



**Coimisiún na Scrúduithe Stáit  
State Examinations Commission**

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**JUNIOR CERTIFICATE EXAMINATION, 2009**

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**GEOGRAPHY - HIGHER LEVEL**

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**FRIDAY, 5 JUNE - AFTERNOON, 2.00 to 4.00**

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**SECTION 2 (90 MARKS)**

Answer **THREE** questions.

**SECTION 1** of this paper is on a separate folder, where spaces are provided for your answers.  
Please remember to return your completed folder with your answer book.

# 1. RAINFALL, GLOBAL WARMING AND ACID RAIN

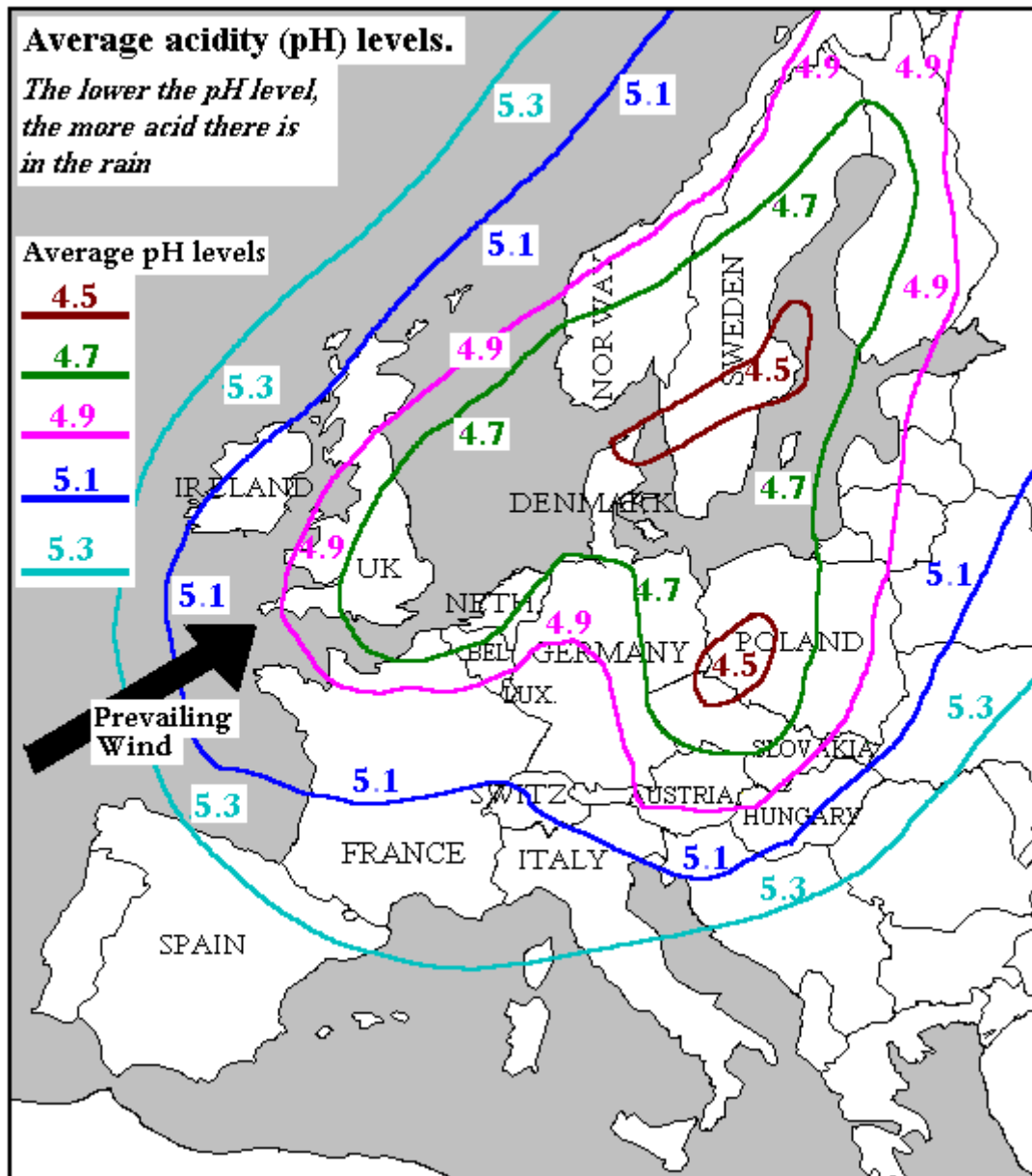
## A. Relief Rainfall

Explain with the aid of a diagram how **relief rainfall** occurs.

(10)

## B. Acid Rain

The **map below** indicates acid rain levels throughout Europe.



(i) According to this map which **one** of the following countries is likely to **suffer most** from the effects of acid rain: *Spain, The UK, France, Sweden?*

(2)

(ii) Describe **two impacts** (effects) of acid rain.

(6)

### C. Global Warming

Global warming is already beginning to affect Ireland. A recent scientific report shows that average temperatures in Ireland have increased by 0.7 °C over the past hundred years and that most of this increase has happened since 1980.

All the indications are that mean temperatures will continue to rise.

Meanwhile, winter rainfall is expected to increase by about 15%, while summer rainfall levels are predicted to fall by anything up to 20%.

These climate changes could have terrible effects on agriculture and domestic water supplies. It is expected that the south and east of the country will be worst affected.

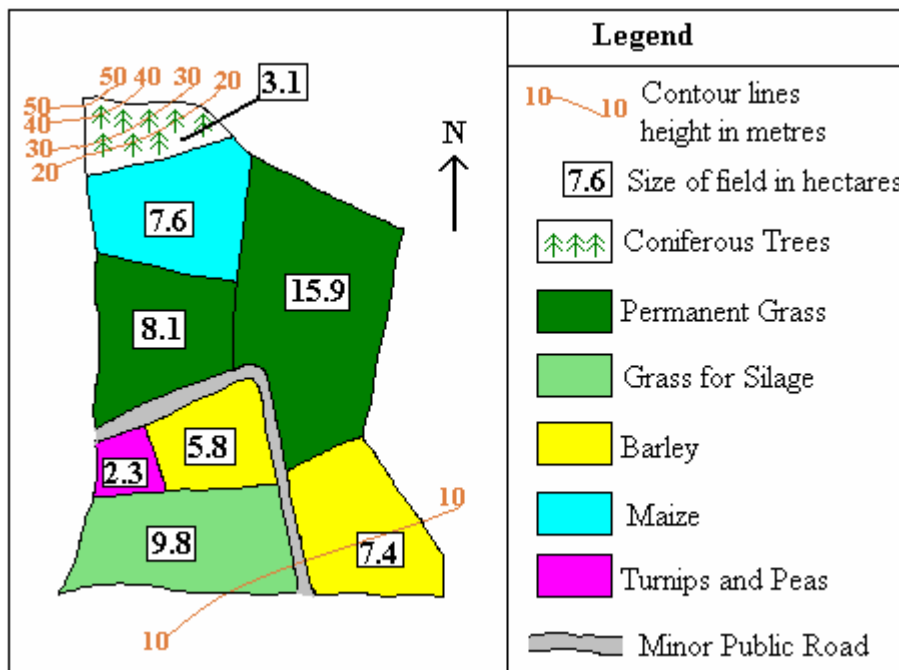
*(After Irish Examiner 10 June 2008)*

- (i) Answer the following questions that relate to *the newspaper extract provided*:
- (a) By how much have average temperatures increased in Ireland over the past one hundred years? (4)
- (b) Which parts of the country are likely to be worst affected by the climate changes mentioned in the extract? (8)
- (ii) Describe **two causes** of global warming. (8)

## 2. AGRICULTURE AND IRRIGATION

### A. An Irish Farm

Examine the sketch map of an Irish farm below and answer the questions which follow:



- What is the size in hectares of the largest field on the farm?
- How many hectares in total are devoted to barley?
- The total area of the farm is 60 hectares. Calculate the percentage of the land that is devoted to permanent grass.
- Why is the growth of coniferous trees an appropriate land use for the 3.1 hectare field at the north of the farm?

(11)

### B. Farming as a System

Farming is a system with **inputs, processes and outputs**.

Explain these **three** terms and give an example of **each**.

(9)

### C. Irrigation

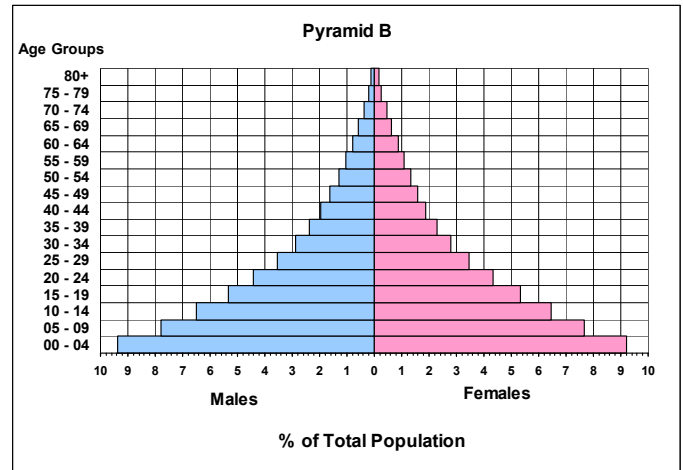
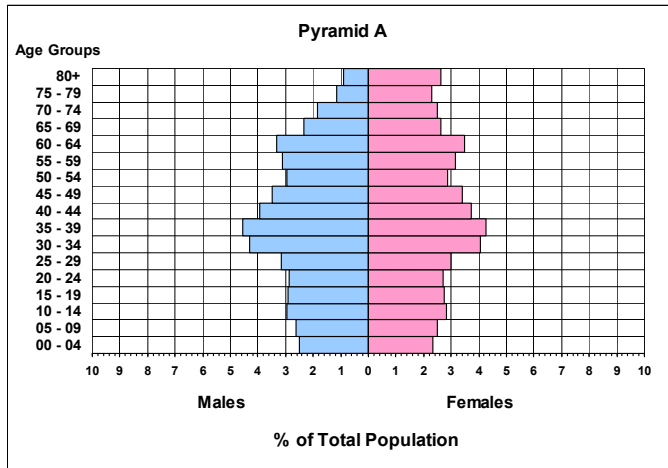
Farms throughout the world sometimes benefit from major irrigation projects.

- What is meant by the term '**irrigation**'?
- Describe any **one** major irrigation project that you have studied.

(10)

### 3. POPULATION, DEVELOPING WORLD CITIES AND BILATERAL AID

A. Examine the population pyramids below.



One of the pyramids represents a developing country and the other represents a developed country.

- State which pyramid shows the population structure of a **developing country**.
- Describe **two major contrasts** (differences) between the population structures of these two countries. **Refer to both population pyramids for each contrast** that you describe.

(10)

B. High population densities have contributed to serious problems in many cities in the Developing World.

- Name **one** city in the Developing World that you have studied.
- Describe **two major problems** in the named city.

(10)

C. Some countries such as Ireland provide bilateral aid to reduce poverty in the Developing World.

- What is meant by the term '**bilateral aid**'?
- Outline **one argument in favour of** and **one argument against** the use of aid as a means of assisting countries of the Developing World.

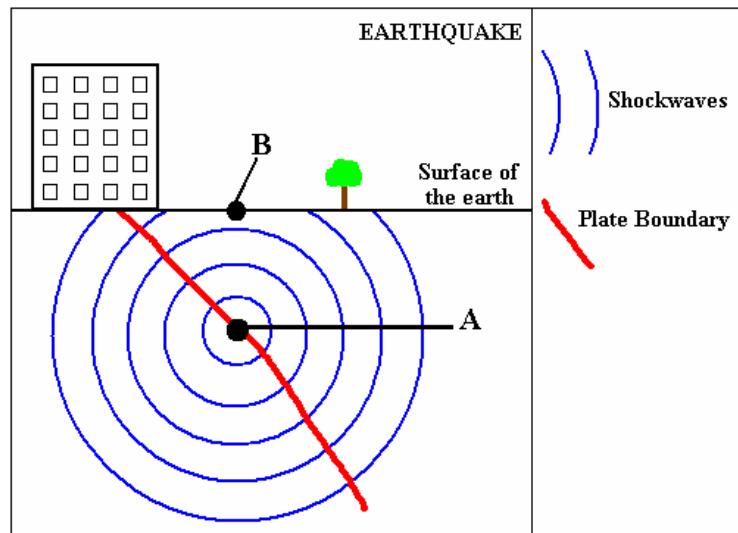
(10)

#### 4. GEOGRAPHICAL MIX

Answer **three** of the following questions **A, B, C** and **D**.

##### A. Earthquakes

- (i) Name **one** place where earthquakes occur.
- (ii) Examine the diagram showing the shockwaves of an earthquake and name the areas labelled **A** and **B**.



- (iii) Briefly describe the **cause** of earthquakes.

(10)

##### B. Tourism

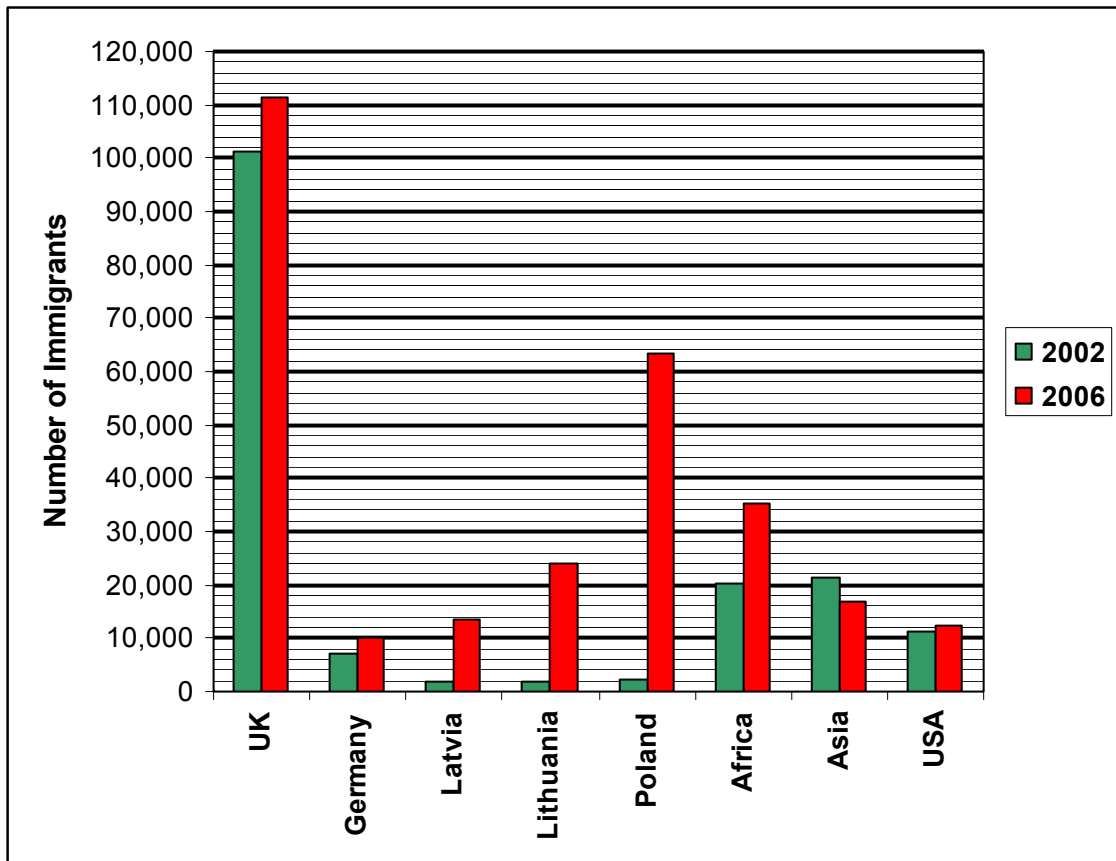


- (i) Name **four** reasons why tourists come to Ireland.
- (ii) Large-scale tourism may have **unwelcome impacts** on some tourist areas. Describe **two** such impacts.

(10)

### C. Human Migration

- (i) Examine the bar chart which shows the numbers of immigrants from a selection of regions who lived in Ireland in 2002 and in 2006.



Data: CSO

- (a) From which country did most immigrants come in 2006?
- (b) From which country did immigration to Ireland grow most rapidly between 2002 and 2006?
- (c) Calculate the increase in the numbers of immigrants from Lithuania to Ireland between 2002 and 2006.
- (4)
- (ii) Explain the following terms relating to human migration:
- (a) Pull factors.
- (b) Emigrant.

(6)

### D. The aerial photograph

Examine the aerial photograph provided with this examination paper.

- (i) Identify and locate **two** types of **urban** land-use to be seen on the photograph.
- (ii) At what time of year was this photograph taken? Explain **one** reason for your answer.

(10)

## 5. ORDNANCE SURVEY MAP

Examine the Ordnance Survey map provided.

**A. Draw a sketch map** of the area shown on the Ordnance Survey map.

**Show and label each** of the following on your sketch:

- The entire length of the railway line as shown on the map
- The built up area of Wicklow town
- Boating activities
- An area of coniferous forest.

(10)

**B. (i)** Estimate in square kilometres the area of the sea shown on the map.

(4)

**(ii)** Measure in kilometres the length of the railway line from the railway station in Wicklow at T 307 947 to where it leaves the map at T 260 933.

(4)

**C.** Explain **three** reasons why the town of Wicklow developed at this location.

(12)