



# Coimisiún na Scrúduithe Stáit State Examinations Commission

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LEAVING CERTIFICATE EXAMINATION, 2006

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**GEOGRAPHY – HIGHER LEVEL**

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MONDAY, 12 JUNE – AFTERNOON, 1.30 TO 4.20

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For the Examiner's Use Only

<b>PART ONE Short Questions</b>	<b>Mark</b>
<b>Accumulated Mark</b>	
<b>Disallowed Marks</b>	
<b>Nett mark</b>	

<p><b>N.B. Remember to return this paper with your answer-book. Otherwise, marks will be lost</b></p>
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## PART ONE – SHORT-ANSWER QUESTIONS – 80 MARKS

Attempt **TEN** questions

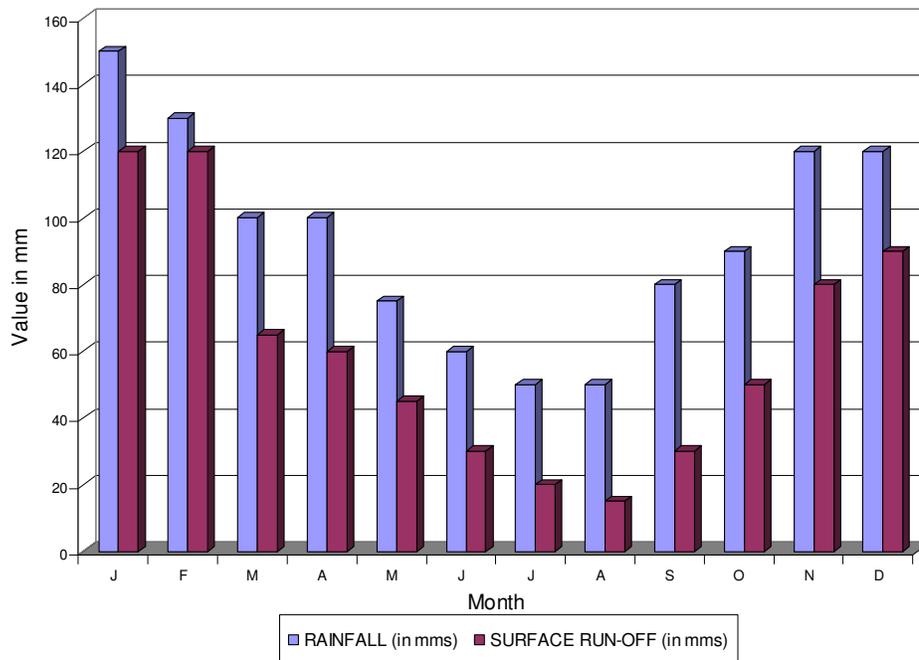
All Questions carry equal marks

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

### 1 Rainfall and Run-off

The table and graph below give information on rainfall and runoff, gathered over a twelve-month period.

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
RAINFALL (in mms)	150	130	100	100	75	60	50	50	80	90	120	120
SURFACE RUN-OFF ( in mms)	120	120	65	60	45	30	20	15	30	50	80	90

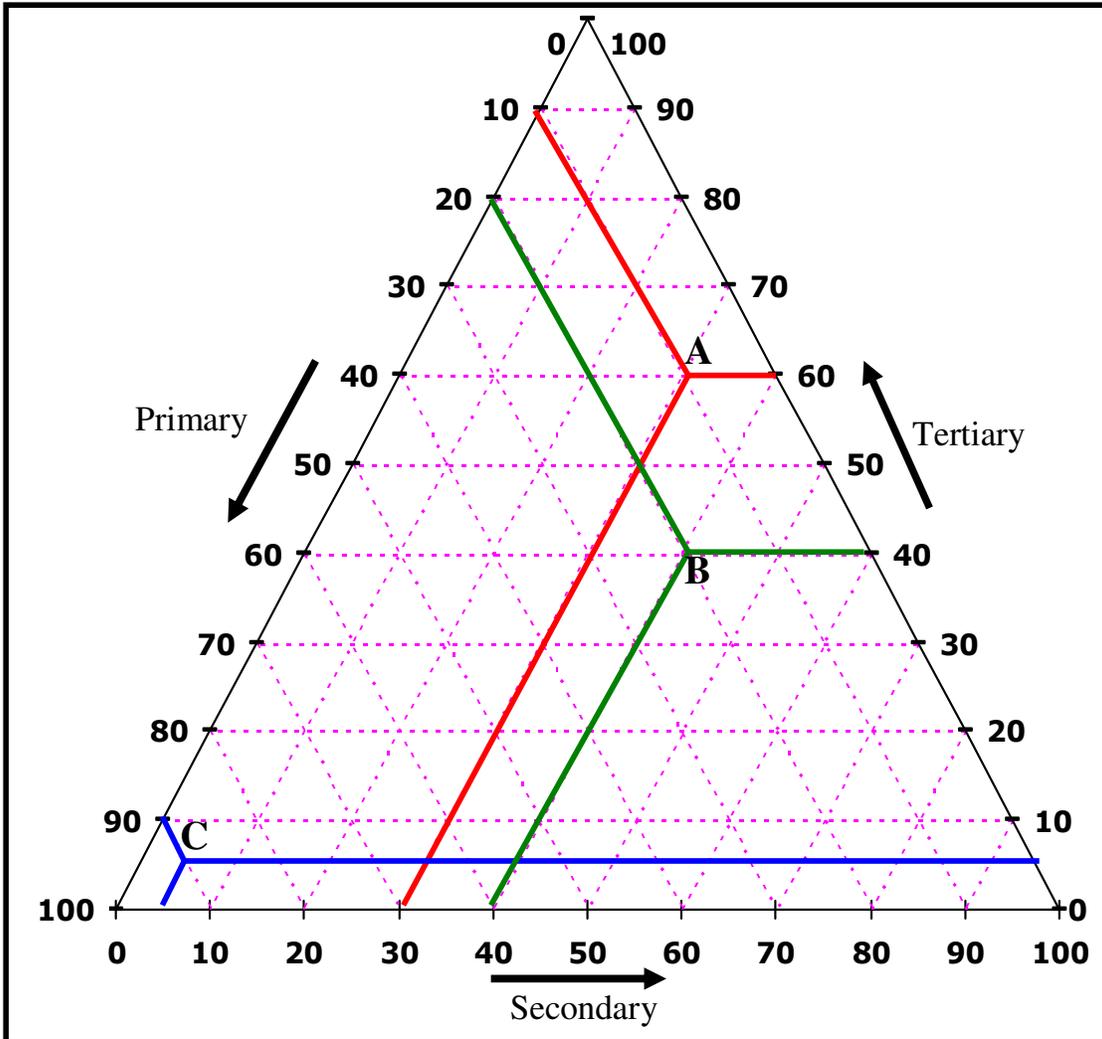


Answer the questions below in the spaces provided:

In how many months did rainfall exceed 80mm?	
Calculate the average monthly rainfall for the last three months of the year	
Name the month when rainfall and surface run-off were closest.	
Select the most likely explanation for run-off being almost equal to rainfall in that month.	
(a) the ground was very dry (b) evaporation was low (c) the soil was very wet	

**[8]**

## 2 Employment Structure



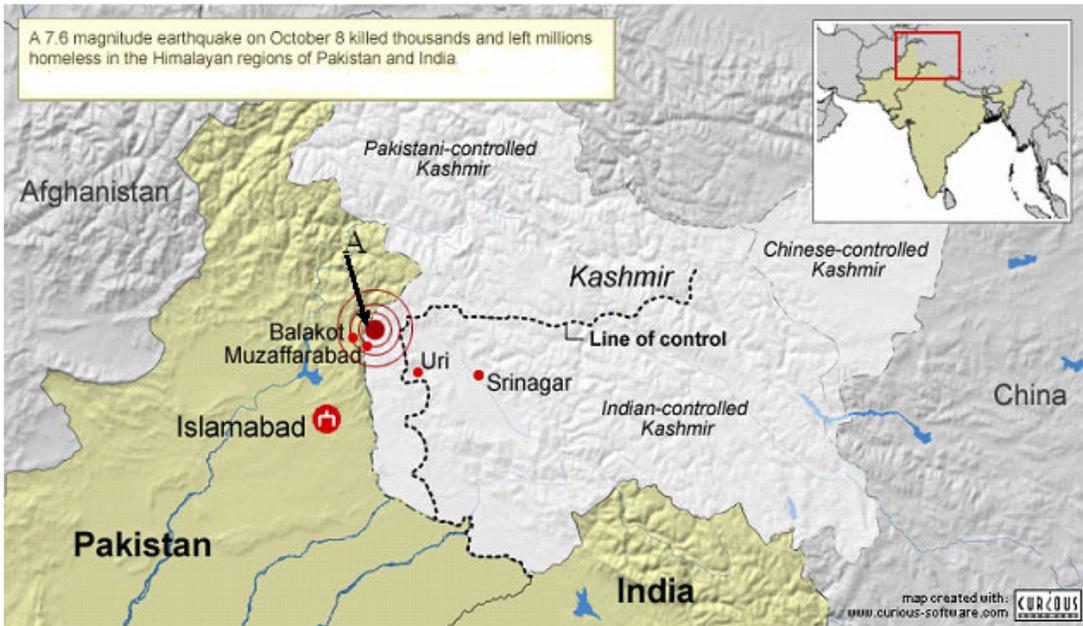
Examine the triangular graph which shows the employment structure in three countries, A, B and C. Complete the table below.

Employment structure	Country
Primary 20%, Secondary 40%, Tertiary 40%	
Primary 90%, Secondary 5%, Tertiary 5%	
Primary 10%, Secondary 30%, Tertiary 60%	
Which country would appear to have the most developed economy?	

[8]

### 3 Earthquakes

Examine the map of the Pakistan-India border region and answer the questions that follow.



- (i) The point on the earth's surface directly above the focus of the earthquake – shown at A – is called the:

.....

- (ii) Smaller shocks followed the main earthquake. These later shocks are called:

.....

- (iii) Which of these cities is likely to have suffered the greatest damage: Uri, Balakot or Islamabad?

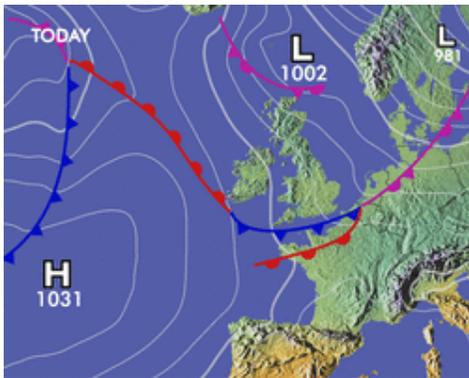
.....

- (iv) To what scale does the term “7.6 magnitude earthquake” refer?

.....

[8]

#### 4 Weather Maps



Match **each** weather map symbol in Column A with its description in Column B.

Column A		Column B			
	A	Warm Front	1	A	
	B	Isobars	2	B	
	C	Anticyclone	3	C	
	D	Cold Front	4	D	

[8]

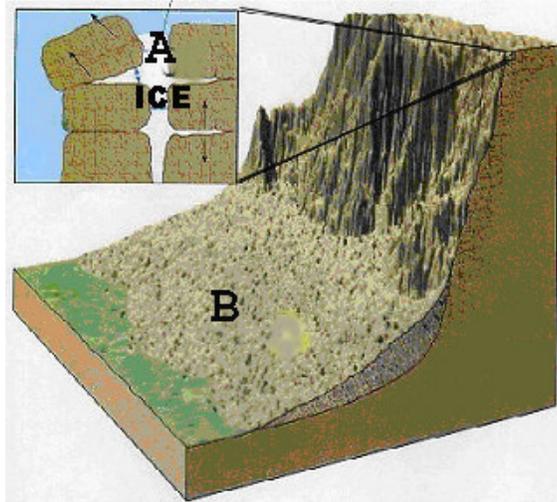
#### 5 Landforms

Match **each** of the named landform groups in Column A with the description in Column B.

Column A		Column B			
Delta, Moraine	A	Structural Landforms	1	A	
Corrie, Gorge	B	Weathering Landforms	2	B	
Rift Valley, Fold mountains	C	Erosional Landforms	3	C	
Scree, Clint	D	Depositional Landforms	4	D	

[8]

## 6. Weathering



Examine this diagram and write in the space provided the correct answer for **each** of the following:

Question	Answer
Identify the weathering agent that is active at A	
Is this agent an example of physical (mechanical) weathering or chemical weathering?	
Which of the following best describes temperatures at A: (i) always under freezing point ( $0^{\circ}\text{C}$ ) (ii) varying above and under freezing point (iii) never under freezing point ( $0^{\circ}\text{C}$ )	
What name is given to the rock particles (B) that gather at the foot of the slope?	

[8]

## 7 Ordnance Survey map

Examine the OS map of the Killarney region and write in the space provided the correct answer from the options given in **each** of the following statements.

- (i) The antiquity found at grid reference V 878 909 is:
- (ii) The highest point on the extract (summit of Purple Mountain) is indicated by a:
- (iii) The area of Lough Leane is approximately:
- (iv) The valley type occupied by the River Loe at V 87 86 is a:

[8]

## 8 Regions

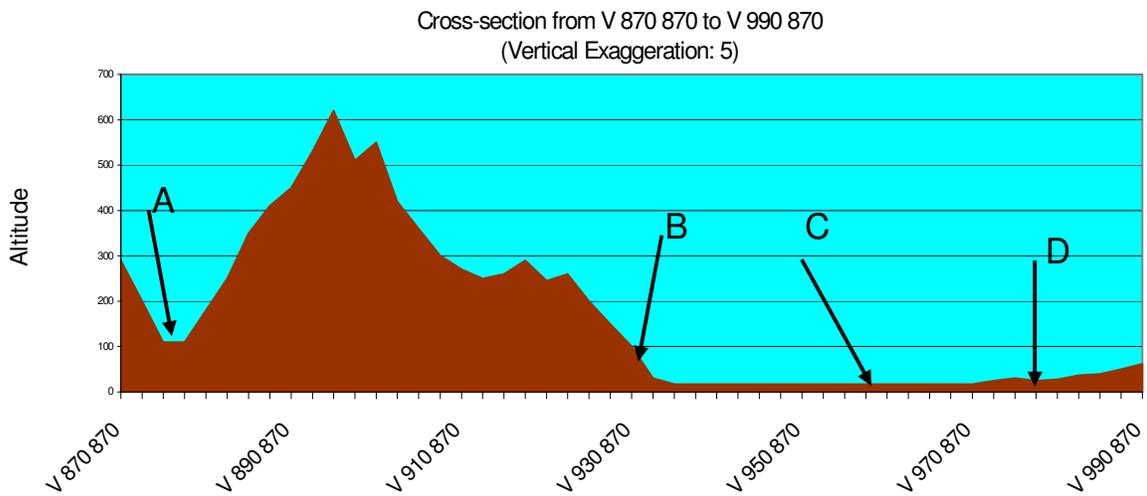
From your study of regional geography, identify an example of any **four** of the following types of region:

<b>Climatic Region</b>	
<b>Administrative Region</b>	
<b>Cultural Region</b>	
<b>Socio-economic region</b>	
<b>Nodal/city/urban region</b>	

[8]

## 9 Cross-section (OS maps)

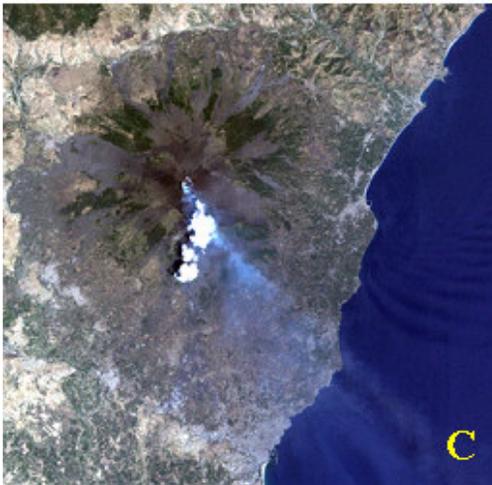
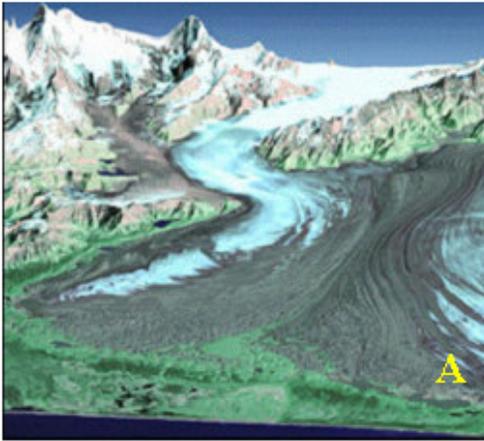
Examine the cross-section below, drawn (along Northing 87) from V 870 870 to V 990 870 on the Ordnance Survey extract that accompanies this paper. Answer the questions that follow.



- (i) The river Loe is flowing in a ..... direction at A.
- (ii) The type of slope at B is .....
- (iii) The name of the island at C is .....
- (iv) The name of the road at D is the .....

[8]

10 Photograph Interpretation



Source: USGS

Insert the correct letter A to D in the boxes below, to identify the various images.

Volcano (Mt. Etna)	
Delta (Mississippi)	

Deforestation (Brazil)	
Glacier (Alaska)	

[8]

## 11 Aerial Photograph

Examine the aerial photograph that accompanies this paper.

- (i) What type of aerial photograph is this? [Tick the correct box]:

Vertical

High Oblique

Low Oblique

- (ii) Two large churches with spires are to be seen in the photograph. Using the correct reference system, describe the location of **one** of them:

\_\_\_\_\_

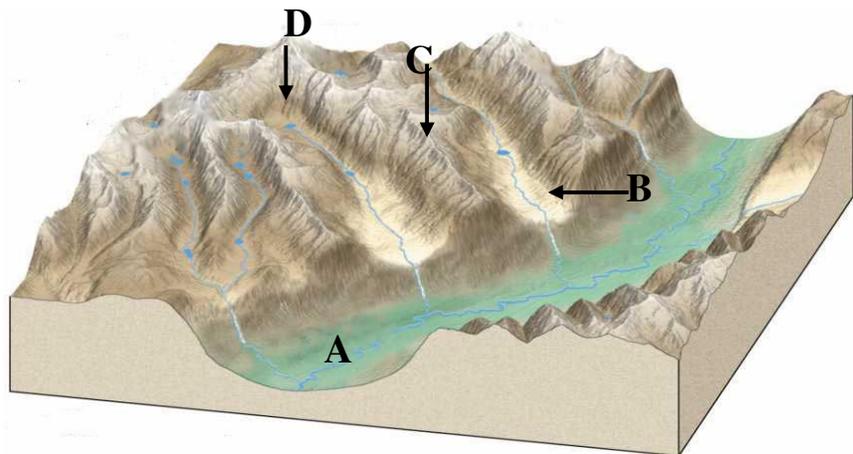
[8]

## 12 Glacial Landforms

Examine this diagram of a glaciated landscape.

Match **each** of the following landforms with its correct letter in the diagram.

Hanging Valley	
Cirque / Corrie	
Glaciated Trough	
Arete	



[8]

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

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

- **Two** questions from **Section 1**
- **One** question from **Section 2**
- **One** question from **Section 3**

***THESE QUESTIONS TO BE ANSWERED IN THE ANSWERBOOK***

**SECTION 1 - CORE**

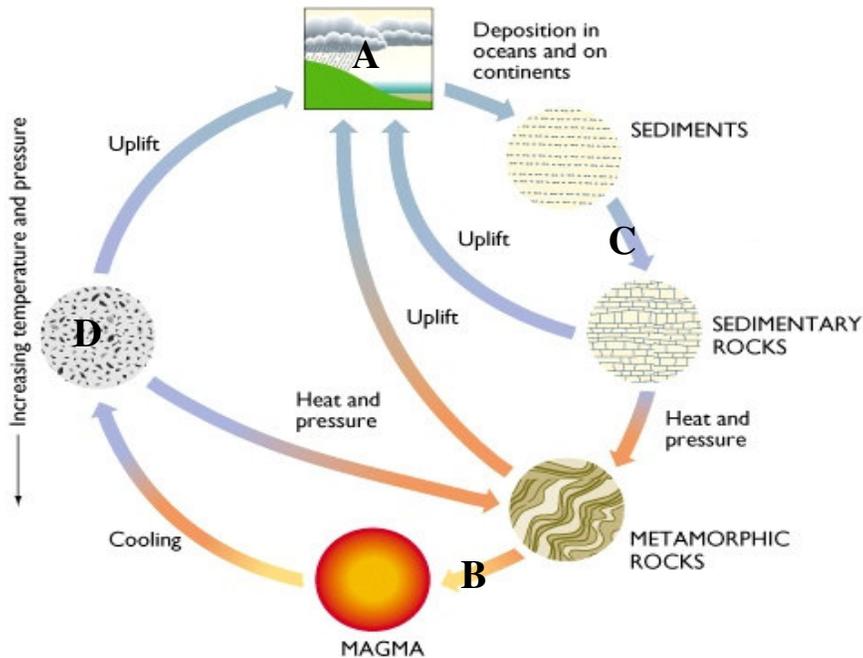
You **MUST** attempt **TWO** questions:

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

**ONE** from **Regional Geography**

Question 1

A. ROCK CYCLE:



In your answer-book, match **each** of the descriptions below with the correct label A to D in the diagram above:

- Igneous rock
- Burial and lithification
- Weathering and erosion
- Melting

[20m]

B LANDFORMS & ROCK TYPE

With reference to any **one** rock type, explain how it was formed **and** how it can produce a distinctive landscape.

[30m]

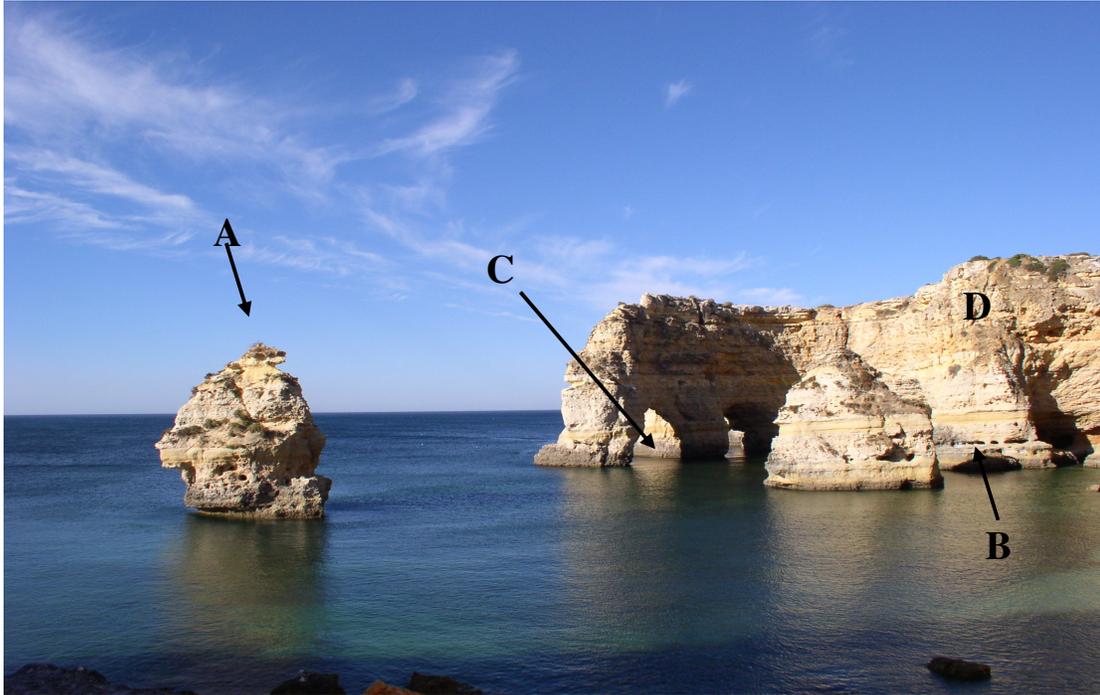
C HUMAN INTERACTION WITH ROCK CYCLE

Examine how humans interact with the rock cycle in the case of **one** of the following: mining, quarrying, oil/gas exploration, geothermal energy production.

[30m]

## Question 2

### A COASTAL LANDFORMS



In your answer-book, identify **each** of the landforms labelled A to D in the above diagram.  
[20m]

### B LANDFORM DEVELOPMENT

With the aid of a labelled diagram, examine the processes that have led to the formation of any **one** Irish landform of your choice – **excluding** those shown in the above photograph.  
[30m]

### C HUMAN INTERACTION

Examine how human processes can have an impact on the operation of **one** of the following natural processes:

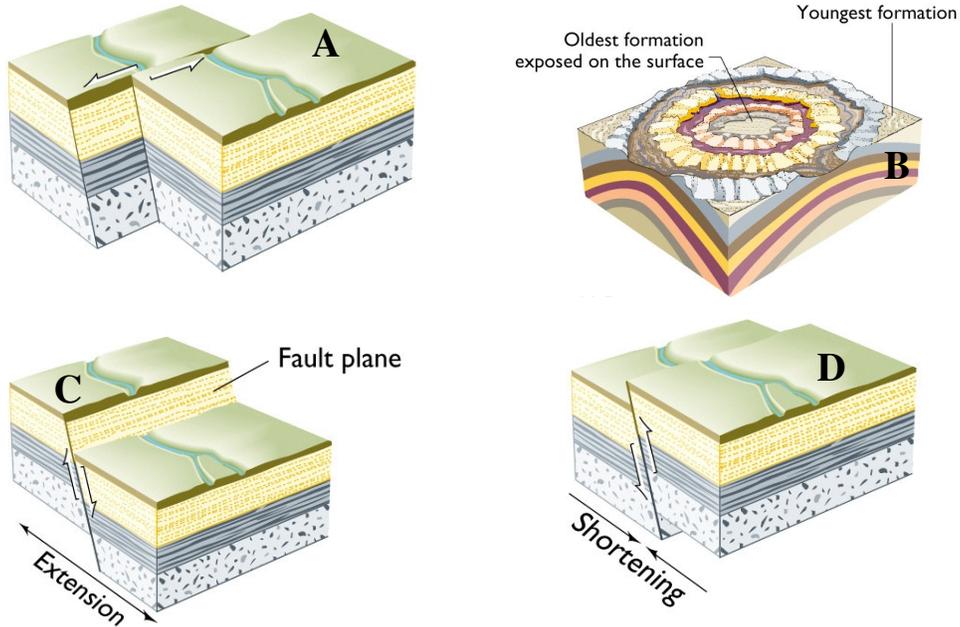
- Mass movement processes
- River processes
- Coastal processes.

[30m]

### Question 3

#### A STRUCTURES OF DEFORMATION

The following diagrams show structures of deformation.



In your answer-book, match **each** of the structures below with the correct label A to D in the diagrams above:

- Normal fault
- Reverse or thrust fault
- Doming
- Transverse or tear fault

[20m]

#### B PLATE TECTONICS

Explain how a study of plate tectonics helps us understand the occurrence of earthquakes.

[30m]

#### C VOLCANOES

Examine the processes that have led to the formation of any **two** volcanic landforms.

[30m]

**REGIONAL GEOGRAPHY**

**Attempt ONE question**

**Question 4**

**A EUROPEAN UNION UNEMPLOYMENT**

Examine the table below, showing selected unemployment statistics for 2004.

<b>COUNTRY</b>	<b>UNEMPLOYMENT RATE (% of adult population)</b>
Austria	3.8%
Estonia	9.7%
France	9.5%
Latvia	14.6%
Poland	16.1%
Spain	10.5%

Using graph paper, draw a graph suitable to illustrate these data.

**[20m]**

**B MANUFACTURING INDUSTRY**

Examine some of the factors that have influenced the development of **one** economic activity in a non-Irish region that you have studied.

**[30m]**

**C URBAN GROWTH**

“The boundaries of city regions have expanded over time”.  
Discuss this statement, with reference to **one** example you have studied.

**[30m]**

### Question 5

#### A NON-IRISH EUROPEAN REGIONS

Examine the development of primary activities in **one** non-Irish European region of your choice. [20m]

#### B CONTINENTAL/SUBCONTINENTAL REGION

Describe how any **two** of the following have influenced human activities in a continental/sub-continental region that you have studied:

- Climate
- Soil
- Relief
- Drainage

[30m]

#### C CULTURE

“Culture is an important factor in defining some regions”.

Examine the above statement with reference to **any** region you have studied.

[30m]

### Question 6

#### A IRISH REGIONS

Draw an outline map of Ireland. Show and name the following on it:

- (i) Any **one** Irish region that you have studied
- (ii) Any **two** physical features in the region
- (iii) **One** urban centre in the region.

[20m]

#### B EUROPEAN UNION EXPANSION

Examine the impact of European Union expansion on Ireland’s economy **and/or** culture.

[30m]

#### C TERTIARY ACTIVITIES

Account for the development of tertiary activities in **one** non-Irish European region of your choice.

[30m]

**SECTION 2 - ELECTIVES**

You **MUST** attempt **ONE** question

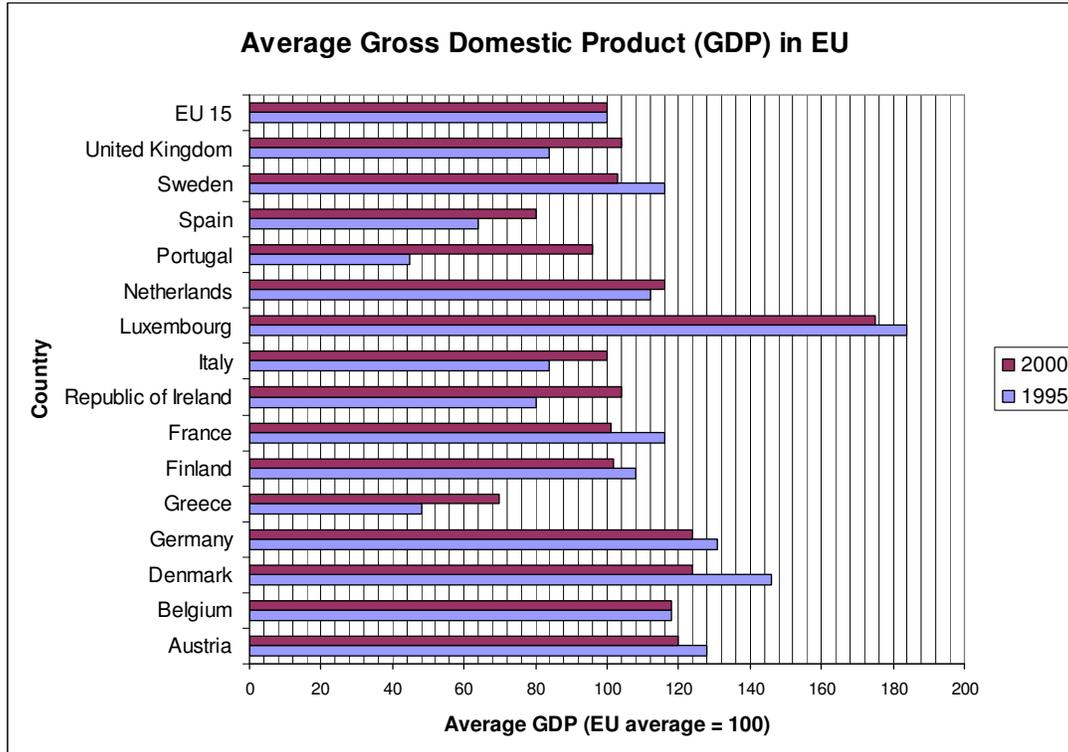
From **EITHER**

- **Patterns and Processes in Economic Activities**
- OR**
- **Patterns and Processes in the Human Environment**

**Question 7**

**A GROSS DOMESTIC PRODUCT**

Examine the table below, showing GDP in the European Union



Answer the following questions in your answer-book:

- (i) Which country had the highest average GDP in both 1995 and 2000?
- (ii) Which country had an average GDP that did not change from 1995 to 2000?
- (iii) How many countries had an average GDP lower than the EU average in 2000?
- (iv) By how many points did Ireland increase its GDP between 1995 and 2000?

[20m]

**B EUROPEAN UNION POLICIES**

Examine how European Union policies have influenced the development of any **one** sector of the Irish economy. [30m]

**C INDUSTRIAL LOCATION**

Examine any **two** of the major factors that have influenced the location of a secondary economic activity that you have studied.

[30m]

### Question 8

#### A ORDNANCE SURVEY MAP

Study the 1:50,000 Ordnance Survey extract that accompanies this paper.  
Identify **by grid reference** a suitable site for a major industry of your choice.  
Using map evidence to support your answer, explain **two** reasons why you chose this site.  
[20m]

#### B LOCAL AND GLOBAL INTERESTS

With reference to **one** example you have studied, examine how conflicts may develop between local and global interests where economic and environmental issues are concerned.  
[30m]

#### C DEVELOPING ECONOMIES

Examine the impact of colonialism **and/or** globalisation on a developing economy that you have studied.  
[30m]

### Question 9

#### A EMPLOYMENT STRUCTURE

Examine the table below, showing the percentage of people in employment in various economic sectors in Ireland (1984-2004).

SECTOR	YEAR	
	1984	2004
Primary	24%	6%
Secondary	31%	28%
Tertiary	45%	66%

Using graph-paper, draw a graph suitable to illustrate these data.  
[20m]

#### B MULTI-NATIONAL COMPANIES

Examine the global nature of the operations of a Multi-national company (MNC) that you have studied.  
[30m]

#### C FOSSIL FUELS

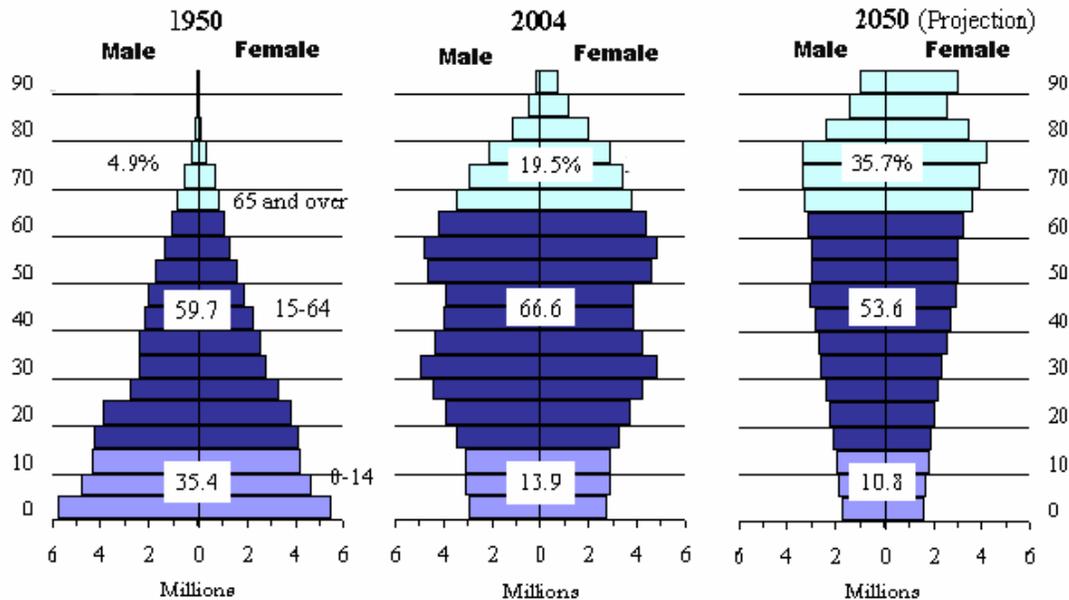
Examine the economic **and** environmental impact of our world's continued reliance on fossil fuels.  
[30m]

# PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Attempt ONE question

## Question 10

### POPULATION PYRAMIDS - JAPAN



#### A POPULATION STRUCTURE

Examine the population pyramids of Japan and answer the following questions in your answer-book:

- What percentage of the population was in the 15-64 age group in 1950?
- Which age group (0-14 or 15-64 or 65 and over) will have shown the greatest increase between 1950 and 2050?
- What percentage of population was classified as dependant in 2004?
- Identify **one** socio-economic problem that might arise from the high percentage of “65 and over” population in 2050.

[20m]

#### B TRAFFIC CONGESTION

The growth of urban centres may lead to the development of problems. Examine any **two** of these problems, with reference to examples you have studied. [30m]

#### C URBAN DEVELOPMENT

Study the 1:50,000 Ordnance Survey map extract that accompanies this paper. Using map evidence to support your answer, explain **three** reasons why Killarney developed at this location. [30m]

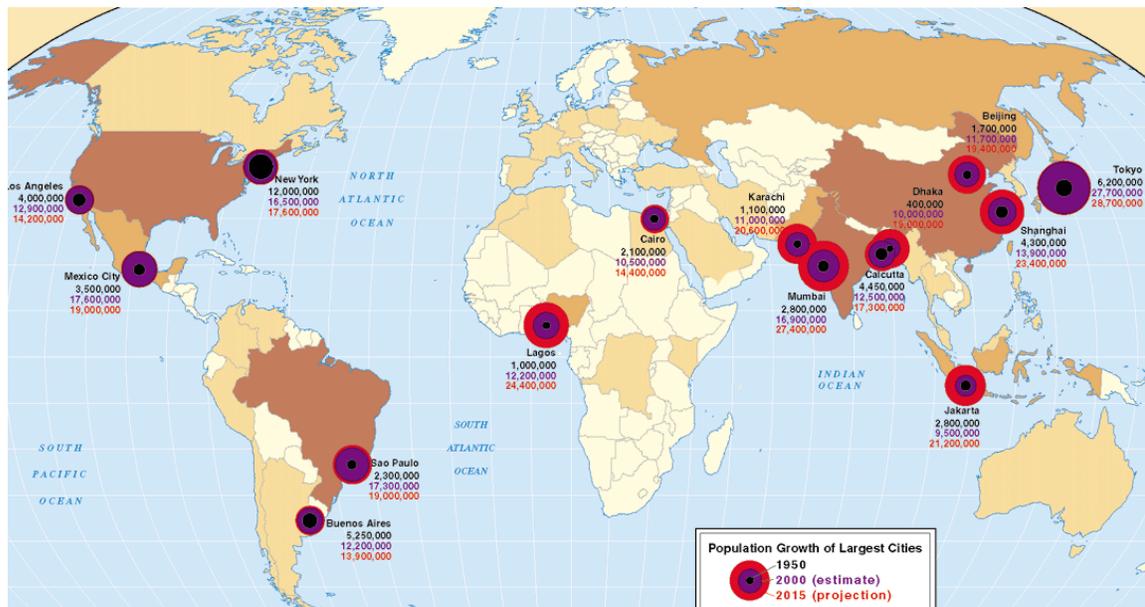
### Question 11

#### A AERIAL PHOTOGRAPH

Examine the aerial photograph that accompanies this paper.  
Draw a sketch map **half the length and half the breadth** of the photograph. On it show and name any **three** different land-use zones within the town.

[20m]

#### B URBAN GROWTH



The rapid growth of cities in the developing world has led to social and economic problems. Examine any **two** such problems, referring to examples you have studied.

[30m]

#### C CHANGING LAND USE

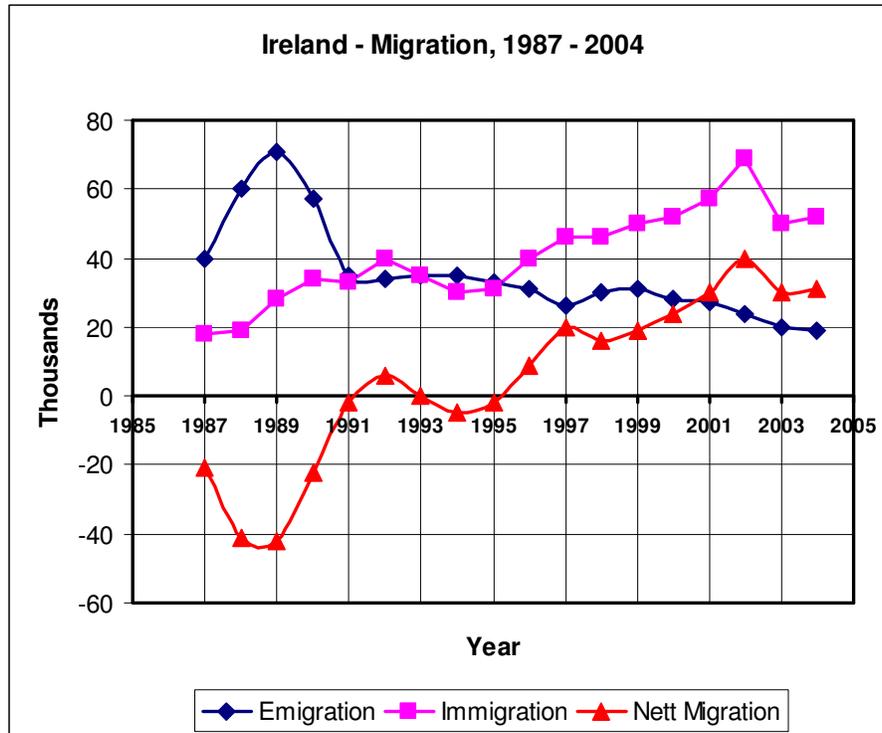
Different activities compete for space in urban areas. As a result different land-use zones develop. Referring to examples you have studied, examine how these land-use zones change as urban centres grow.

[30m]

**Question 12:**

**A MIGRATION**

Examine the table below and answer the questions that follow.



Answer the following questions in your answer-book:

- (i) In what year did the greatest number of people emigrate?
- (ii) List any two-year period when emigration showed an increase.
- (iii) In which year did the number of emigrants first equal the number of immigrants?
- (iv) State one factor, other than those listed in the diagram that would also cause change in the total population of Ireland. [20m]

**B OVER-POPULATION**

Examine **one** cause **and one** effect of over-population, with reference to an example(s) you have studied.

[30m]

**C HISTORIC SETTLEMENT**

“The area shown on the Ordnance Survey map extract that accompanies this paper indicates evidence of a wide variety of historic settlement.”

Examine this statement using map evidence, with reference to any **three** aspects of settlement.

[30m]

**SECTION 3 - OPTIONS**

Attempt **ONE** question

**N.B.** It is better to treat of 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. With reference to examples that you have studied, examine how natural resources can be exploited in a sustainable way. **[80m]**
14. Examine the impact of any **two** of the following global environmental issues:
- Deforestation
  - Desertification
  - Global warming
- [80m]**
15. “Aid to developing regions often fails to improve the lives of those for whom it is intended”.  
Examine this statement, with reference to examples you have studied. **[80m]**

## Geocology

16. Examine the factors that influence soil characteristics. **[80m]**
17. Examine the main characteristics of a biome that you have studied. **[80m]**
18. Assess the impact of human activity on a biome that you have studied. **[80m]**

### Culture and Identity

19. “Religion can be a divisive as well as a unifying force”. Discuss, with reference to examples you have studied. [80m]
20. Examine the impact of colonialism and migration on racial patterns. [80m]
21. “Cultural groups and national borders do not always coincide”. Discuss. [80m]

### The Atmosphere-Ocean Environment

22. “Climate change is a cause of global concern”. Discuss. [80m]
23. Examine the influence of climate on economic development, referring to examples you have studied. [80m]
24. Describe and account for the development of patterns of circulation in **either** the atmosphere **or** the oceans. [80m]

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