Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2006

GEOGRAPHY – ORDINARY LEVEL

MONDAY 12 JUNE – AFTERNOON, 1.30 TO 4.20

N.B. Remember to return this paper with your answer-book.
Otherwise, marks will be lost

1.   **Glaciation**
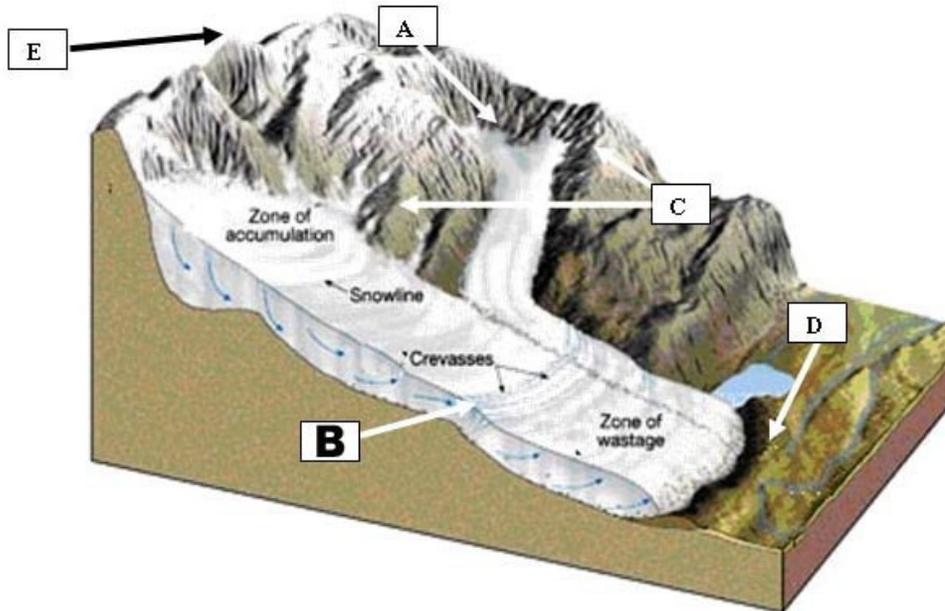
Examine the diagram above and then match **each** of the descriptions in the table below with the appropriate letter in the diagram.

Description	Letter
A deep hollow in a mountain called a Corrie or Cirque	
As the glacier melts it creates a long ridge called a terminal moraine.	
A knife-like ridge called an Arête.	
A Pyramidal Peak caused by glacial erosion.	
As the glacier moves cracks form in the ice sheet.	

[10]

2. Coastal Features

Examine the photograph which shows a coastal region.

(i)   In the boxes provided, name **two** features of deposition that you can see.

┌─────────────────────┐   ┌─────────────────────┐
│   │   And   │   │
└─────────────────────┘   └─────────────────────┘

(ii)   Are the waves here more likely to be Constructive **or** Destructive?

_____
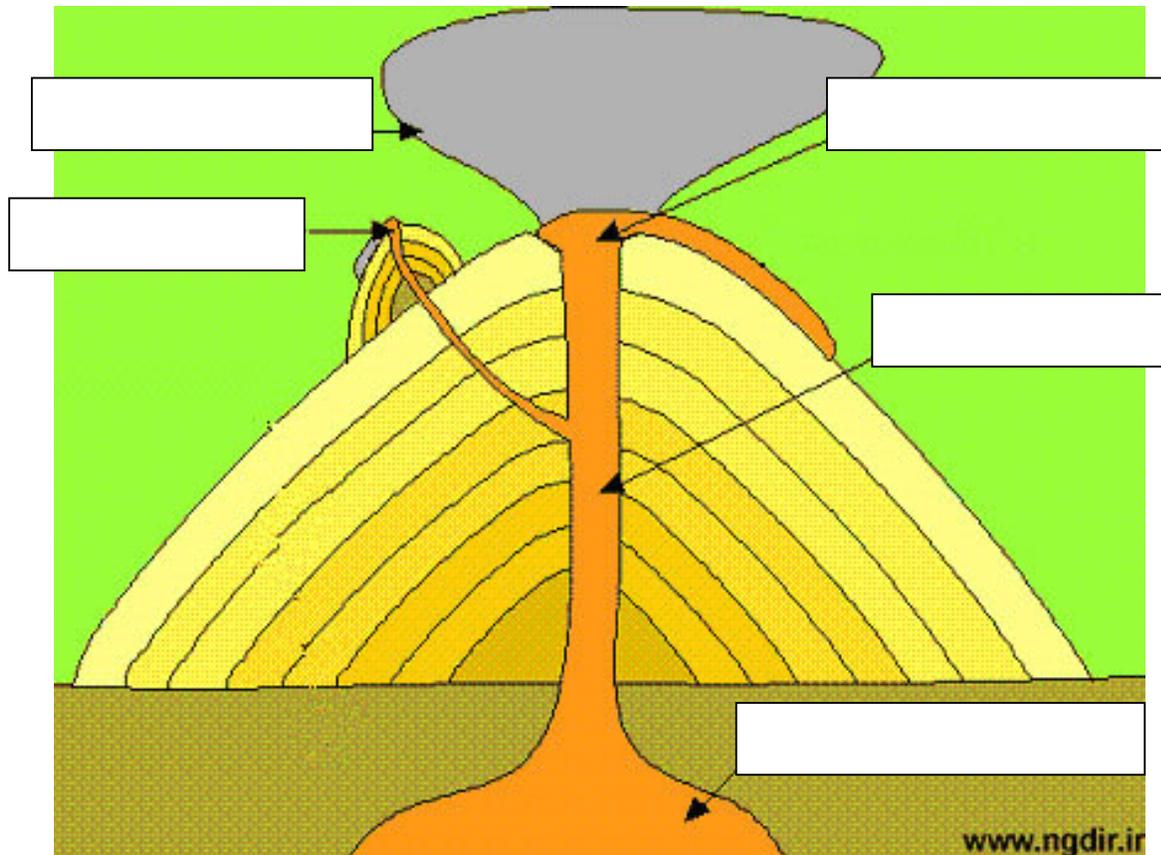
(iii)   Name **two** ways in which a coastal area like this is of economic benefit to people.

Way 1 _____

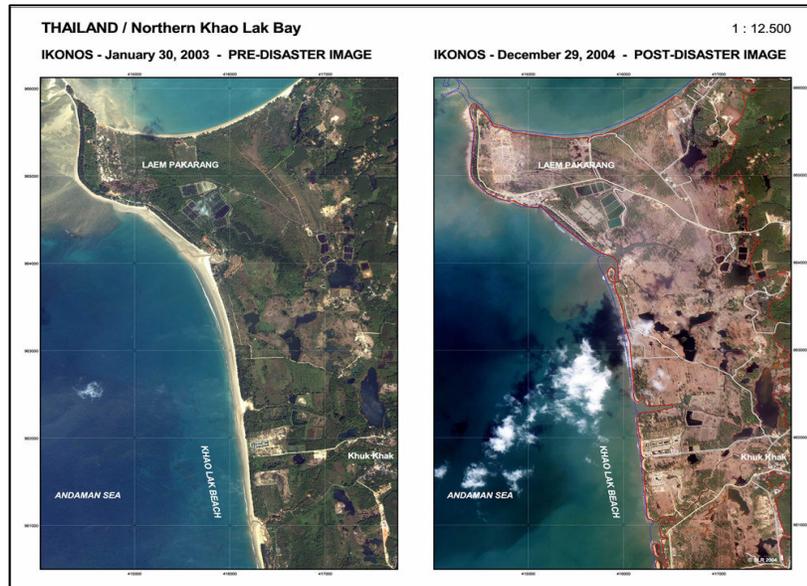Way 2 _____

[10]

3. Volcanoes

Examine the diagram of a volcano shown above.
Use the following terms to **fill in the blanks on the diagram:**

- Vent
- Secondary cone
- Ash cloud
- Crater
- Magma chamber

[10]

4. Satellite Imagery

THAILAND / Northern Khao Lak Bay   1 : 12.500

IKONOS - January 30, 2003 - PRE-DISASTER IMAGE   IKONOS - December 29, 2004 - POST-DISASTER IMAGE

The satellite images shown here show an area of Thailand before and after the tsunami of December 2004.

(i) What is a tsunami? _____

(ii) Name **one** cause of a tsunami _____

(iii) Name **three** problems caused in Thailand by the tsunami.

Problem 1:

_____

Problem 2:

_____

Problem 3:

_____

[10]

5. Rock types

The above photograph shows a well-known basalt landscape in Ireland.

Select the correct answer from **each** of the statements below and write it in the space provided:

(i)   This rock is **igneous/sedimentary/metamorphic**._____

(ii)   Basalt cools deep **beneath / close** to the earth's surface _____

(iii)   Basalt cools **quickly / slowly** _____

(iv)   Basalt is a **coarse-grained / fine-grained** rock _____

(v)   The photograph was taken in **Connemara/ at the Giant's Causeway/ in the Burren.**

_____

[10]

6. Ordnance Survey Map

Examine the Ordnance Survey map accompanying this paper. Calculate (in square kilometres) the approximate area of the entire map extract:

_____

[10]

7. Ordnance Survey Map

Examine the Ordnance Survey map accompanying this paper. Identify the **antiquity** shown at each of the following grid references:

      (i) V892904   _____

      (ii) V949887   _____

      (iii) V988924   _____

      (iv) V878908   _____

   **(v) V977871**   _____

[10]

8. Aerial Photograph

Examine the aerial photograph of Killarney that accompanies this paper.

(i)   Is the photograph **vertical / oblique**? _____

(ii)   Using the normal notation (e.g. Right Background etc…) give the locations of **two** churches on the photograph.

      Church 1:   _____

      Church 2:   _____

(iii)   State **one** advantage which the photograph has over the Ordnance Survey map for showing the churches.

      _____

[10]

9. Rivers

(a)   Examine the diagram below. Name **each** of the three river patterns in the boxes provided.
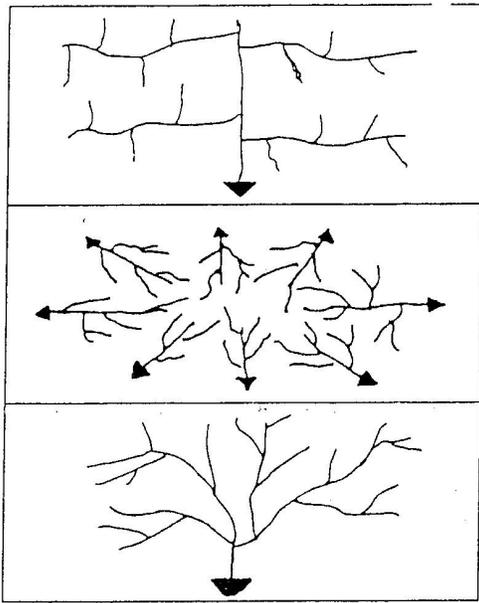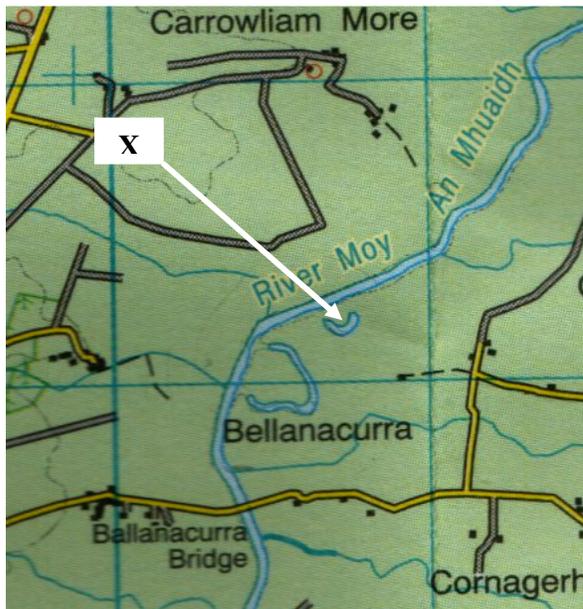

A	

B	

C	

(b) The O.S. Map extract below shows a river valley.

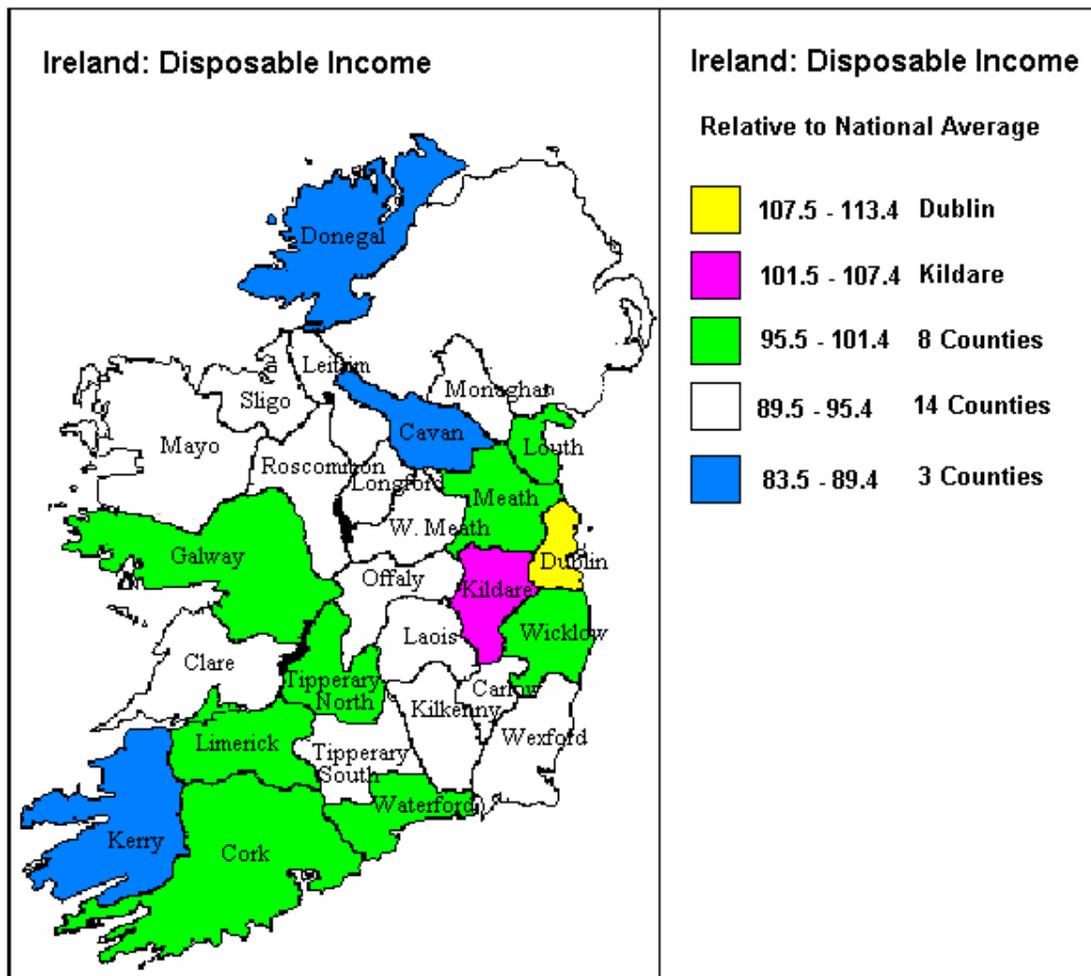(i) Is the river Moy in the O.S. extract in its **Upper** or **Middle** or **Lower Course**?

_____

(ii) What **name** is given to the feature marked X on the map?

_____

[10]

10. Ireland

The map below shows the household disposable income per head in Ireland in 2002.

(a)   Identify the county with the highest disposable income.

_____

(b)   Name the **three** counties with the lowest disposable income.

(i)_____(ii)_____(iii)_____

(c)   Name **one** reason why these counties have such a low disposable income.

_____

[10]

11.   Regions

The Organisation for Economic Cooperation and Development (OECD) is an organisation that gives advice to 30 of the world's most industrial nations. Its members are listed below:

Australia	**Finland**	**Ireland**	**Netherlands**	**Spain**
Austria	**France**	**Italy**	**New Zealand**	**Sweden**
Belgium	**Germany**	**Japan**	**Norway**	**Switzerland**
Canada	**Greece**	**Korea**	**Poland**	**Turkey**
Czech Republic	**Hungary**	**Luxembourg**	**Portugal**	**United Kingdom**
Denmark	**Iceland**	**Mexico**	**Slovakia**	**USA**

List **five** countries from the above table which are **not** in Europe

(i)   _____

(ii)   _____

(iii)   _____

(iv)   _____

(v)   _____   **[10]**

12. Features of Erosion

The following features are the result of ice, river or sea action. In the case of **each** feature listed state which of the agents (ice, rivers, or sea) formed it.

FEATURE	FORMED BY
Waterfall	_____
Interlocking spur	_____
Esker	_____
Blowhole	_____
Cirque/Corrie	_____

[10]

PART TWO – STRUCTURED QUESTIONS – 300 MARKS

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

- **Two** questions from Section 1
- **One** question from Section 2

THESE QUESTIONS TO BE ANSWERED IN THE ANSWERBOOK

SECTION 1 - CORE

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

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

ONE from Regional Geography

Question 1

A. **ORDNANCE SURVEY MAP**

Examine the 1:50000 Ordnance Survey extract and legend supplied with this paper. Draw a sketch-map of the area covered by the extract. On it **mark** and **name** the following:
- The River Flesk
- A Ribbon or Paternoster Lake
- A Battle Field Site
- A Nature Reserve
- An area of Natural Woodland

(30 Marks)

B. **SURFACE PROCESSES**

Select any **one** of the following surface processes:

- Sea/marine action
- River action
- Glacial action
- Mass movement.

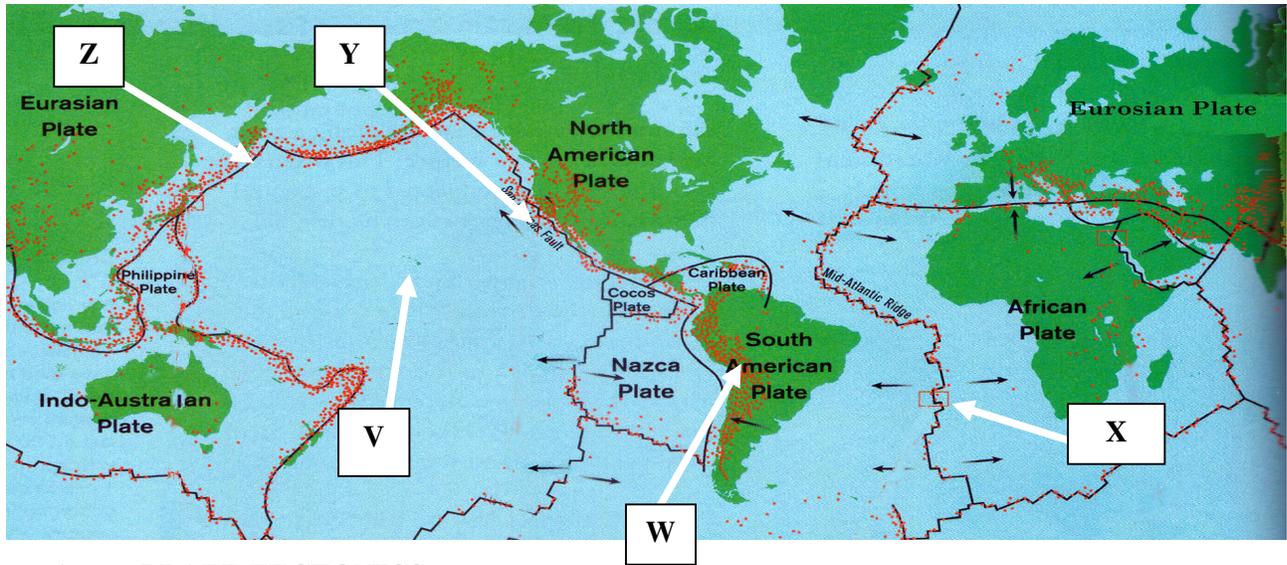Explain the formation of any **two** Irish landforms caused by your selected process with the aid of diagrams.

(40 Marks)

C. **HUMAN INTERFERENCE**

With reference to an **example** which you have studied, describe and explain **one** way in which humans attempt to control river processes **or** marine(sea) processes **or** mass movement.

(30 Marks)

A. PLATE TECTONICS

With reference to the labels **V**, **W**, **X, Y** and **Z** on the above map, **state in your answer book** which points to:

- A constructive margin
- A destructive margin
- A transverse/transform margin
- A Ridge of Fold Mountains
- A Hot Spot

(30 Marks)

B. PLATES AND VOLCANOES

Explain with the aid of an <u>example</u> which you have studied why volcanic activity happens at plate margins.

(30 Marks)

C. EARTHQUAKES

Read the report below and answer the questions which follow it in **your answer book:**

"According to Pakistani officials, the 7.6-magnitude tremor killed 87,000 people and left 3.5 million homeless. The U.N. estimates that 2.5 million people are living in tents below 5,000 feet, while others are still at risk in higher areas, where snow and rains may make it more difficult for helicopters and trucks to reach them."
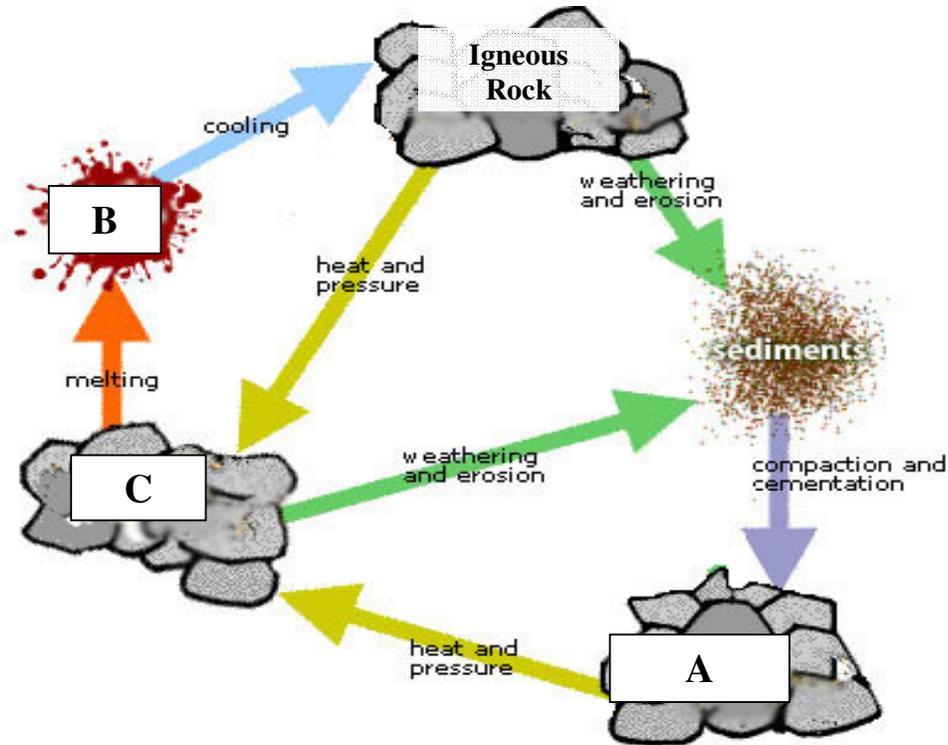
Report by *Boston Herald*

(i) How strong was the earthquake?

(ii) How many people are homeless?

(iii) Explain why the earthquake caused so much damage in the highland area described.

(40 Marks)

Question 3

A.   **THE ROCK CYCLE**

With reference to the boxes labelled **A, B** and **C** on the above diagram of the Rock Cycle, **state in your answer book** which letter represents **each** of the following:

- Sedimentary Rock
- Metamorphic Rock
- Magma

(30 Marks)

B.   **KARST REGIONS**

What is the chief type of rock found in karst regions?
Describe in detail how this type of rock is formed.

(30 Marks)

C.   **KARST REGIONS**

Explain with the aid of diagrams how any **two** underground landforms found in a karst region, are formed.

(40 Marks)

Question 4

The figures below show the tourist regions of Ireland visited by domestic tourists in 2004.

2004 - Regions Visited - Domestic Holidays (%)

Dublin	13.9
Midlands-East	12.5
South-East	15.9
South-West	20.4
Shannon	11.3
West	17.9
North-West	8.1

A.   IRELAND – DOMESTIC HOLIDAYS

Use graph paper to draw a graph that shows the data in the table above.

(30 Marks)

B.   EUROPEAN REGIONS

With reference to any **one** European region which you have studied, give and explain in detail **two** reasons why tourists might visit the region.

(40 Marks)

C.   NON-EUROPEAN REGIONS

Describe the influence which **either** Climate **or** the Physical Landscape has on the development of tourism in any non-European Continental or Sub-Continental region which you have studied.

(30 Marks)

Question 5

A.   **IRELAND - REGIONS**

Draw a sketch map of Ireland
On it mark and name:
- **Two** contrasting regions.
- **One** major city or town in **each** region.

(30 Marks)

B.   **EUROPEAN REGIONS**

Explain the importance of **one** of the primary industries listed below to the economy of **any** European region studied by you.

- Agriculture
- Forestry
- Fishing
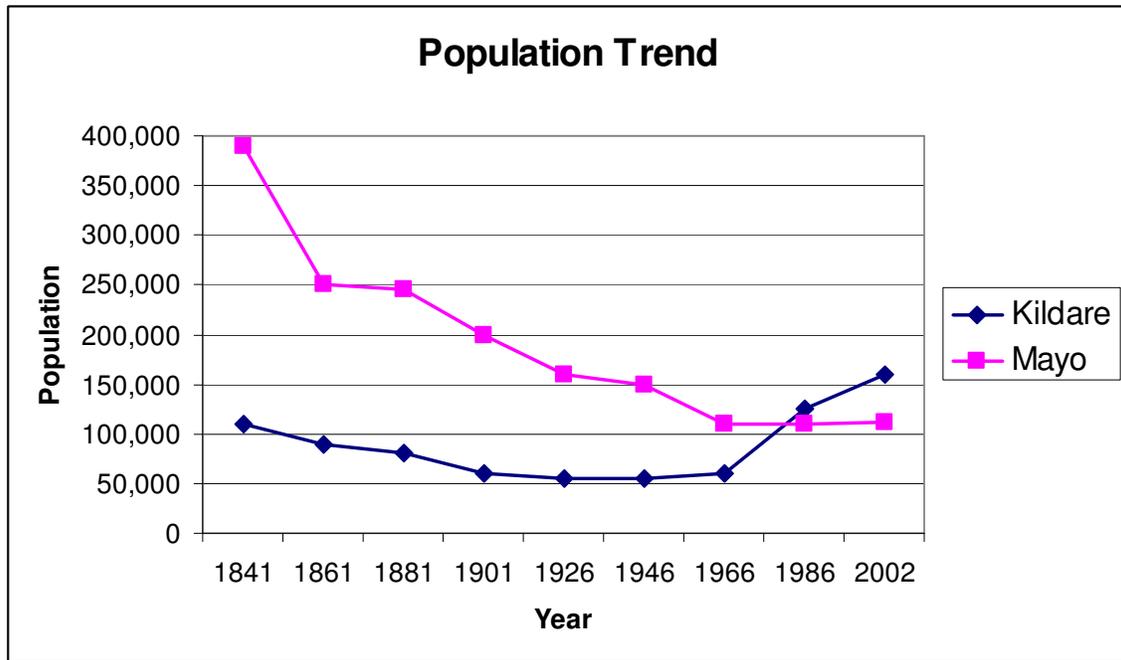- Mining/Energy

(30 Marks)

C.   **NON-EUROPEAN REGIONS**

With reference to **any** Non-European, Continental or Sub-Continental region you have studied:

Describe **two** factors which have influenced its industrial development.

(40 marks)

Population Trend

A graph showing Population (y-axis, 0 to 400,000) against Year (x-axis: 1841, 1861, 1881, 1901, 1926, 1946, 1966, 1986, 2002) with lines for Kildare and Mayo.

A. POPULATION TREND

Examine the graph above which shows the populations of Mayo and Kildare since 1841.

(i) After which census-year did Kildare show a significant change in trend?

(ii) In which census-year did the population of Kildare first exceed that of Mayo?

(iii) Explain briefly **two** causes of the rise in population in core areas such as Kildare.

(30 Marks)

B. EUROPEAN REGIONS

With reference to **two** contrasting European regions explain the differences between them under **one** of the following headings:

- Climate
- Population patterns
- Energy sources
- Manufacturing Industry.

(40 Marks)

C. NON-EUROPEAN REGIONS

In the case of a non-European Continental or Sub-Continental region which you have studied briefly describe **two** factors which have influenced the development of agriculture **or** industry in the region.

(30 Marks)

SECTION 2 - ELECTIVES
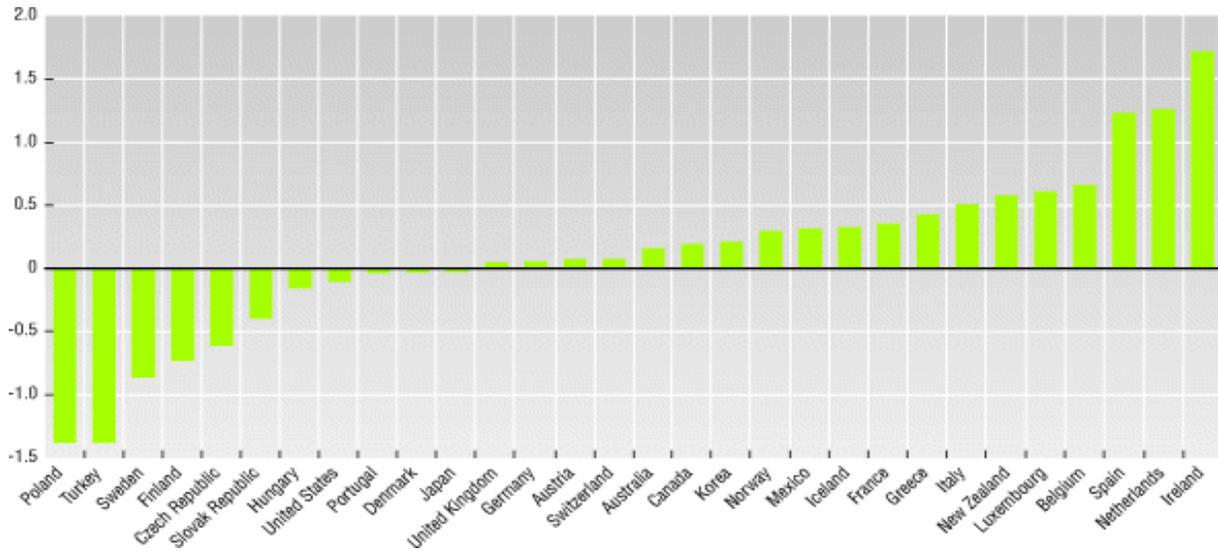**You MUST attempt ONE question**
From EITHER
• Patterns and Processes in Economic Activities
OR
• Patterns and Processes in the Human Environment

Question 7

A.   EMPLOYMENT RATE

The above table shows the growth in employment rate 1990-2003. (OECD)

(i)   Which country has the smallest increase in employment rate in that period?
(ii)   Which two countries have the biggest drop in employment rate in that period?
(iii)   Which country has the biggest increase in employment rate during that period?

(30 Marks)

B.   AERIAL PHOTOGRAPH

Examine the **aerial photograph** accompanying this paper. Imagine you have the task of finding a suitable location for a company making computer software.

(i)   State clearly where you would locate the factory using the usual notation
       (e.g. Right Background etc. …..)

(ii)   Explain **one** reason in favour of this location and **one** reason against it.

(30 Marks)

C.   MULTINATIONAL COMPANIES

Many multinational companies (M.N.C.s) have set up in Ireland in recent years.
Explain fully **two** reasons why Ireland is attractive to such companies.

(40 Marks)

A.   **DEVELOPMENT INDICATORS**

Examine the table below which refers to a Developed and a Developing country.

Indicator	Country A	Country B
Area	923,768 sq.km.	70,280 sq.km.
Population	129,934,911	4,015,676
GDP per capita	$840	$31,900
Life Expectancy	50.6	77.6
Literacy Rate	57.1%	77.6%
Birth Rate(per thousand)	39.22	14.47
Death Rate(per thousand)	14.10	7.85
Population Growth	2.54%	1.16%
Rail tracks in the country	3,557 km	3,312 km
Highest Point	2,419 m	1041 m

(i)   State which country – A or B - is **developing**.

(ii)   List **two** indicators from the table which helped your decision

(30 Marks)

B.   **EUROPEAN UNION**

Membership of the EU has been a major factor in Ireland's economic development.
Describe **two** ways in which Ireland has gained from its EU membership.

(40 Marks)

C.   **DEVELOPING REGIONS**

Some developing countries have suffered significantly from colonialism in the past.
With reference to a **specific country or region** which you have studied describe **two**
ways in which colonialism has limited that region's development.

(30 Marks)

Question 9

A. ATMOSPHERIC CO² - IRELAND

The table below refers to the amount of CO_2 in the atmosphere in Ireland.

Year	1980	1985	1990	2000	2002
Metric tons per capita	7.7	7.5	8.7	11.2	10.9

Use graph paper to draw a graph that shows the data in the table above.

(30 Marks)

B. FOSSIL FUELS

(i)   Name **two** fossil fuels.

(ii)   Fossil fuels cause much damage to the environment such as global warming
        and acid rain. Explain how **either** global warming **or** acid rain is caused and
        describe its effects on the environment.

(40 Marks)

C. HUMAN ACTIVITIES AND THE ENVIRONMENT

The environment can also be endangered by other activities such as:

- Overfishing
- Mass tourism
- Exploitation of energy resources
- Deforestation
- Desertification

Examine the threat caused by **one** activity and in your answer:

(i)   Describe the problem caused.

(ii)   Outline **one** possible solution to this problem.

(30 Marks)

Question 10

Examine the **aerial photograph** accompanying this paper.

A.   AERIAL PHOTOGRAPH

Draw a sketch map of the area shown on the photograph. On your sketch map **mark** and **name** the following:
- A large car- park
- The street-pattern
- An area of woodland
- The CBD (Central Business District)
- An area of terraced housing with gardens

(30 Marks)

B.   GREEN BELTS

Central Park, New York in winter.

http://www.centralpark.com

A park such as this is an example of a land-use zone within a city. Explain fully **two** reasons why it is important to preserve green belts such as this within towns and/or cities.

(30 Marks)

C.   ORDNANCE SURVEY MAP

Examine the **1:50000 O. S. Map of Killarney** supplied with this paper and answer the following:

(i)   Name and give locations for **two** patterns of rural settlement on the map.

(ii)   Explain the development of **one** of these patterns in detail.

(40 Marks)

Question 11

Population and Migration Estimates for Ireland

Year ending April	Natural Change(000)	Immigrants (000)	Emigrants (000)
1987	29.0	17.2	40.2
1989	22.6	26.7	70.6
1991	22.0	33.3	35.3
1993	20.0	34.7	35.1
1995	17.2	31.2	33.1
1997	19.0	44.5	25.3
1999	21.2	48.9	31.5
2001	24.8	59.0	26.2
2003	31.9	50.5	20.7
2005	33.5	70.0	16.6

A.   POPULATION AND MIGRATION - IRELAND

Use the figures from the above table to answer the following questions **in your answer book**.

(i)   In which year was immigration greater than emigration for the first time?

(ii)   Calculate the difference between immigration and emigration in 2005.

(iii)   In what year was emigration greatest?

(30 Marks)

B.   IRELAND - IMMIGRATION

Explain **two** reasons why immigration into Ireland has increased in recent times.
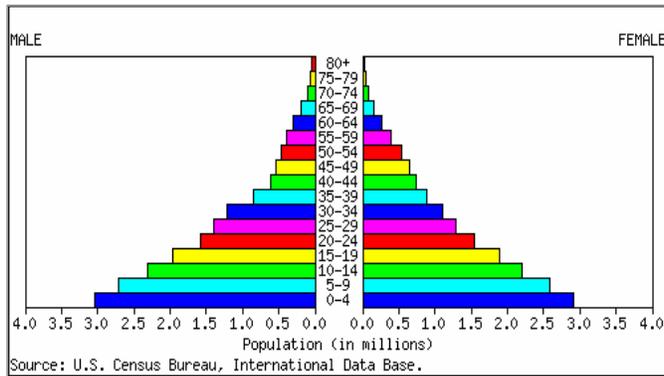
(30 Marks)

C.   REFUGEES

(i)   Describe **two** problems faced by refugees when they seek asylum (a safe place) in a new country such as Ireland.

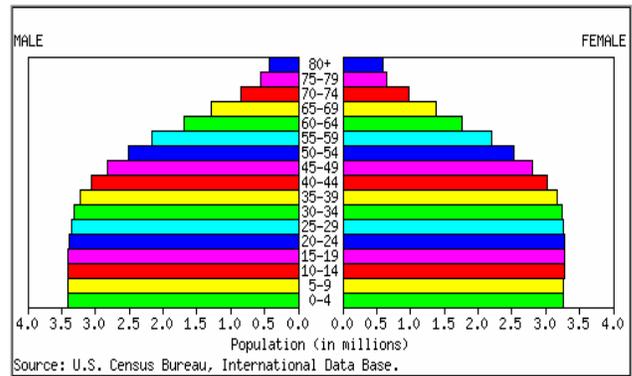(ii)   Explain **two** measure that governments could take to help refugees solve these problems.

(40 Marks)

Sudan 2000   **Sudan 2050**

A.   POPULATION STRUCTURE

Examine the population pyramids above. Describe **two** differences between the structure in 2000 and the projected structure for 2050.

(30 marks)

B.   OVERPOPULATION

(i)   Explain what is meant by 'overpopulation'.

(ii)   Explain **two** effects of overpopulation in a region or country you have studied.

(30 marks)

C.   URBAN PROBLEMS

Using examples which you have studied, suggest how urban problems in the Developed World would differ from urban problems in the Developing World.

(40 marks)

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