



Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2009

GEOGRAPHY – HIGHER LEVEL

FRIDAY 5 JUNE – AFTERNOON 2.00 to 4.50

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.

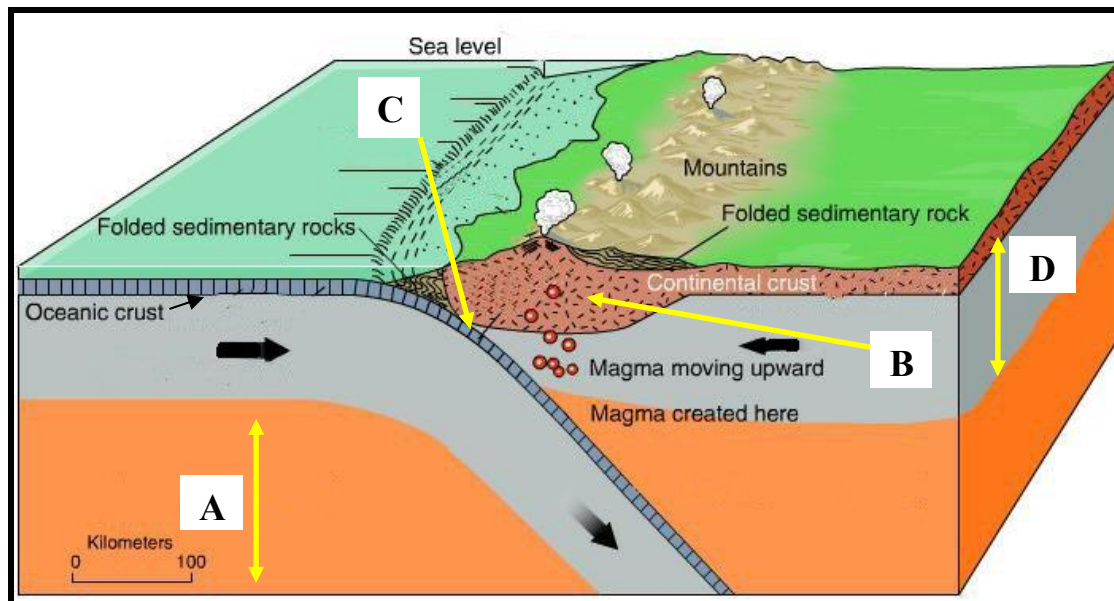
PART ONE – SHORT-ANSWER QUESTIONS – 80 MARKS

Attempt **TEN** questions

All Questions carry equal marks

THESE QUESTIONS ARE TO BE ANSWERED IN THE SPACES PROVIDED

1. Subduction Zone



www.school-portal.co.uk

Examine this diagram showing a subduction zone.

Pair each of the letters **A** to **D** with the correct feature in the table below:

Feature	Letter
Asthenosphere	
Lithosphere	
Subduction Zone	
Volcanic Intrusions	

[8m]

2. Ordnance Survey Extract

Examine the 1:50,000 Ordnance Survey map of part of Wicklow and the legend that accompanies this paper.

Write in the space provided the correct answer for **each** of the following:

- (i) The antiquity found at **T 274 914** is a _____
- (ii) The type of plantation found at **T 265 965** is _____
- (iii) What is the six figure grid reference for the **highest point** on the map? _____
- (iv) The **total area** of the map extract is _____ sq kms.

[8m]

3. Aerial Photograph & Ordnance Survey

Examine **both** the Aerial Photograph & Ordnance Survey Map that accompany this paper.

Write in the space provided the correct answer for **each** of the following:

- (i) Using both the Aerial Photograph & Ordnance Survey Map identify the direction the camera was pointing when the Aerial Photograph was taken: _____
- (ii) What type of aerial photograph is this? [*Tick the correct box*]:

Vertical

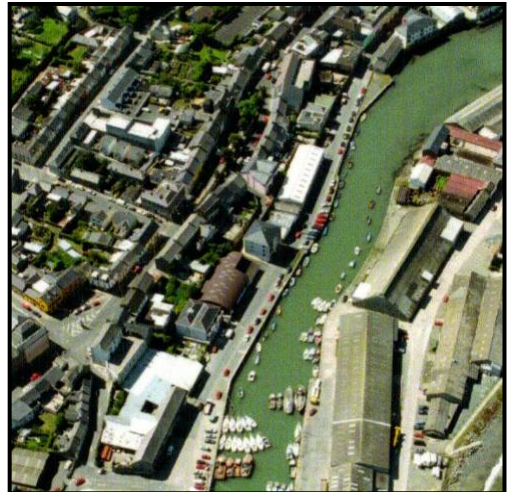
Oblique

- (iii) At what season of the year was this photograph taken? _____
 - (iv) Provide one piece of evidence to support your choice of season. _____
-

[8m]

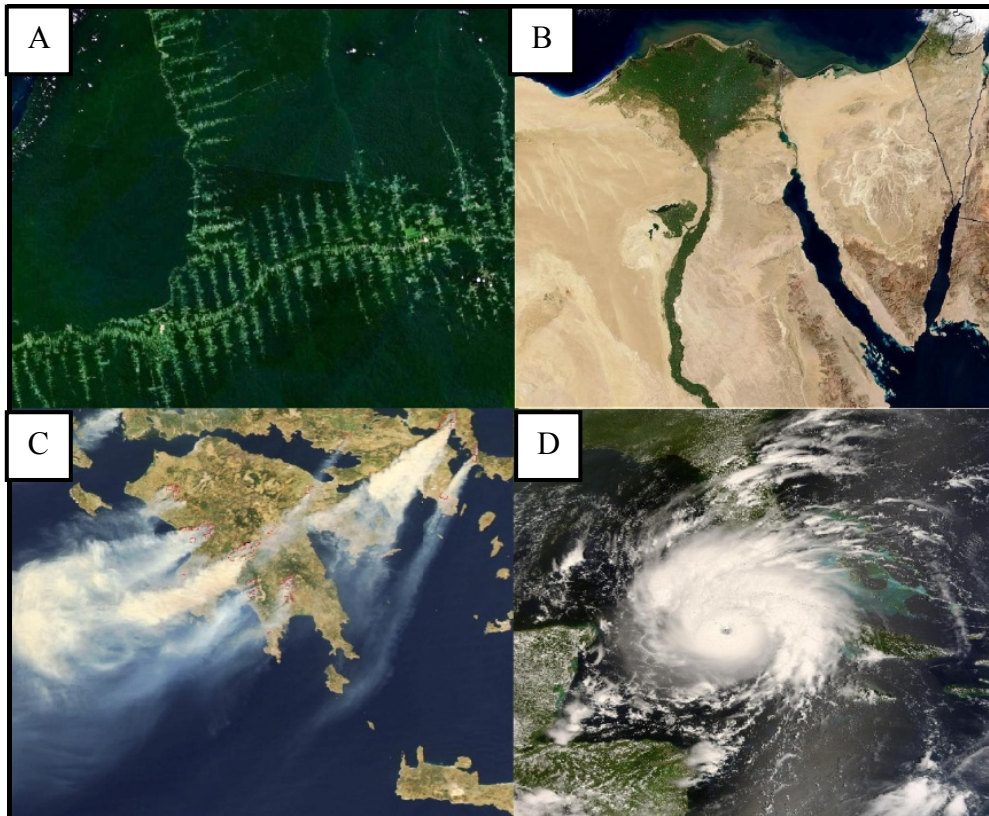
4. Aerial Photograph

Examine the Aerial Photograph of part of Wicklow that accompanies this paper. Using accepted notation (Right Background etc.) state in the appropriate box, the location for each of the sections pictured below:



[8m]

5. Satellite Interpretation



www.upload.wikimedia.com

Insert the correct letter **A** to **D** in the spaces below, to identify each of the various satellite images:

Image	Letter
Hurricane (Gustav)	
Deforestation (Brazil)	
Bush Fires (Greece)	
Delta (Nile)	

[8m]

6. Landforms

Match **each** of the surface processes in Column A with the correct example in Column B.

Column A	
<i>Erosional</i>	A
<i>Structural</i>	B
<i>Mass Movement</i>	C
<i>Depositional</i>	D

Column B	
<i>Soil Creep</i>	1
<i>Fold Mountain</i>	2
<i>Pothole</i>	3
<i>Esker</i>	4

Letter	Number
A	
B	
C	
D	

[8m]

7. Types of Regions in Ireland

From your study of regional geography, match **each** of the examples in Column A with the region type in Column B.

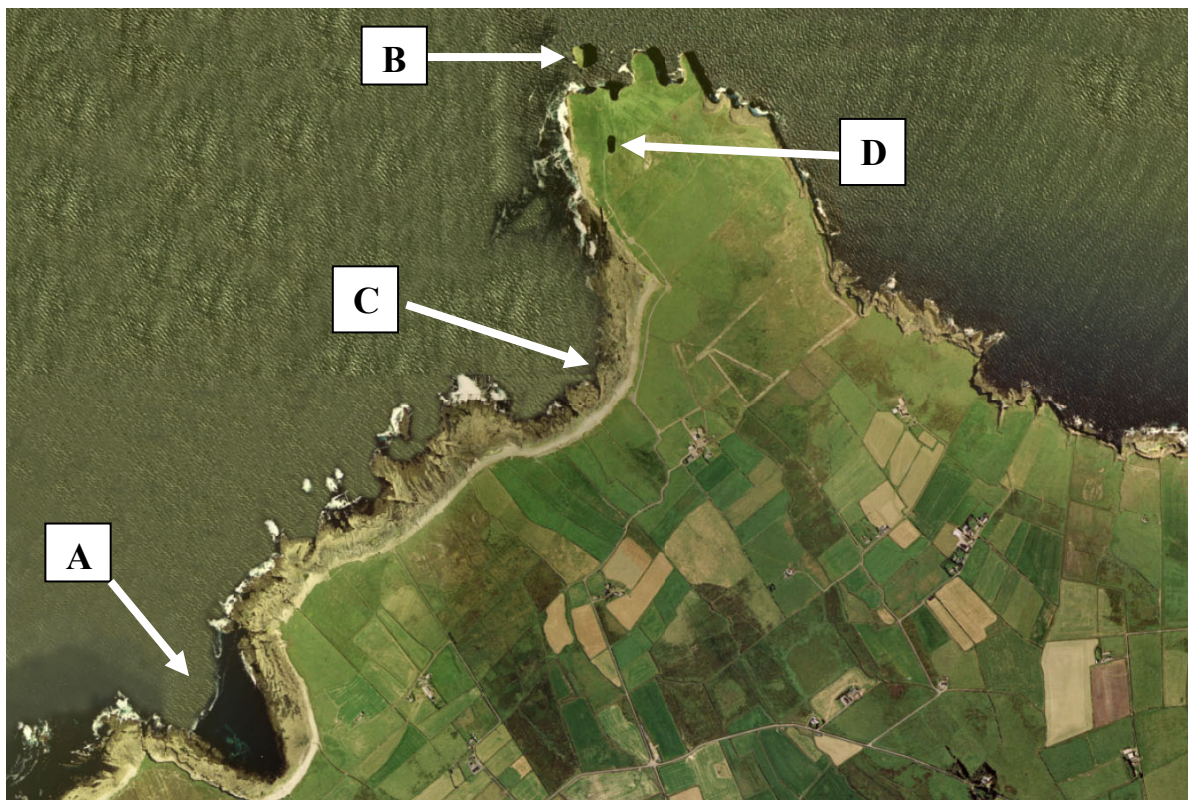
Column A	
<i>Cork City</i>	<i>A</i>
<i>Karst</i>	<i>B</i>
<i>Cool Temperate Oceanic</i>	<i>C</i>
<i>Co. Wicklow</i>	<i>D</i>

Column B	
<i>Climatic</i>	<i>1</i>
<i>Administrative</i>	<i>2</i>
<i>Geomorphic</i>	<i>3</i>
<i>Urban</i>	<i>4</i>

Letter	Number
<i>A</i>	
<i>B</i>	
<i>C</i>	
<i>D</i>	

[8m]

8. Coastal Landforms



Examine the photograph above. Pair each of the letters **A** to **D** with the correct feature in the table below:

Feature	Letter
Wave Cut Platform	
Bay	
Blow Hole	
Sea Stack/Stump	

[8m]

9. Rock Types



www.geology.about.com/www.beg.utexas.edu

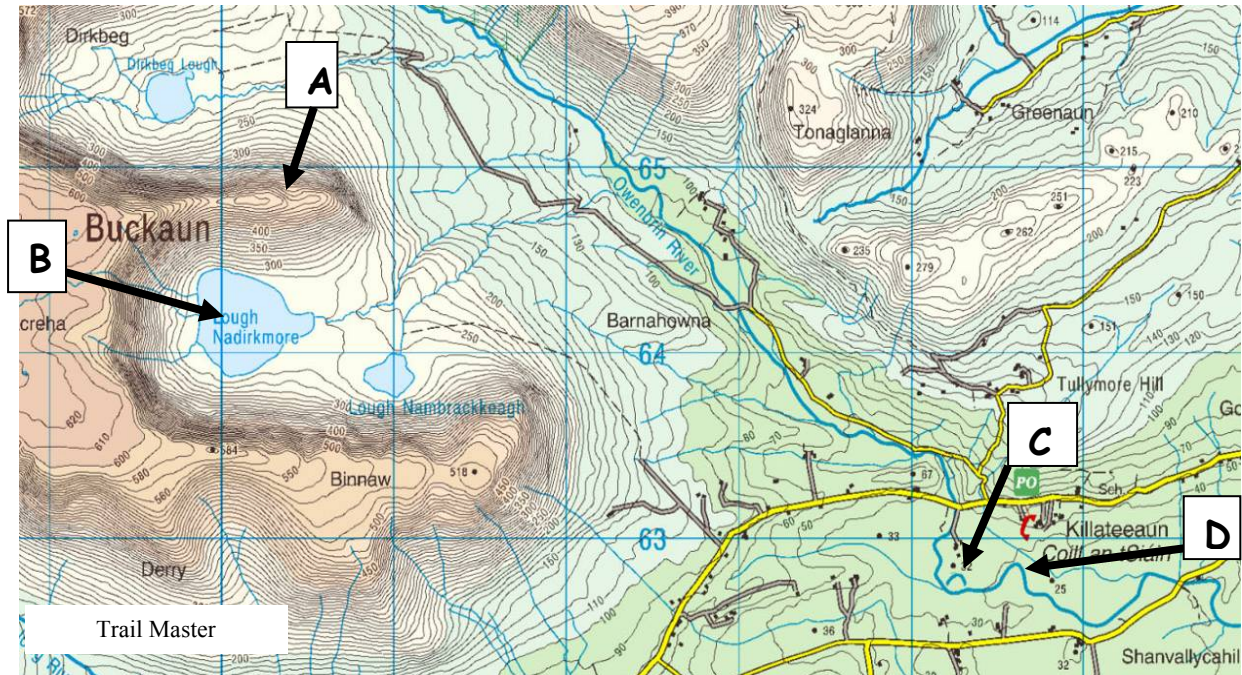
Examine the images above and identify each rock type by placing the appropriate letter into each of the boxes below:

Rock Type	Letter
Slate	
Basalt	
Old Red Sandstone	
Limestone	

[8m]

10. Landforms

Look at the Ordnance Survey map below and answer the questions:



Question	Answer
Identify the glacial ridge at A.	
Identify the glacial landform at B.	
Identify the river landform at C.	
Identify the river landform at D.	

[8m]

11. Ireland – Population by Age, 2006

Age Group (years)	Males	%	Females	%	Persons
0-14	443,044	10%	421,405	10%	864,449
15-24	321,007	8%	311,725	7%	632,732
25-44	681,988	16%	663,885	16%	1,345,873
45-64	468,037	11%	460,831	11%	928,868
65 +	207,095	5%	260,831	6%	467,926
Total	2,121,171	50%	2,118,677	50%	4,239,848

www.cso.ie

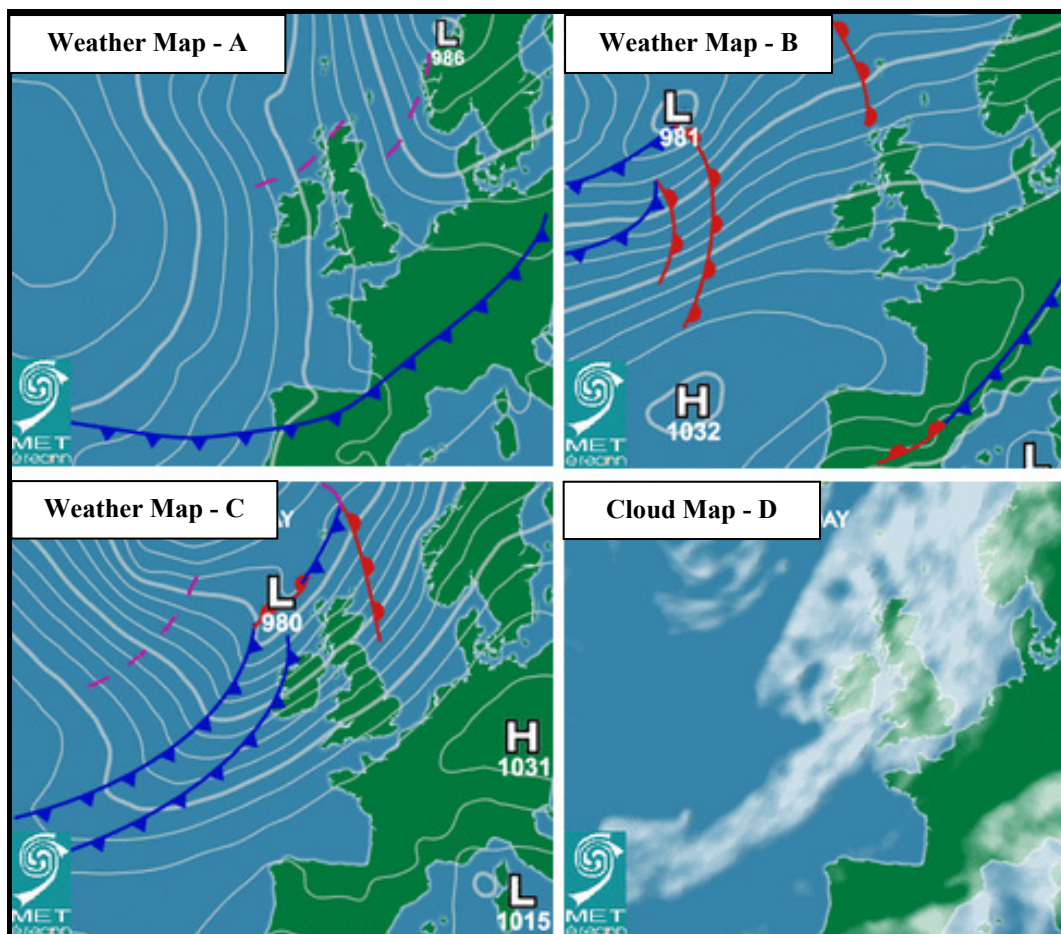
Use the data in the above table to complete the following statements:

- In 2006 there were 632,732 persons in the _____ age group.
- In the 25 - 44 age group there was _____ % females.
- The percentage of males in the 65+ age group was _____ % less than the percentage of females.
- The total number of persons in Ireland in 2006 was _____ .

[8m]

12. Atlantic Weather Charts

Examine the Weather and Cloud Maps below and answer the questions that follow:



www.met.ie

Categorise the type of weather front over Central Europe in Weather Map A ?	
State the barometric pressure of the anti-cyclone in Weather Map B ?	
Is Ireland experiencing strong or light wind conditions in Weather Map C ?	
Which of the Weather Maps A, B or C is represented by Cloud Map D ?	

[8m]

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 ARE TO BE ANSWERED IN THE ANSWER BOOK

SECTION 1 - CORE

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

Attempt ONE question

Question 1

A. ORDNANCE SURVEY EXTRACT

Examine the Ordnance Survey extract that accompanies this paper. **In your answer book**, draw a sketch-map **to half scale** of the area shown. On it, mark and identify **each** of the following:

- The complete course of The Vartry River
- Land above 100 metres south of Northing 95
- One landform created by the coastal processes of erosion
- One landform created by the coastal processes of deposition.

[20m]

B. PLATE MARGINS

Explain, with reference to examples you have studied, how plate tectonics helps us understand the forces at work along crustal plate boundaries.

[30m]

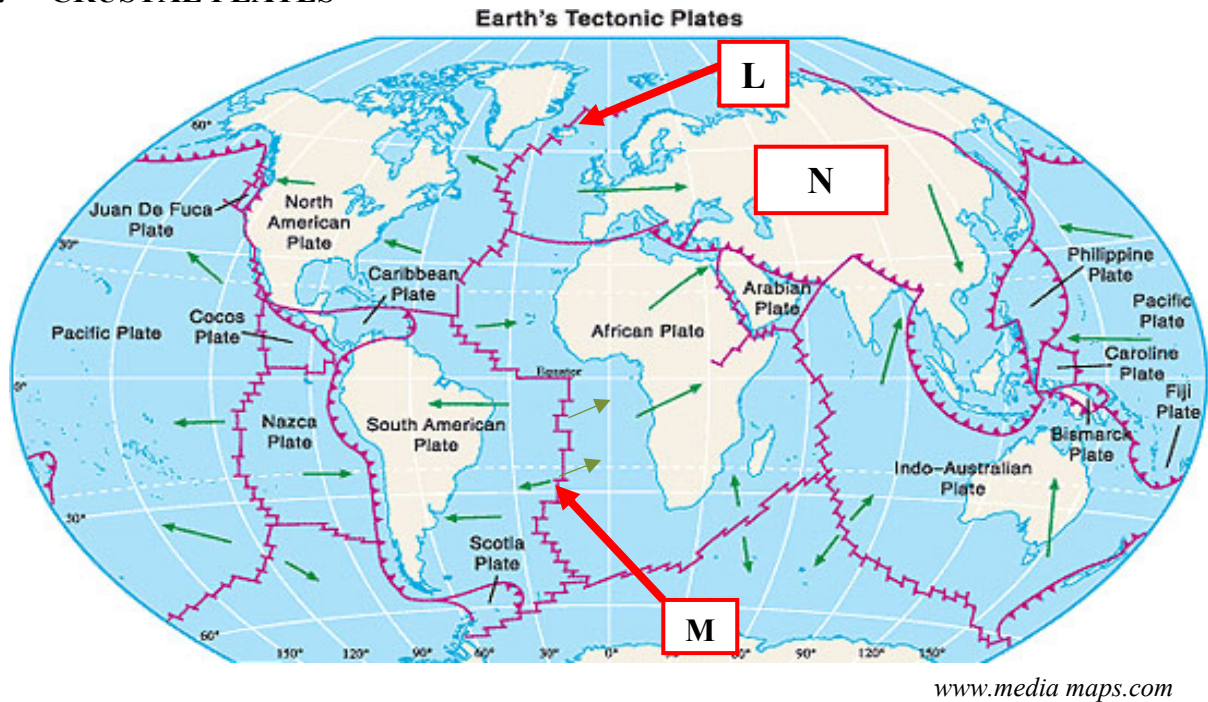
C. LANDFORM DEVELOPMENT

Examine, with the aid of labelled diagram/diagrams, the processes which have shaped **one** Irish landform of your choice.

[30m]

Question 2

A. CRUSTAL PLATES



Examine the map above, showing the major crustal plates of the Earth. **In your answer book** answer the following:

- (i) Name the volcanic island at **L**.
- (ii) Which term constructive or destructive best describes the plate boundary **M**?
- (iii) Name the plate at **N**.
- (iv) Which of the following statements is **False**?
 - O.** As the plates move apart (very slowly) magma rises from the mantle.
 - P.** Convection currents inside the Earth cause the earth's plates to move apart.
 - Q.** The North American Plate moves eastwards.
 - R.** Volcanoes often form at plate boundaries.

[20m]

B. ROCKS

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

[30m]

C. HUMAN INTERACTION

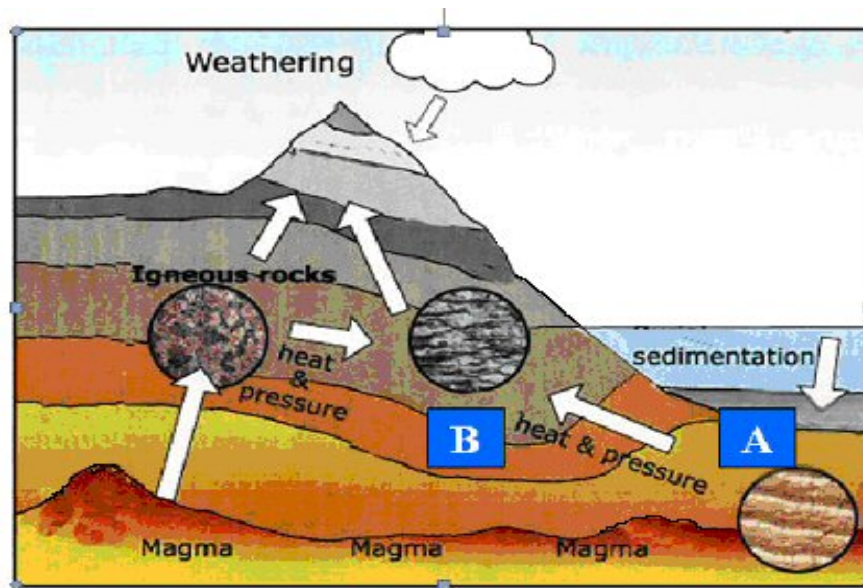
Discuss, with reference to **one** of the following, how humans interact with the rock cycle:

- Mining
- Extraction of building materials
- Oil / Gas exploitation
- Geothermal energy production.

[30m]

Question 3

A. THE ROCK CYCLE



www.pullouttheplug.co.uk

Examine the diagram above and answer the following **in your answer book**:

- (i) Identify the rock group found at **A**.
- (ii) Name **one** example of a rock within the rock group named in part (i).
- (iii) Identify the rock group found at **B**.
- (iv) Name **one** igneous rock formed **below** the earth's surface.

[20m]

B. LANDFORM DEVELOPMENT

Isostatic processes involve adjustments to the balance between land and sea. Discuss how these processes have shaped the Irish landscape over time.

[30m]

C. HUMAN INTERACTION

Examine, with reference to **one** of the following, how human activities can impact on surface processes:

- Mass movement processes
- River processes
- Coastal processes.

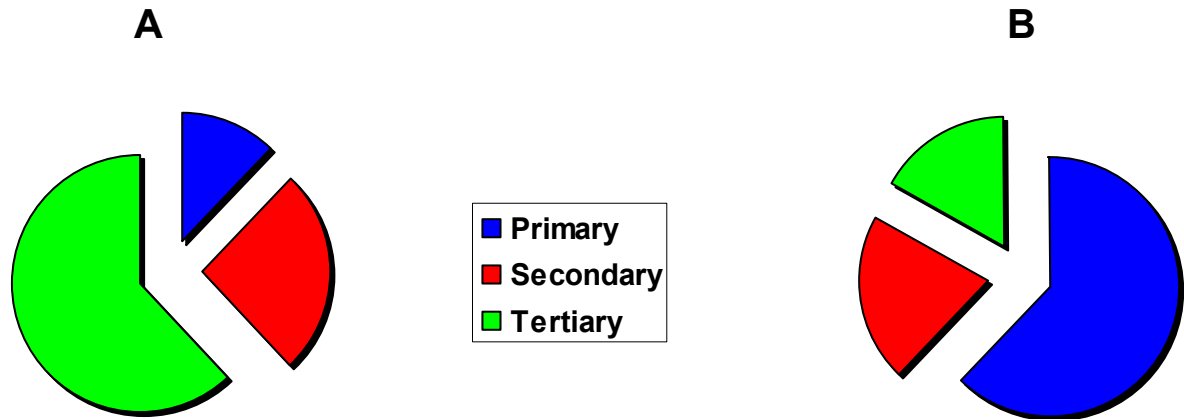
[30m]

REGIONAL GEOGRAPHY

Attempt ONE question

Question 4

A. THE CONCEPT OF REGION



Examine the pie-charts above that represent a Core Region and a Peripheral Region. Answer the following questions **in your answer book**:

- (i) Identify which chart **A** or **B** represents a Core Region.
- (ii) State **one** example within Europe of a Peripheral Region.
- (iii) Define **one** characteristic that determines a region as a Core Region.
- (iv) Define **one** characteristic that determines a region as a Peripheral Region.

[20m]

B. PRIMARY ECONOMIC ACTIVITIES

Describe and explain any **two** physical factors that have influenced the development of agriculture in an **Irish Region** that you have studied.

[30m]

C. HUMAN PROCESSES

Examine how the distribution of population, in a **European Region [not Ireland]** that you have studied, has been influenced by the region's level of economic development.

[30m]

Question 5

A. IRISH REGIONS

In your answer book draw an outline map of **Ireland**. Show and name the following on it:

- (i) **Two** contrasting regions.
- (ii) **Two** different physical landscape features – one in **each region**.
- (iii) **Two** urban centres – one in **each region**.

[20m]

B. EUROPEAN UNION

Describe and explain **two** impacts on Ireland of the enlargement of the European Union.

[30m]

C. TERTIARY ECONOMIC ACTIVITY

Account for the development of **one** tertiary economic activity in any **one Continental / Sub-Continental Region** that you have studied.

[30m]

Question 6

A. CONTINENTAL / SUB-CONTINENTAL REGION

In your answer book draw an outline map of a **Continental / Sub-Continental Region**. Show and name the following on it:

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

[20m]

B. URBAN GROWTH

Examine the development of **one** urban area in **a European region [not Ireland]** that you have studied.

[30m]

C. SECONDARY ECONOMIC ACTIVITY

Describe and explain the development of secondary economic activities in an **Irish Region** that you have studied.

[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**

PATTERNS AND PROCESSES IN ECONOMIC ACTIVITIES

Attempt ONE question

Question 7

A. ENERGY IN IRELAND

Ireland's Percentage Share of Energy Requirements by Selected Sector for 1990 & 2006.

Sector	1990	2006
Industry	27%	23%
Transport	22%	34%
Services	15%	16%
Agriculture	4%	2%

Examine the data in the above table showing Ireland's percentage share of energy requirements by selected sector for 1990 & 2006.

Using **graph paper**, draw a suitable graph to illustrate this data.

[20m]

B. ORDNANCE SURVEY

Examine the Ordnance Survey extract that accompanies this paper. Using map evidence to support your answer, state and explain **three** reasons why the industrial estate is located at grid reference **T 285 955**.

[30m]

C. DEVELOPING ECONOMIES

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

[30m]

Question 8**A. HUMAN DEVELOPMENT INDEX**

Country	Life Expectancy in years in 2005	Adult Literacy Rate 1995 - 2005	GDP per capita (PPP US\$) 2005	Human Development Index (HDI)			
				1975	1985	1995	2005
Iceland	81.5	..	36,510	0.87	0.90	0.92	0.97
Ireland	78.4	..	38,505	0.82	0.85	0.90	0.96
France	80.2	..	30,386	0.86	0.88	0.93	0.95
USA	77.9	..	41,890	0.87	0.90	0.93	0.95
Italy	80.3	98.4	28,529	0.85	0.87	0.91	0.94
Brazil	71.7	88.6	8,402	0.65	0.70	0.75	0.80
China	72.5	90.9	6,757	0.53	0.60	0.69	0.78
India	63.7	61	3,452	0.42	0.49	0.55	0.62
Nigeria	46.5	69.1	1,128	0.32	0.39	0.43	0.47
Mali	53.1	24.0	1,033	0.25	0.27	0.32	0.38

Refer to the table above and answer the following questions **in your answer book**:

- (i) Which country had the lowest HDI in 2005?
- (ii) Which country had the greatest change in its HDI since 1975?
- (iii) Adult Literacy rate and the GDP are two indicators used to assess the HDI. What is the third indicator?
- (iv) What does the term GDP stand for?

[20m]

B. MULTINATIONAL COMPANIES

Examine the mobility of modern economic activities referring to **one** Multinational Company (MNC) that you have studied.

[30m]

C. ENVIRONMENTAL IMPACT

Describe and explain the impact of the burning of fossil fuels on the environment.

[30m]

Question 9

A. AERIAL PHOTOGRAPH

Examine the aerial photograph of Wicklow that accompanies this paper. Draw a sketch map **half the length** and **half the breadth**. On it show and name examples of the following which would make the area an attractive location for industry:

- Two different modes of **Transport**
- Suitable **Site** for a ship building industry
- A new **Residential** development.

[20m]

B. ECONOMIC AND ENVIRONMENTAL INTERESTS

Conflict may develop between economic interests and environmental interests. Examine this conflict with reference to **one** example you have studied.

[30m]

C. EUROPEAN UNION

Examine the importance of any **one** of the following to the development of the Irish economy:

- Common Agricultural Policy
- Common Fisheries Policy
- Regional Development Funds
- Social Funding.

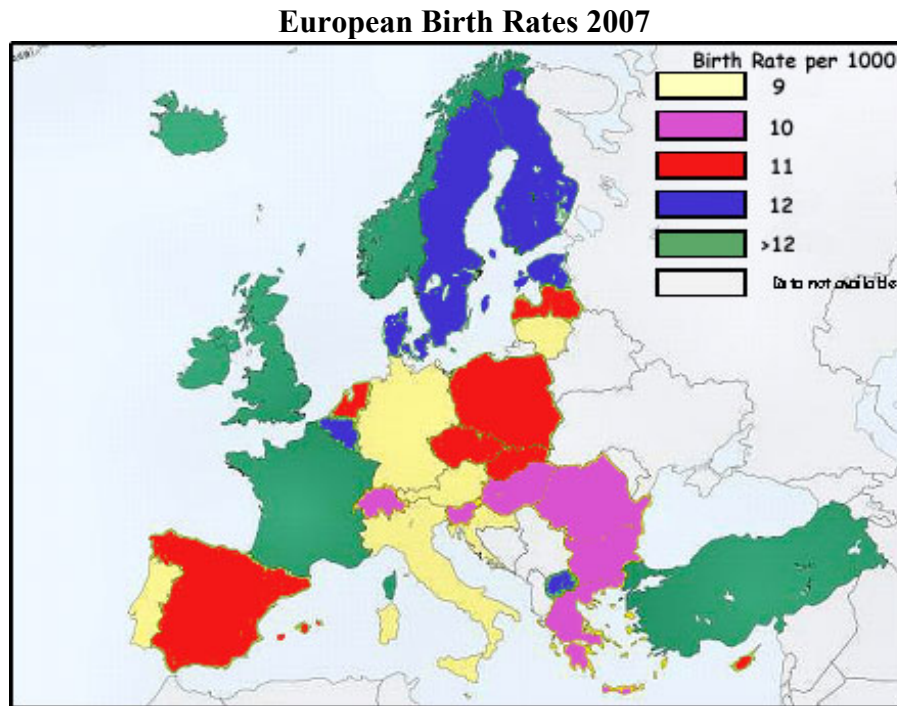
[30m]

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Attempt ONE question

Question10

A. Birth Rates



Using the above map as a reference answer the following questions in your answer book:

- (i) What is The Netherland's birth rate for 2007?
- (ii) What is Switzerland's birth rate for 2007?
- (iii) Identify one social factor that influences the birth rate.
- (iv) Define the term *Mortality Rate*.

[20m]

B. SETTLEMENT PATTERNS

Examine the Ordnance Survey extract that accompanies this paper. Using map evidence to support your answer, identify and explain **three** patterns of **rural** settlement.

[30m]

C. DYNAMICS OF SETTLEMENT

With reference to **one** Irish urban centre that you have studied, examine how its functions change over time.

[30m]

Question 11

A. URBANISATION

World Region	Urban 1975	Urban 2015
Africa	26 %	47 %
Asia	24 %	51 %
Europe	66 %	76 %
North America	74 %	86 %

The above table shows the percentage of urban population in selected regions for 1975 and the predicted percentage of urban population in selected regions for 2015. Using **graph paper**, draw a suitable graph to illustrate this data.

[20m]

B. PROBLEMS IN CITIES

With reference to **one** example you have studied, examine the effectiveness of urban planning strategies in dealing with urban problems.

[30m]

C. OVER-POPULATION

- (i) Explain the term *over-population*.
- (ii) Examine two causes of over-population in **one** area you have studied.

[30m]

Question 12

A. AERIAL PHOTOGRAPH

Examine the aerial photograph of Wicklow that accompanies this paper. Draw a sketch map **half the length** and **half the breadth**. On it show and name the following:

- A new **housing development**
- An area of **water-based recreation**
- A **bridge**
- A **church**.

[20m]

B. MIGRATION

With reference to examples you have studied, examine **two** impacts of rural to urban migration.

[30m]

C. URBAN LAND-USE

With reference to **one** example you have studied, describe and explain changing land-use in urban areas.

[30m]

SECTION 3 – OPTIONS

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 the role played by Non-Governmental Organisations (NGOs) in the 'aid debate'. [80m]
14. We live in an interdependent global economy. Actions or decisions taken in one area have an impact on other areas. Discuss. [80m]
15. Fair trade supports sustainable development. Discuss. [80m]

Geoecology

16. With reference to **one** soil type you have studied, examine how parent material, climate and organic matter influence the soil. [80m]
17. Discuss how human activities can accelerate soil erosion. [80m]
18. Assess how biomes have been altered by human activity. [80m]

Culture and Identity

19. Cultural identity is defined by many diverse factors. Discuss this statement with reference to **one** case study of a European region you have studied. [80m]
20. Conflicts exist between political structures and cultural groups. Discuss this statement with reference to examples you have studied. [80m]
21. Discuss how people express their culture and identity in everyday life. [80m]

The Atmosphere-Ocean Environment

22. Give an explanatory account of any **one** global climate you have studied. [80m]
23. Explain why temperatures vary greatly over the surface of the earth. [80m]
24. Climate influences economic development. Discuss this statement with reference to examples you have studied. [80m]

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