Aerial Photograph and Ordnance Survey Map

Examine **both** the aerial photograph and the Ordnance Survey map that accompany this paper. In the space provided write the correct answer for **each** of the following:

- (i) What is the name of the river which flows from the left background to the right foreground of the aerial photograph?

- (ii) What are the names of the **two** bridges in the aerial photograph?

Bridge 1 _____ Bridge 2 _____

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

S 385 228

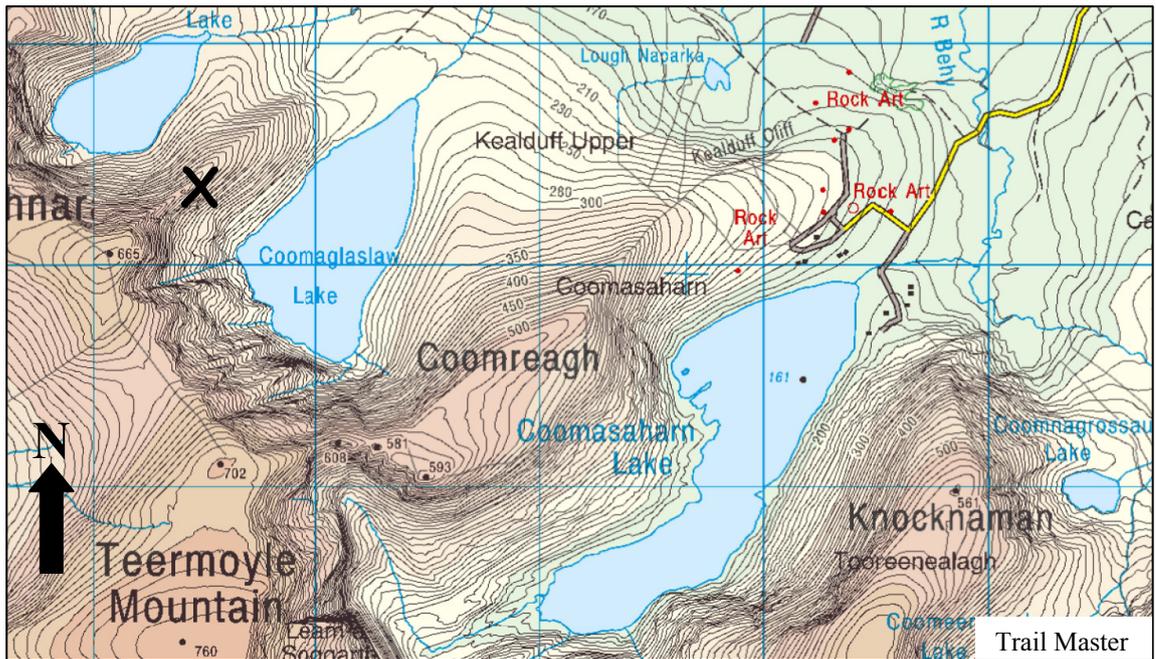
S 408 215

S 405 229

[8m]

5. **Glacial Landforms**

Examine the Ordnance Survey map extract below. Write the answers to the questions in the spaces provided.



(i) The height above sea level of the surface of Coomasaharn Lake is:

_____ metres.

(ii) What type of glacial lake is Coomasaharn Lake?

(iii) What is the correct name for the feature found at X? Tick the correct box.

Arête

Moraine

Pyramidal Peak

(iv) The glacier which shaped Coomasaharn Lake moved out of the basin in which of the following directions? Tick the correct box.

North

North Eastwards

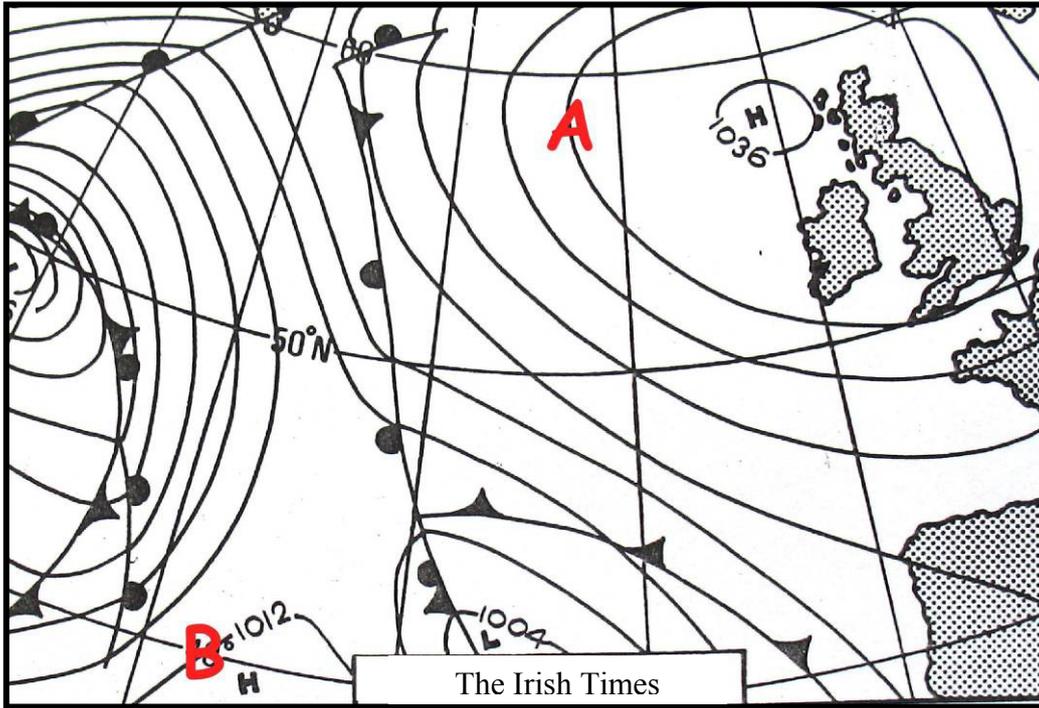
West

South Eastwards

[8m]

6. Weather Chart

The Atlantic Weather Chart below shows a weather situation in June. Examine the chart and answer the questions which follow:



- (i) Is Ireland under the influence of a Depression or an Anticyclone?

- (ii) Name the type of line at **A** on the map. _____
- (iii) What is the barometric pressure at **B** on the map? _____
- (iv) Which of the descriptions below best describe weather conditions over Ireland?
Tick the correct box.

- Continuous light or heavy rain
- Showers with strong winds
- Calm dry weather with warm temperature.

[8m]

7. Land-use

Match each of the land-use letters in **Column X** with the number of its function in **Column Y**. One match has been made for you.

Column X Land-Use	
A	House
B	Local shop
C	Factory
D	School
E	Road
F	Church
G	Town Hall
H	Sports Field
I	Bank

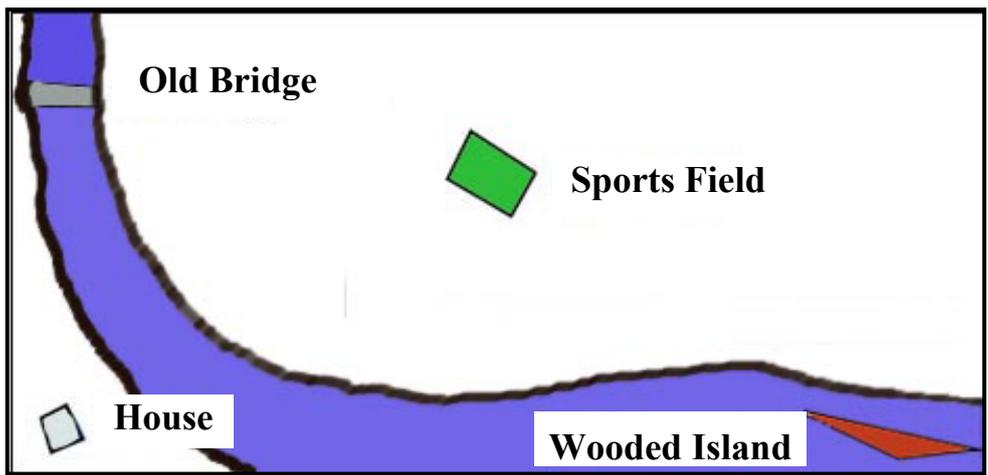
Column Y Function	
1	Retail
2	Educational
3	Religious
4	Administrative
5	Commercial
6	Recreational
7	Transport
8	Residential
9	Industrial

A	
B	1
C	
D	
E	
F	
G	
H	
I	

[8m]

8. Location on the Aerial Photograph

Study the sketch map below and the aerial photograph which accompanies this paper. In the box below, indicate the location on the aerial photograph of each of the features marked below. Use accepted notation (left background etc.).

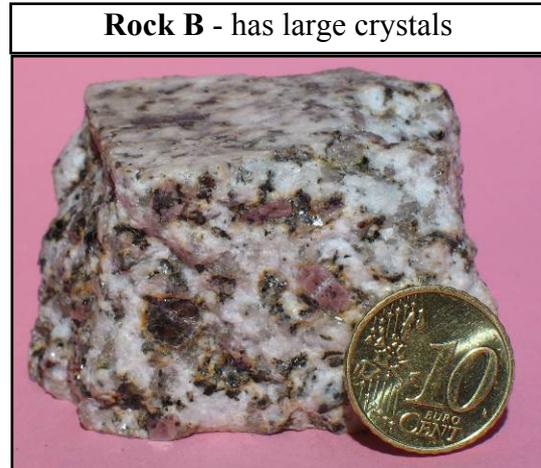


Feature	Location
Old Bridge	
House	
Wooded Island	
Sports Field	

[8m]

9. **Rock Type**

Examine the photographs of the igneous rocks **A** and **B** shown below and answer the questions which follow:

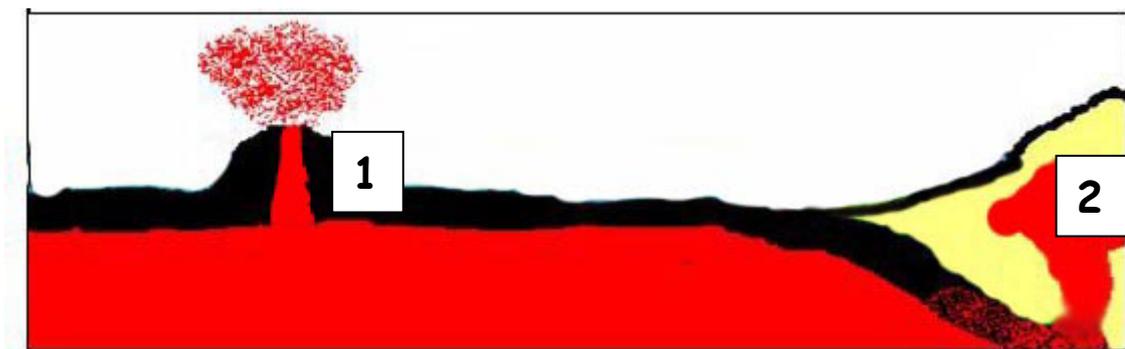


- (i) Name each of the rocks. Fill in the names in the spaces provided.

Rock **A** is _____

Rock **B** is _____

- (ii) Study the diagram below and identify the location where each of the rocks **A** and **B** from part (i) are formed.
Tick the correct box in each case.

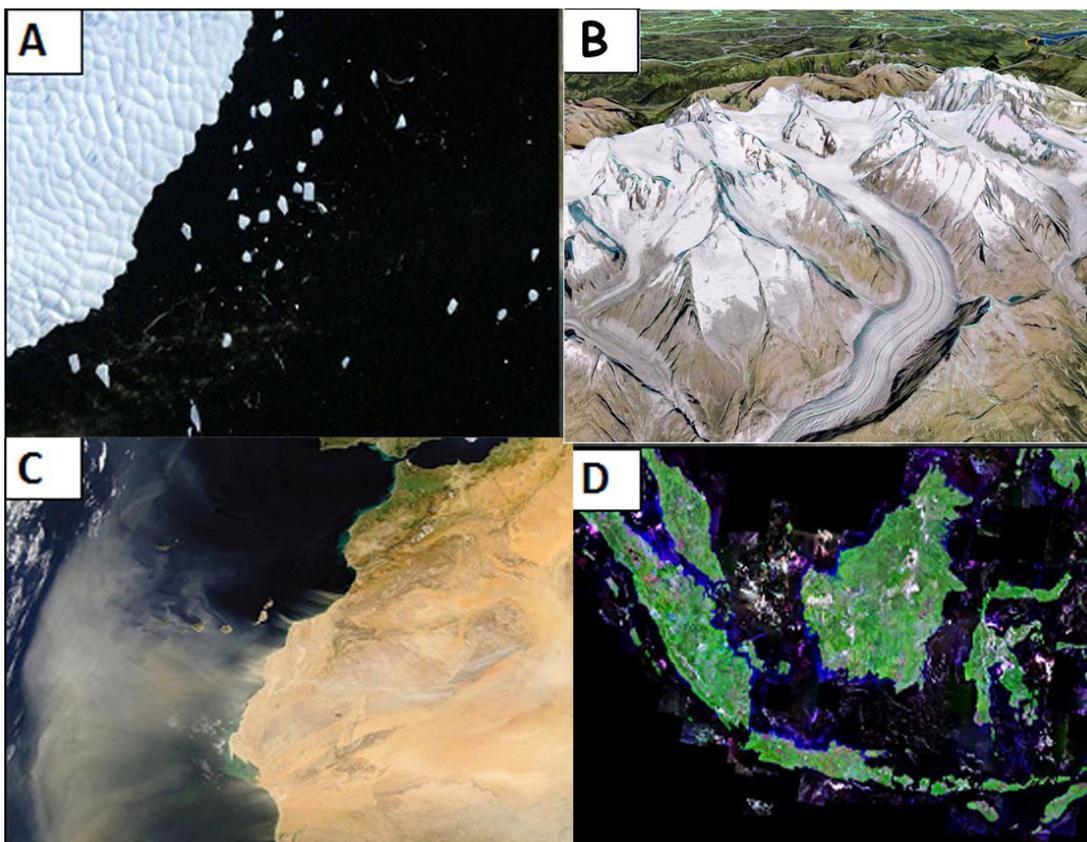


Rock **A** forms at 1 or 2

Rock **B** forms at 1 or 2

[8m]

10. Satellite Interpretation



Match each of the satellite images above with its description in the table below by inserting the correct letter **A** to **D** in the spaces provided.

Image	Letter
Sandstorm which is blowing from the Sahara to the Atlantic.	
Icebergs breaking away from the ice sheet in Greenland.	
The Island Arc of Indonesia.	
Alpine Glacier.	

[8m]

11. Irish Fishery Statistics

Examine the table below and answer the questions that follow:

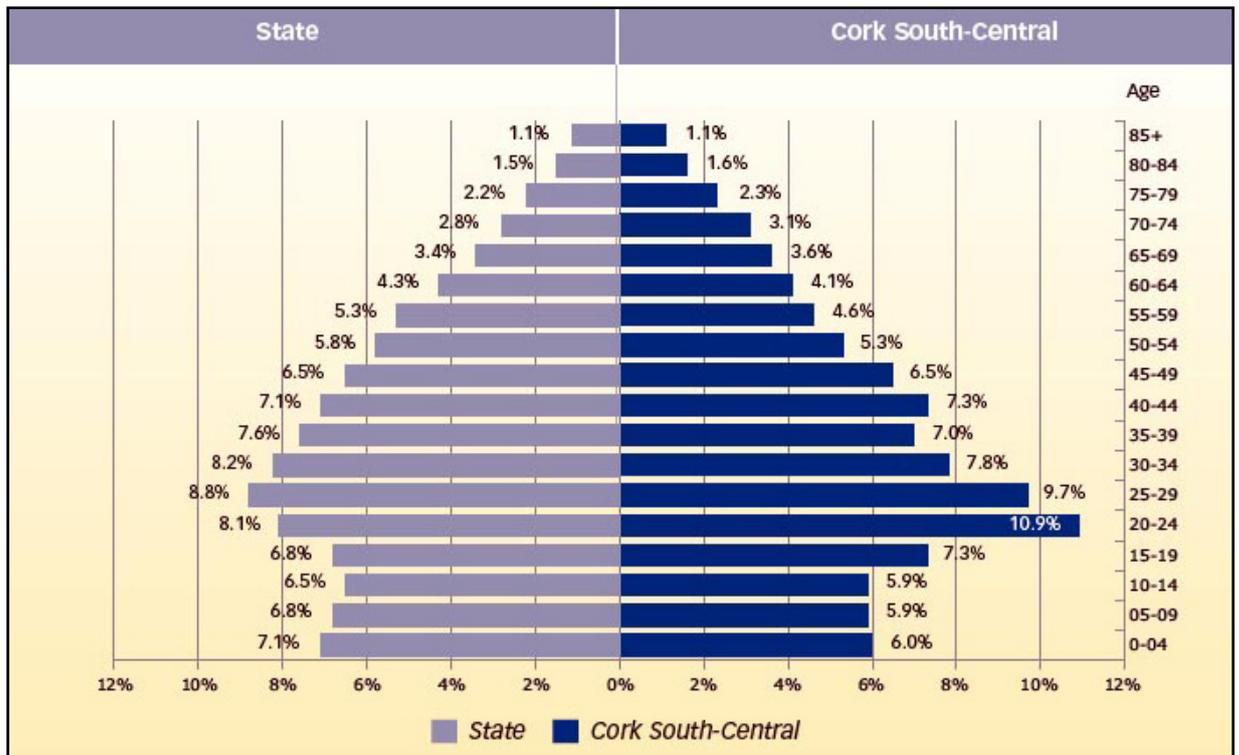
Fish Production in Ireland 2002 - 2004 in Millions of Euro				
Year	Sea landings	Aquaculture	Inland catches	Total Production
2002	€209.9m	€125.2m	€5.5m	€340.6m
2003	€180.3m	€101.8m	€4.5m	€286.7m
2004	€180.9m	€100.5m	€5.0m	€286.4m

- (i) What was the value of Aquaculture in 2004? € _____m
- (ii) What was the change in the total production of fish between 2002 and 2004?
€ _____m
- (iii) Which of the following sectors suffered a decline in production between 2003 and 2004?
Tick the correct box.
- Sea landings Aquaculture Inland catches
- (iv) What is the name of the microscopic organisms that fish feed on, in the sea?
Write the correct answer in the box below.

[8m]

12. Graphical Interpretation

Examine the population graphic for the Republic of Ireland (State) and Cork-South Central 2006 and answer the questions in the spaces provided.



www.oireachtas.ie

- (i) In which age group is the greatest overall percentage of population in the State?

- (ii) What is the total percentage of the population in the 35-39 age group in Cork South-Central?

- (iii) What percentage of Cork South-Central's population is over 65 years?

- (iv) What is the difference in population in the 20-24 age group between Cork South-Central and the State?

[8m]

PART TWO – STRUCTURED and ESSAY QUESTIONS – 320 MARKS

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

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

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 Ordnance Survey map that accompanies this paper.

In your answer book, draw a sketch-map **to half scale** of the area shown. On it, mark and name **each** of the following:

- One landform created by the processes of river deposition
- A V-Shaped river valley
- An area with a trellised drainage pattern
- The complete course of the Glen River.

[20m]

B. Landform Development

Answer (i) or (ii)

- (i) Examine, with the aid of a labelled diagram or diagrams, the processes that have led to the formation of any **one** Irish landform of erosion **or** deposition of your choice.

OR

- (ii) Describe and explain **one** mass movement process that you have studied.

[30m]

C. Rocks

Examine, with reference to examples from Ireland, the formation of metamorphic rocks.

[30m]

Question 2

A. Karst Landscape



Examine the photograph and answer the following questions in your answer book:

- (i) What is the name of the feature marked **A**?
- (ii) What is the name of the feature marked **B**?
- (iii) What is the name of the overall feature in the photograph?
- (iv) Name **one** process which helped to form these features.
- (v) Name the type of rock most associated with these features.

[20m]

B. Folding

Explain how the study of plate tectonics has helped us to understand the global distribution of Fold Mountains.

[30m]

C. Human Interaction

Humans interact with the rock cycle in many ways. Discuss this with reference to any **one** human interaction you have studied.

[30m]

Question 3

A. Earthquakes



Examine the map above relating to the earthquake in Haiti in January 2010 and answer the following questions in your answer book:

- (i) Activity along which **two** plates resulted in the earthquake in Haiti?
- (ii) What type of fault caused the earthquake?
- (iii) Describe the fault responsible for the earthquake.
- (iv) What tectonic activity along the subduction zone created the island arc on the map?

[20m]

B. Human Interaction

With reference to an example you have studied, describe and account for **one** way in which humans attempt to influence or control natural processes. In your answer, refer to **one** of the following:

- Fluvial processes
- Marine processes
- Mass movement.

[30m]

C. Karst Landscape

With reference to the Irish landscape, examine the processes which have influenced the development of any **one underground** landform in a karst region.

[30m]

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

A. Irish Regions

In your answer book, draw an outline map of **Ireland**. On it show and name the following:

- (i) **Two** Irish regions you have studied
- (ii) **One** urban centre in **each** region
- (iii) **One** feature of the physical landscape in **each** region.

[20m]

B. Economic Activities

Examine the factors that influence the development of **one** tertiary economic activity in a **European region (not in Ireland)** that you have studied.

[30m]

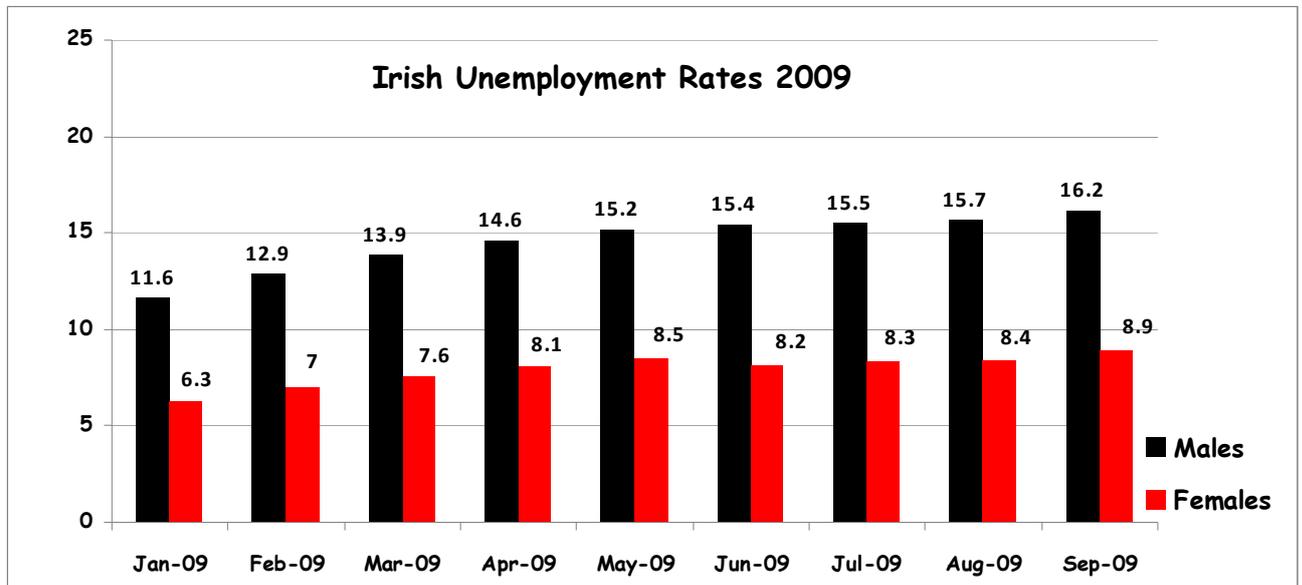
C. Culture

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

[30m]

Question 5

A. Irish Unemployment



Examine the data in the chart above which shows the monthly unemployment rates in Ireland and answer the following questions:

- (i) By how much has the male unemployment rate increased from January to September?
- (ii) By how much has the female unemployment rate increased from January to September?
- (iii) What is the difference between the total male and total female unemployment rate from January to September?
- (iv) In which month was the difference between the male and female unemployment rates greatest?
- (v) Briefly explain **one** reason why the percentage increase in unemployment for males was greater than the percentage increase for females.

[20m]

B. Urban Regions

Examine the development of **one** urban area in any **Irish region** studied by you.

[30m]

C. Agriculture

Describe and explain any **two** factors that influence the development of agriculture in a non-European **Continental / Sub-Continental Region** that you have studied.

[30m]

Question 6

A. European Regions

In your answer book, draw an outline map of a **European Region (not in Ireland)** that you have studied.

On it show and name the following:

- (i) Any **two** physical features in the region
- (ii) Any **two** urban centres in the region.

[20m]

B. Irish Regions

Regions can be defined by many factors including:

- Economic
- Human
- Physical.

Explain how any **one** of the above factors has defined an **Irish Region** studied by you.

[30m]

C. European Regions

Describe and explain any **two** factors that influence the development of secondary economic activities in a **European Region (not in Ireland)** that you have studied.

[30m]

SECTION 2 – ELECTIVES

Questions 7 to 12

You **MUST** attempt **ONE** question from **EITHER**

Patterns and Processes in Economic Activities

OR

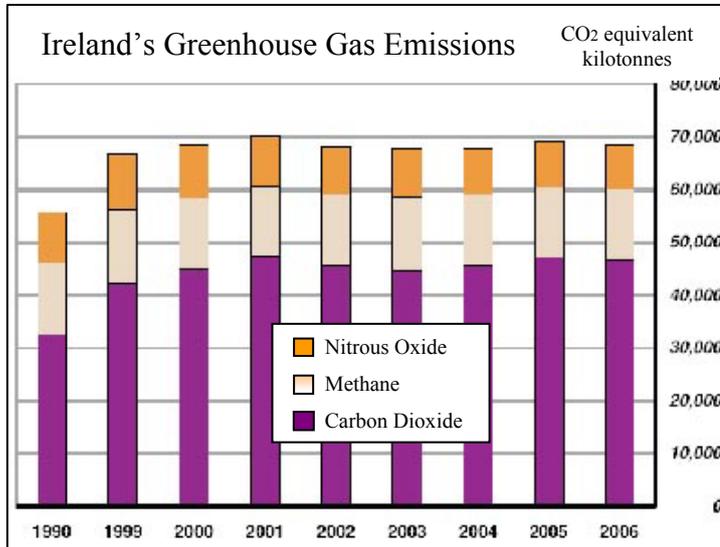
Patterns and Processes in the Human Environment

PATTERNS AND PROCESSES IN ECONOMIC ACTIVITIES

Questions 7 to 9

Question 7

A. Environmental Impact



Examine the graph above and answer the following questions in your answer book:

- Which Greenhouse gas makes up most of Ireland's gas emissions?
- In which year did Ireland emit 70,000 kilotonnes of greenhouse gas emissions?
- What was the trend in Ireland's emissions between 1990 and 2001?
- Explain **one** reason why Ireland should reduce its Greenhouse gas emissions.

[20m]

B. Multinational Companies

Examine the aerial photograph and the Ordnance Survey map accompanying this paper. Using evidence from the Ordnance Survey map **and** the aerial photograph, explain **three** reasons why Carrick-on-Suir would be a suitable location for a multinational company.

[30m]

C. Globalisation

Explain the effects of globalisation on the economy of a developing country that you have studied.

[30m]

Question 8

A. Economic Development

Human Development Index (HDI)

Country	HDI
Norway	0.97
Ireland	0.92
Egypt	0.70
India	0.61
Zambia	0.48
Niger	0.34

Examine the data in the above table showing the HDI for a number of countries in 2007.

- (i) Use **graph paper** to draw a suitable graph to illustrate this data.
- (ii) Literacy levels is one of the indicators used to calculate the HDI. In your answer book name **two** other indicators used.

[20m]

B. Developed Economy

Explain the growth of any **one** developed economy you have studied under one or more of the following headings:

- Financial services
- Tourism
- Industrial decline.

[30m]

C. Conflicts of Interest

Examine how conflict can arise between local interests and global interests when a resource is exploited for economic reasons.

In your answer refer to an example of such conflict that you have studied.

[30m]

Question 9

A. Ordnance Survey Map and the Transport Network

Examine the Ordnance Survey map that accompanies this paper.

In your answer book, draw a sketch-map **to half scale** of the area shown. On it, show and name the following:

- Built-up area of Carrick-on-Suir
- N24 road
- R697 road
- Railway line.

[20m]

B. European Union Policy

Examine how any **one** major policy of the European Union has influenced Ireland's economic development.

[30m]

C. Sustainable Development

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

[30m]

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

A. Population

Population Density

Country	Population Density
Ireland	62
Brazil	22
Kenya	64
Sweden	21
Mali	10
Mexico	54

Examine the data in the table above showing population density for a number of countries in 2007.

- (i) Use **graph paper** to draw a suitable graph to illustrate this data.
- (ii) In your answer book explain the term 'population density'.

[20m]

B. Migration and Ireland

Examine **two** major changes in the patterns of Irish migration within the last one hundred years.

[30m]

C. Historic Settlement

Examine the 1:50,000 Ordnance Survey map of Carrick-on-Suir that accompanies this paper.

Using evidence from the map describe and explain **three** different examples of historic settlement.

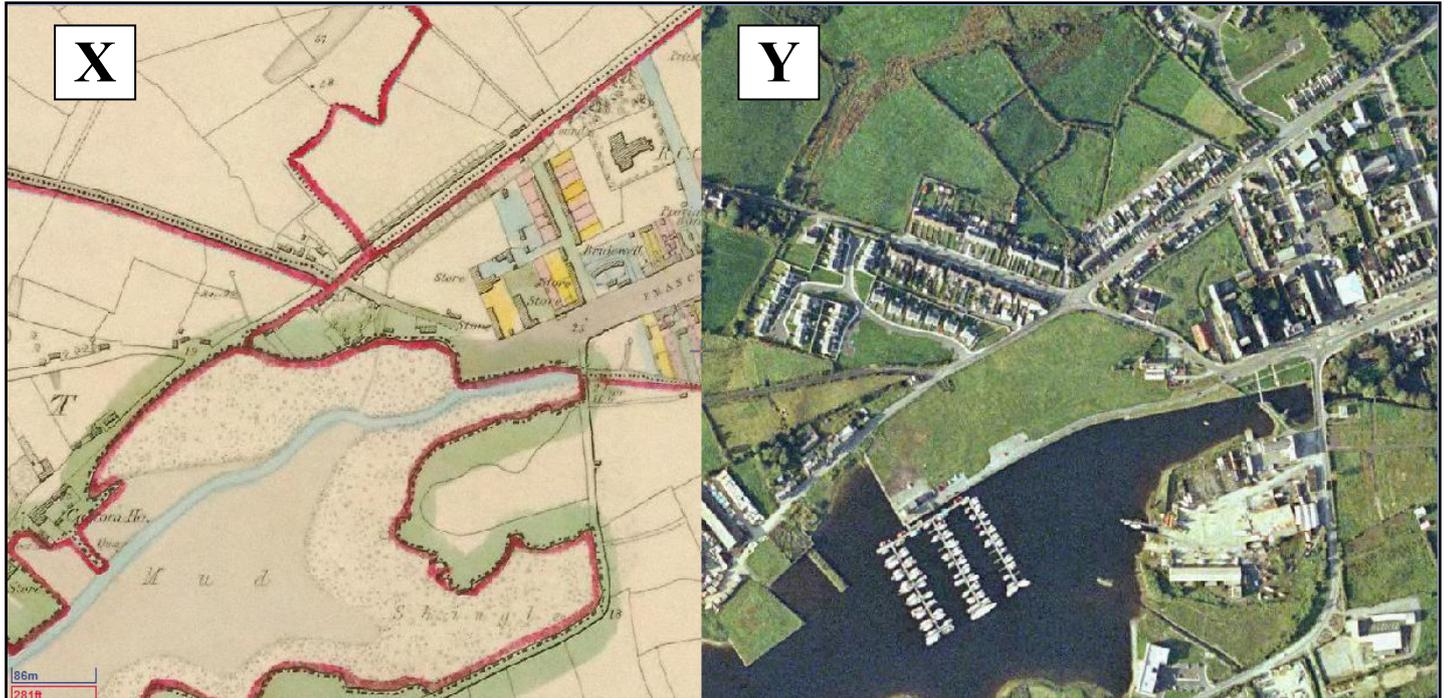
[30m]

Question 11

A. Dynamics of Settlement

1830's Ordnance Survey Map

Recent Aerial Photograph



Scoilnet Maps

Examine the 1830's Ordnance Survey map extract of Kilrush, labelled X and a recent aerial photograph of the same area, labelled Y above.

In your answer book, draw a sketch map of the aerial photograph, labelled Y above.

On it mark and name the following:

- The present day coastline
- A marina with boats
- **Two** land-uses which have developed since the 1830's.

[20m]

B. Urban Problems

- (i) Explain the term 'traffic congestion'.
- (ii) Explain **two** methods used to overcome traffic congestion. Use examples you have studied in your answer.

[30m]

C. Developing World Cities

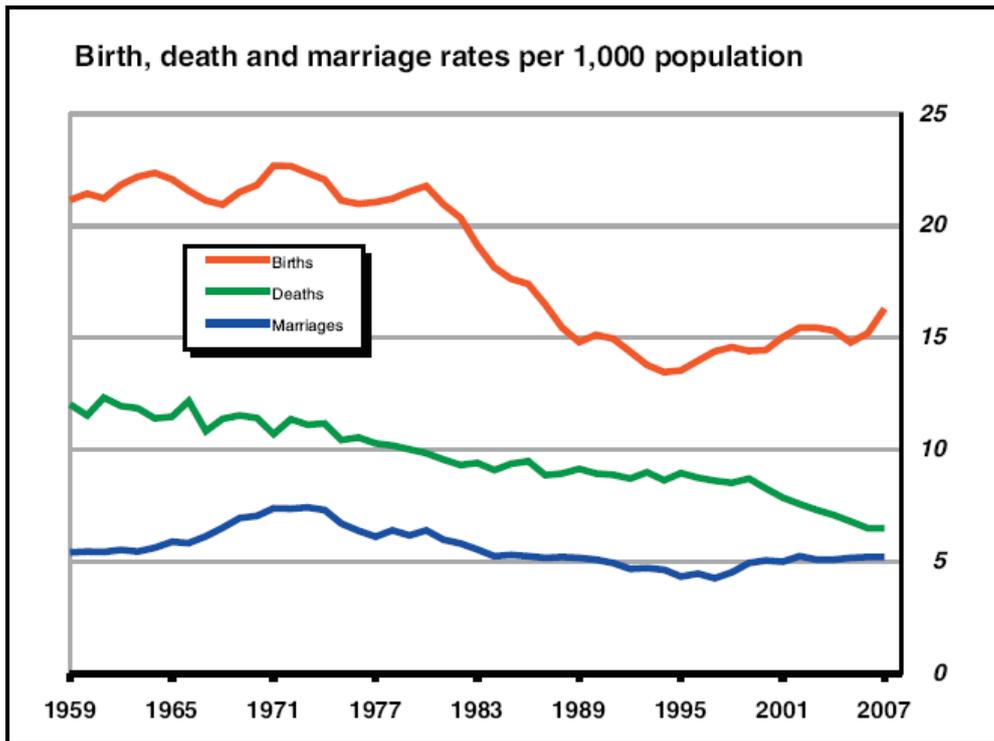
'Problems can develop as urban centres expand and grow.'

Discuss this statement with reference to **one** developing world city that you have studied.

[30m]

Question 12

A. Population Change



Examine the graph above and answer the following questions in your answer book:

- (i) What was the marriage rate per thousand in 1989?
- (ii) When did the death rate first drop below 10 per thousand?
- (iii) What was the general trend in the birth rate between 1983 and 1995?
- (iv) Briefly explain the term 'natural increase'.

[20m]

B. Migration

'Ethnic and religious issues can arise as a result of migration.'

Examine this statement with reference to example(s) you have studied.

[30m]

C. Central Place

Examine the Ordnance Survey map and aerial photograph accompanying this paper. Using evidence from the Ordnance Survey map **and** aerial photograph, show that Carrick-on-Suir performs the function of a Central Place or market centre for the surrounding hinterland.

[30m]

SECTION 3 – OPTIONS

Questions 13 to 24

Attempt **ONE** question

N.B. 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

13. Discuss how the operations of Multinational Companies may contribute to the widening economic gap between developing and developed countries. [80m]
14. Discuss the idea that Fair Trade not Aid is the best way to tackle economic inequality in the world. [80m]
15. Examine the causes and the impact of **one** global environmental issue studied by you. [80m]

Geocology

16. Examine the influence of climate on the characteristics of **one** biome that you that have studied. [80m]
17. Examine **two** ways in which human activities have impacted on soils. [80m]
18. Describe and explain the characteristics of any **one** soil type studied by you. [80m]

Culture and Identity

19. The Gaeltacht areas are distinctive cultural regions. Discuss. [80m]
20. Examine the significance of **either** language **or** religion as a cultural indicator. [80m]
21. Discuss the role of migration in any European region you have studied. [80m]

The Atmosphere-Ocean Environment

22. Describe and explain why the characteristics of climate change over time. [80m]
23. Examine the impact of climate on the development of tourism in any region that you have studied. [80m]
24. Describe and explain the formation of mid-latitude depressions and the weather patterns associated with them. [80m]

Blank Page

Blank Page

Blank Page