



Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2018

GEOGRAPHY – ORDINARY LEVEL

FRIDAY 8 JUNE – MORNING 9:30 – 12:20

Examination Number

For the Examiner's Use Only

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

Note: Remember to return this paper with your answer book.

Otherwise marks will be lost.

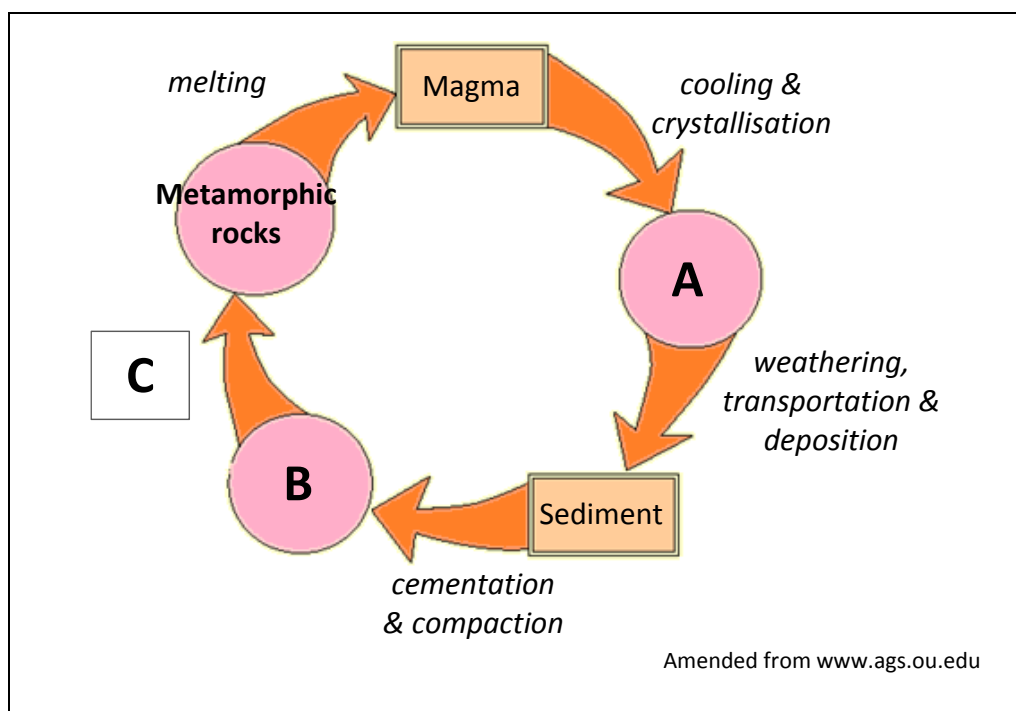
PART ONE – SHORT-ANSWER QUESTIONS – 100 MARKS

Attempt any **TEN** questions.

All questions carry equal marks.

THESE QUESTIONS ARE TO BE ANSWERED IN THE SPACES PROVIDED

1. Rock Cycle



Examine the diagram of the rock cycle above and answer each of the following questions.

- (i) Match each of the letters on the rock cycle **A**, **B** and **C** with the stage in the rock cycle in the table below most associated with it.

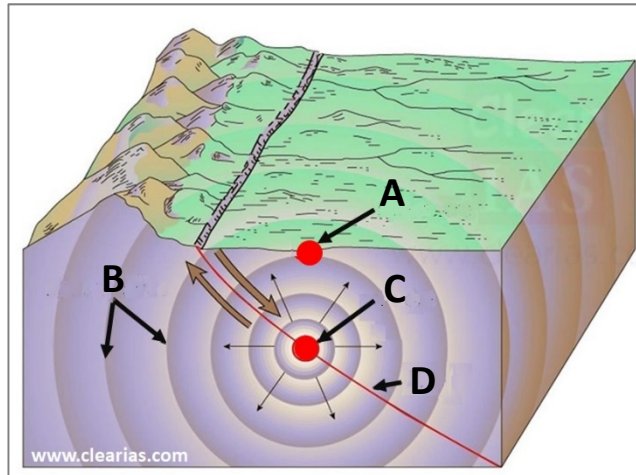
Stage in Rock Cycle	Letter
Heat and pressure	
Sedimentary rock	
Igneous rock	

- (ii) State whether each of the following statements is true or false.

- (a) Marble is an example of a metamorphic rock. _____
- (b) Fossils can be found in sedimentary rocks. _____

[10m]

2. Earthquakes



Examine the diagram of an earthquake above and answer each of the following questions.

- (i) Match each of the letters **A**, **B**, **C** and **D** on the diagram above with the correct term in the table below.

Term	Letter
Focus	
Epicentre	
Fault line	
Shock waves	

- (ii) Name the scale used to measure the force/magnitude of an earthquake.

[10m]

3. Physical Processes

Match the physical process with the term or feature most associated with it, by writing the correct letter in each case, in the table below.

Letter	Physical Process
A	Glacial deposition
B	Chemical weathering
C	Coastal deposition
D	Mechanical weathering
E	Fluvial deposition

Term/Feature	Letter
Scree	
Moraine	
Calcite	
Alluvium	
Sand spit	

[10m]

4. Regions

Match the description of a region with the example of the region that best matches it, by writing the correct letter in each case, in the table below.

Letter	Description of Region
A	A region defined by culture.
B	A core region.
C	A region of industrial decline.
D	A region defined by climate.
E	An urban area.

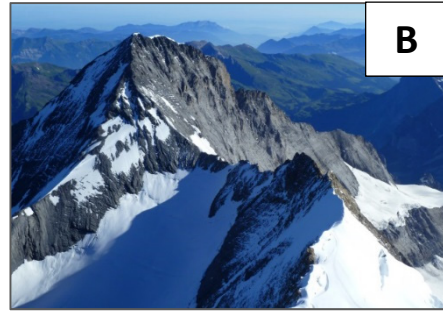
Example of Region	Letter
The Paris Basin	
The Mediterranean	
Ennis, Co. Clare	
Catalonia, Spain	
South Wales coalfields	

[10m]

5. Surface Processes



Amended from www.geograph.org.uk



Amended from www.camptocamp.org



Amended from www.whistlerhiatus.com



Amended from www.donegalglamping.com

Examine the photographs above and answer each of the following questions.

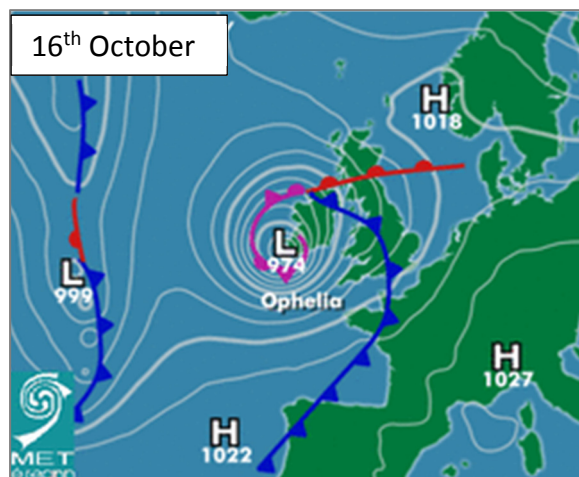
- (i) Match each of the photographs **A**, **B**, **C** and **D** with the landform in the table below that best matches it.

Landform	Letter
Sea arch	
Corrie/Cirque/Tarn	
Interlocking spur	
Arête	

- (ii) State whether processes of erosion **or** processes of deposition are most associated with the formation of all of the landforms in the table above.

[10m]

6. Weather Chart



Hurricane Ophelia was the easternmost Atlantic major hurricane on record. Ophelia originated outside the tropics from a cold front. The storm steadily strengthened before becoming a Category 2 hurricane. Ophelia intensified into a major hurricane on the 14th of October south of the Azores resulting in high winds and heavy rainfall in that area. Shortly after achieving peak intensity, Ophelia accelerated to the northeast towards Ireland and Great Britain.

Amended from www.wikipedia.com

Examine the weather chart and extract above and answer each of the following questions.

- (i) What type of weather front did Hurricane Ophelia originate from?

- (ii) Where **and** when did hurricane Ophelia intensify into a major hurricane?

- (iii) What does the letter **H** on the weather chart indicate?

- (iv) In the weather chart above, is the weather in southern Europe wet and windy **or** calm and dry?

Tick the correct box.

Wet and windy ☐

Calm and dry ☐

- (v) In the box below, draw the weather chart symbol for a cold front.



[10m]

7. Human Processes

Number of Daily Irish Speakers in Gaeltacht Areas, 2011 and 2016

Gaeltacht Area	2011	2016	Change 2011-2016
Cork County	982	872	-110
Donegal County	7,047	5,929	-1,118
Galway City	636	646	10
Galway County	10,085	9,445	-640
Kerry County	2,501	2,049	-452
Mayo County	1,172	895	-277
Meath County	314	283	-31
Waterford County	438	467	29
All Gaeltacht Areas	23,175	20,586	-2,589

Amended from www.cso.ie

Examine the table above showing the number of daily Irish speakers in Gaeltacht areas in 2011 and 2016 and the change in the number of daily Irish speakers between 2011 and 2016. Answer each of the following questions.

- (i) Name the Gaeltacht area with the greatest number of daily Irish speakers in 2016.

- (ii) Name the Gaeltacht area with the least number of daily Irish speakers in 2011.

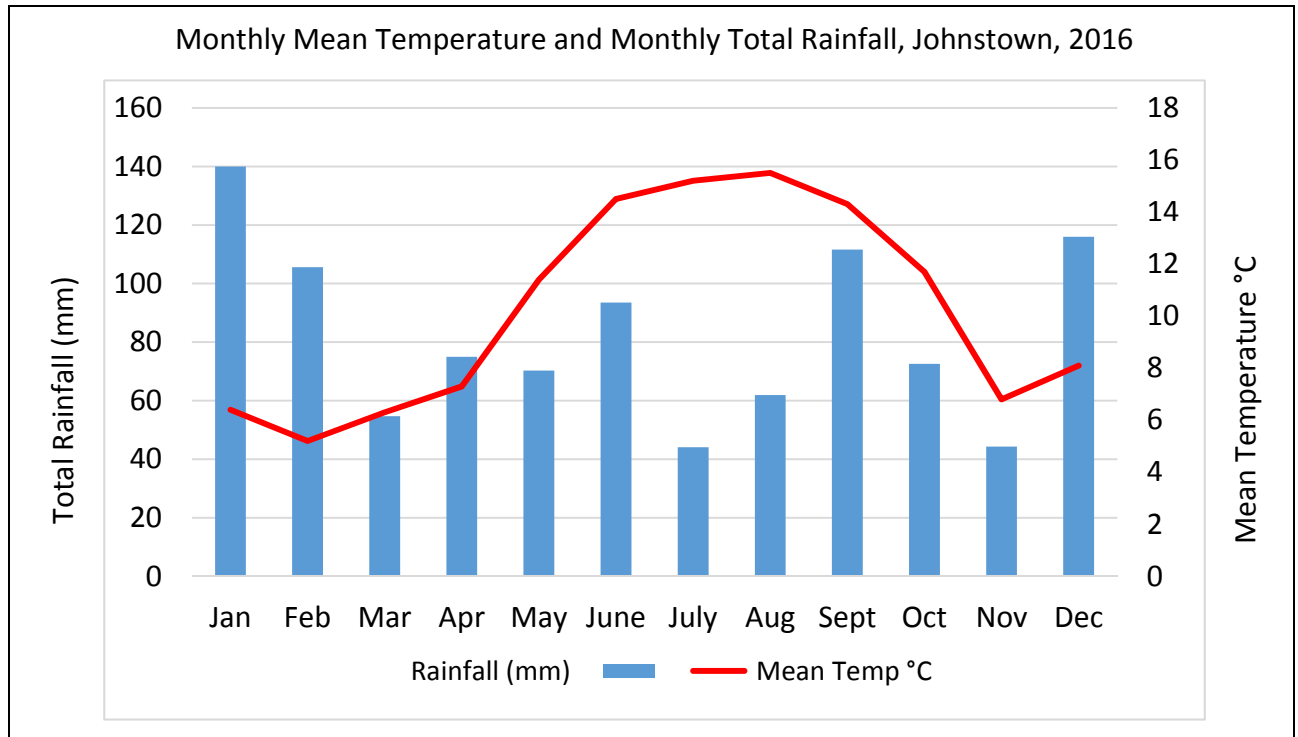
- (iii) What was the decline in the number of daily Irish speakers in County Donegal between 2011 and 2016?

- (iv) Name the Gaeltacht area which experienced the greatest increase in the number of daily Irish speakers between 2011 and 2016.

- (v) Suggest **one** way that the Irish government could assist in increasing the number of daily Irish speakers.

[10m]

8. Weather Statistics



Examine the climate graph above and answer each of the following questions.

- (i) Which month experienced the lowest mean temperature?

- (ii) Which month experienced the highest mean temperature?

- (iii) What was the highest monthly rainfall level (mm) experienced?

- (iv) How many months had a rainfall level higher than 80 mm?

- (v) Name the weather instrument used to measure rainfall.

[10m]

9. Ordnance Survey Map

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper and answer each of the following questions.

- (i) What is the length of the railway line from the train station at G 686 361 to where it leaves the map at G 679 350?

Tick the correct box.

1.4 km

☐

0.9 km

☐

- (ii) What is the height in metres of the highest point on the map?

[10m]

10. Ordnance Survey Map

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper and answer each of the following questions.

- (i) Name the features which can be found at each of the following grid references:

G 743 359

G 681 421

G 736 432

- (ii) If you were to walk the Benbulbin Walk from the Mound at G 673 461 to where it leaves the map at G 685 470 in what direction would you be walking?

- (iii) In the box below, draw the Ordnance Survey map symbol for a County Boundary.

[10m]

11. Aerial Photograph

Examine the aerial photograph accompanying this paper, and the sections from it below.



Give the location of each of the sections from the aerial photograph, using accepted notation (right background, centre foreground, etc.).

A. _____

B. _____

C. _____

D. _____

E. _____

[10m]

12. Tourism

Number of Overseas trips to Ireland by Area of Residence and Reasons for the Journeys

Trips by area of residence	2014	2016
Great Britain	3,164	3,924
France	456	531
Germany	557	652
Italy	258	344
USA and Canada	1,329	1,808
Reasons for journey to Ireland	2014	2016
Business	1,282	1,539
Visiting friends and family	2,209	2,553
Holiday, leisure and recreation	3,324	4,388
Other reasons	789	1,105

Amended from CSO

Examine the table above and answer each of the following questions.

- (i) From which area of residence did the least number of visitors to Ireland come from in 2014?

- (ii) What was the main reason for the majority of people visiting Ireland in 2016?

- (iii) From which area of residence did the number of visits increase the most between 2014 and 2016?

- (iv) State whether tourism is a primary, secondary or tertiary economic activity.

- (v) Name **one** Irish international ferry port and **one** Irish international airport.

International ferry port _____

International airport _____

[10m]

PART TWO – STRUCTURED QUESTIONS – 300 MARKS

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

- **TWO** questions from **Section 1 – Core:**
 - **One** question from Questions 1, 2 and 3 **(100 marks)**
 - AND**
 - **One** question from Questions 4, 5 and 6 **(100 marks)**
- **ONE** question from **Section 2 – Electives (100 marks)**

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 (Questions 1 to 3)**

AND

ONE from **Regional Geography (Questions 4 to 6)**

All questions carry 100 marks.

PATTERNS AND PROCESSES IN THE PHYSICAL ENVIRONMENT

Questions 1 to 3

Attempt **ONE** question

Question 1

1A. Mass Movement



Amended from survival-goods.com; panoramio.com; ukgeohazards.info; geostru.eu

Examine the photographs above and answer each of the following questions.

- (i) In your answer book, match each of the photographs **A**, **B**, **C** and **D** with the type of mass movement from the list below that best matches it:
- Soil creep
 - Avalanche
 - Rock fall
 - Mudflow.
- (ii) Name **one** example of a fast mass movement process and **one** example of a slow mass movement process.
- (iii) Explain briefly how slope affects the rate of mass movement.
- (iv) Explain briefly how water affects the rate of mass movement.

[30m]

1B. Rocks

- (i) Name **one** example of an igneous rock **and** state **one** location where it can be found.
- (ii) Name **one** example of a metamorphic rock **and** state **one** location where it can be found.
- (iii) Describe and explain how igneous rocks are formed.

or

Describe and explain how metamorphic rocks are formed.

[30m]

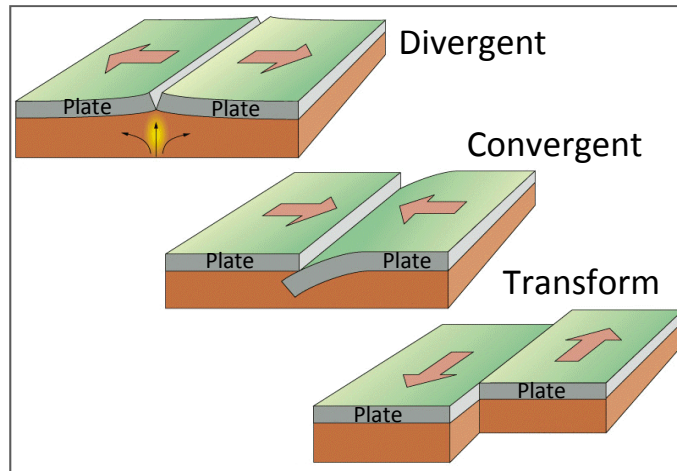
1C. Volcanoes

- (i) State what is meant by each of the following types of volcano:
 - Active volcano
 - Extinct volcano
 - Dormant volcano.
- (ii) Discuss the **positive** effects of volcanoes.
- (iii) Discuss the **negative** effects of volcanoes.

[40m]

Question 2

2A. Plate Boundaries



Amended from www.prenhall.com

Examine the diagrams above and answer each of the following questions.

- (i) In your answer book, match each of the plate boundaries named above with the type of plate movement from the list below most associated with it:
- Plates pushing together
 - Plates sliding past each other
 - Plates pulling apart.
- (ii) State what is meant by the term *plate*.
- (iii) Explain briefly how plates move.
- (iv) At which of the plate boundaries named on the diagram above do ocean ridges form?
- (v) At which of the plate boundaries named on the diagram above do fold mountains form?
- (vi) Name **one** example of an ocean ridge **or** name **one** example of a range of fold mountains.

[30m]

2B. Landform Development

Answer (i) or (ii).

(i) Explain, with the aid of diagrams, the formation of any **two** landforms.

or

(ii) Describe and explain any **two** processes of mass movement.

[40m]

2C. Human Interaction with the Rock Cycle

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

- Quarrying
- Mining
- Oil/Gas exploitation
- Geothermal energy production.

[30m]

Question 3

3A. Ordnance Survey Map

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper.

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

On it, **show** and **label** each of the following:

- The entire coastline
- The Drumcliff River
- Glencar Lough
- The area of Cope's Mountain above 200 metres
- The built up area of Sligo.

[30m]

3B. Karst Landscapes

- (i) Name **one** example of a karst landscape.
- (ii) Explain, with the aid of a diagram, how **one surface** feature in a karst landscape was formed.
- (iii) Explain, with the aid of a diagram, how **one underground** feature in a karst landscape was formed.

[40m]

3C. Human Interaction with Surface Processes

Explain how humans interact with **one** of the following surface processes:

- River processes
- Coastal processes
- Mass movement processes.

[30m]

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

4A. Map Skills

Draw a sketch map of a **Continental / Sub-Continental** region (**not in Europe**) that you have studied.

On it, **show** and **name** each of the following:

- **Two** named urban areas in this region
- **One** named river in this region
- **One** named area of relief (upland or lowland) in this region.

[30m]

4B. Secondary Economic Activity in an Irish Region

Answer each of the following questions with reference to an **Irish** region that you have studied.

- Name **one** example of a secondary economic activity in this region.
- Explain the advantages that this region has for the development of this secondary economic activity.
- Describe **one** challenge faced by this secondary economic activity in this region.

[40m]

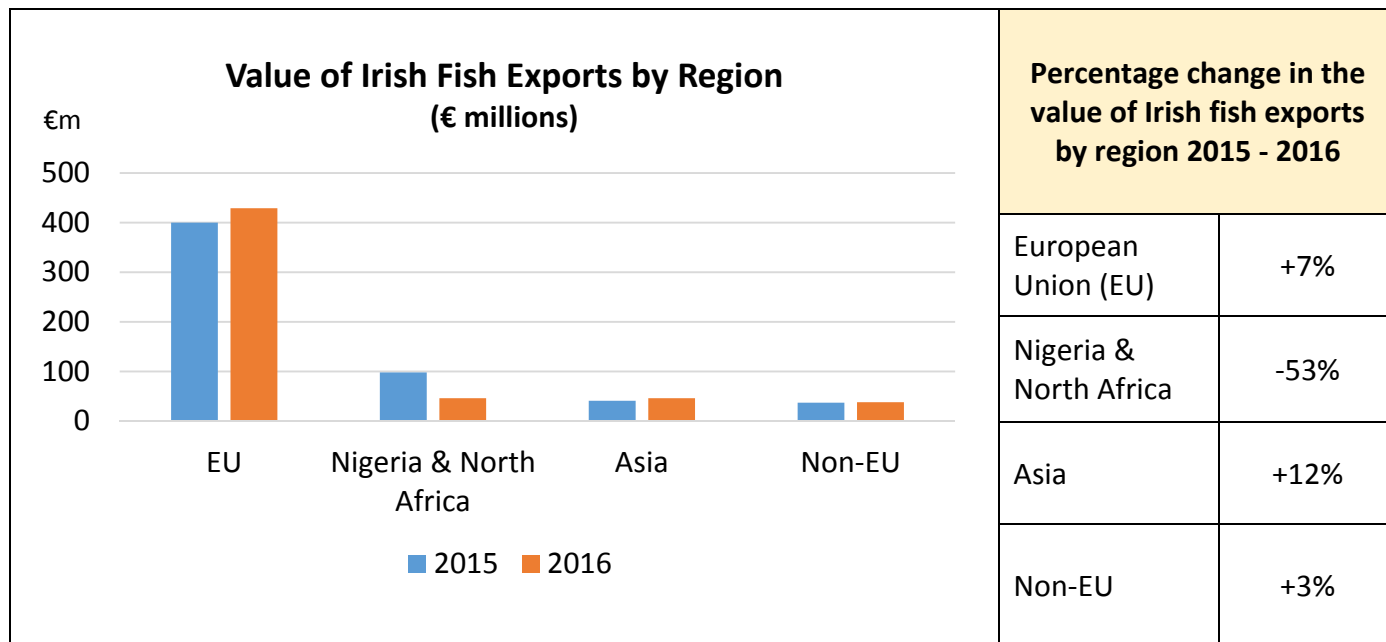
4C. Urban Growth in a European Region

Discuss the reasons for the growth of an urban area in a **European** region (**not in Ireland**) that you have studied.

[30m]

Question 5

5A. Irish Trade



Amended from Bórd Iascaigh Mhara, 2016

Examine the chart and table above and answer each of the following questions.

- The greatest value of Irish fish was exported to which region in 2016?
- Explain briefly **one** reason why the greatest value of Irish fish was exported to this region.
- The value of Irish fish exports to which region underwent the greatest percentage increase between 2015 and 2016?
- Calculate the difference (in millions of euro), between the value of fish exports to the European Union and the value of fish exports to Nigeria & North Africa in 2015.
- Explain briefly **one** advantage of exports to the Irish economy.
- State **two** advantages that Ireland has for fishing.

[30m]

5B. Tertiary Economic Activities – European Region

Discuss the development of **two** tertiary economic activities in a **European** region (**not in Ireland**) that you have studied.

[30m]

5C. Economic Activities – Continental / Sub-Continental Region

Explain any **two** of the following with reference to a **Continental / Sub-Continental** region (**not in Europe**) that you have studied:

- The factors influencing **agriculture** in the region
- The importance of **manufacturing** to the region
- The **reasons** why tourists are attracted to the region.

[40m]

Question 6

6A. Irish Region

Draw a sketch map of Ireland.

On it, **show** and **name** each of the following:

- **One** named region studied by you
- **One** named area of relief (upland or lowland) in this region
- **One** named river in this region
- **One** named town or city in this region.

[30m]

6B. Agriculture in a European Region

Answer each of the following questions with reference to a **European** region (**not in Ireland**) that you have studied.

- (i) Name **two** examples of agricultural activity practiced in this region.
- (ii) Discuss how any **two** of the following factors influence the development of **agriculture** in this region:

- Climate
- Relief and soils
- Markets.

[40m]

6C. Concept of a Region

- (i) Name an example of a core region **and** explain why this region is a core region.
- (ii) Name an example of a peripheral region **and** explain why this region is a peripheral region.

[30m]

SECTION 2 – ELECTIVES

Questions 7 to 12

You **MUST** attempt **ONE** question from:

Patterns and Processes in Economic Activities (Questions 7, 8 and 9)

OR

Patterns and Processes in the Human Environment (Questions 10, 11 and 12)

All questions carry 100 marks.

PATTERNS AND PROCESSES IN ECONOMIC ACTIVITIES

Questions 7 to 9

Question 7

7A. Economic Activity – The Environment

Ireland: Projected Greenhouse Gas Emissions 2020

Sources of Emissions	Percentage
Transport	29%
Industry and Commercial	7%
Residential	12%
Agriculture	47%
Other	5%

Amended from [www. environ.ie](http://www.environ.ie)

Examine the table above and answer each of the following questions.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) In your answer book, state **two** ways that greenhouse gas emissions can be reduced.

[30m]

7B. Economic Development – Developed Economy

- (i) Name **one** example of a developed economy that you have studied.
- (ii) Explain the reasons for the growth of mass tourism **or** footloose industry in the developed economy named by you in part (i) above.
- (iii) Explain **one** benefit of mass tourism **or** footloose industry for developed economies.
- (iv) Explain **one** problem caused by mass tourism **or** footloose industry.

[40m]

7C. Economic Activity and Conflict

- (i) Name **one** example of how the development of economic activities has resulted in conflict arising between people.
- (ii) Describe and explain this conflict.

[30m]

Question 8

8A. Human Development Index

Human Development Index (HDI) Data for Selected Countries, 2016

Country	Gross National Income per capita (\$)	HDI	Life expectancy at birth (years)	Expected number of years in school
Japan	\$37,268	0.903	83.7	15.3
Mali	\$2,218	0.442	58.5	8.4
USA	\$53,245	0.921	79.2	16.5
France	\$38,085	0.897	82.4	16.3
Ireland	\$43,798	0.923	81.1	18.6

Amended from www.undp.org

Examine the table above and answer each of the following questions.

- (i) Name the **two** countries with the highest Human Development Indices.
- (ii) Calculate the difference between the gross national income per capita in Ireland and in France (in \$).
- (iii) Explain briefly **one** reason why life expectancy at birth is higher in some countries.
- (iv) State **two** reasons why some countries have a lower HDI than other countries.
- (v) The three countries with the highest number of expected years in school are the three countries with the highest Gross National Income.
Explain briefly **one** reason why there may be a link between these two factors.

[30m]

8B. Economic Activity – Aerial Photograph

Examine the aerial photograph of Sligo accompanying this paper.

It is proposed to build a computer factory in the **centre background** of the aerial photograph.

- (i) Describe and explain the advantages of this location.
- (ii) Describe and explain the disadvantages of this location.
- (iii) Using accepted notation, suggest an alternative location for the new computer factory **and** explain briefly **one** reason why you chose this alternative location.

[40m]

8C. Renewable Energy

- (i) Name **two** examples of renewable energy.
- (ii) Discuss the advantages **and** disadvantages of renewable energy.

[30m]

Question 9

9A. Ordnance Survey Map

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper.

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

On it, **show** and **label** each of the following:

- The N15
- The N16
- The R291
- The railway line
- The built up area of Sligo north of the Garvoge River.

[30m]

9B. European Union Policies

- (i) Name any **two** European Union policies.
- (ii) Discuss the **positive** impacts of European Union policies.
- (iii) Discuss the **negative** impacts of European Union policies.
- (iv) State **two** potential challenges facing the European Union in the future.

[40m]

9C. Multinational Company (MNC)

- (i) Name **one** multinational company located in Ireland that you have studied.
- (ii) State where this multinational company is located in Ireland.
- (iii) Name **two** markets outside Ireland where this multinational company sells its products.
- (iv) Explain why this multinational company may decide to relocate to another country.

[30m]

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

10A. Aerial Photograph

Examine the aerial photograph of Sligo accompanying this paper.

Draw a sketch map of the area shown on the aerial photograph.

On it, **show** and **label** each of the following:

- The river
- A bridge
- **Two** connecting streets
- A car park in the centre foreground
- A sports field in the right background.

[30m]

10B. Urban Land-Use

- (i) Name **one** urban area that you have studied **and** name any **two** land-uses in this urban area.
- (ii) Describe and explain how land-use in this urban area has changed over time.

[30m]

10C. Migration – Ireland

Migration takes place due to push factors and pull factors.

- (i) Name **one** push factor and **one** pull factor associated with migration in Ireland.
- (ii) Discuss the positive impacts of migration on Ireland.
- (iii) Discuss the negative impacts of migration on Ireland.

[40m]

Question 11

11A. Traffic

Number of People who Crossed the Royal or Grand Canal while entering Dublin City Centre,
by Mode of Transport, 2006-2016

Mode of Travel	2006	2010	2014	2016
Public Transport	102,437	83,111	93,207	98,273
Car	76,850	71,978	64,169	64,885
Walk	17,114	15,092	19,711	21,473
Cycle	4,839	5,952	10,349	12,089
Other	6,139	4,909	5,234	5,281
Total	207,379	181,042	192,670	202,001

Amended from www.nationaltransport.ie

Examine the table above and answer each of the following questions.

- (i) What was the total number of people who crossed the canals while entering Dublin city centre in 2016?
- (ii) Calculate the total number of people who crossed the canals by bicycle and walking combined while entering Dublin city centre in 2016.
- (iii) Name **two** examples of public transport available in cities such as Dublin.
- (iv) For which **two** modes of transport was there an increase in the number of people using them, who crossed the canals while entering Dublin city centre between 2006 and 2016?
- (v) Explain briefly **one** reason for the increase in these two modes of transport.
- (vi) Suggest **one** reason why there was a decrease in the number of people who crossed the canals while entering Dublin city centre between 2006 and 2010.

[30m]

11B. Population

By the year 2031, there will be nearly one million people over the age of 65 in Ireland.

That will have been an increase of more than 86% since 2016. Amended from journal.ie

Discuss the challenges associated with an ageing population **and** how this ageing population can be planned for.

[30m]

11C. Settlement Distribution

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper and answer each of the following questions.

- (i) Give a grid reference for an area on the map where there is an **absence** of settlement.
- (ii) Explain in detail, using evidence from the map, why there is an **absence** of settlement at this location.
- (iii) Give a grid reference for an area on the map which has a relatively **high** density of settlement.
- (iv) Explain in detail, using evidence from the map, why there is a relatively **high** density of settlement at this location.

[40m]

Question 12

12A. Migration

Number of Asylum Applications to the European Union from Selected Countries 2016

Country of Origin	Number of Applications
Pakistan	48,000
Iran	40,000
Eritrea	33,000
Ukraine	11,000
Somalia	19,000

Amended from Eurostat

Examine the table above and answer each of the following questions.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) Explain briefly **one** reason why people seek asylum in other countries.

[30m]

12B. Urban Development

Examine the 1:50 000 Ordnance Survey map and legend accompanying this paper.

Describe and explain **three** reasons why the town of Sligo developed at this location, using evidence from the Ordnance Survey map to support each reason.

[30m]

12C. Urban Problems

Problems can develop as a result of the growth of urban areas.

Discuss any **three** of the following problems with reference to any urban area(s) that you have studied:

- Traffic congestion
- Urban decay
- Urban sprawl
- Environmental quality.

[40m]

There is no examination material on this page

There is no examination material on this page

Leaving Certificate 2018 – Ordinary level

Geography

Friday 8 June

Morning 9:30 – 12:20