



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate 2016

Marking Scheme

Geography

Higher Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

Future Marking Schemes

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.

In considering this marking scheme, the following should be noted:

- The detail required in any answer is determined by the context and the manner in which the question is asked and by the number of marks assigned to the answer in the examination paper.
- Words, expressions or phrases must be correctly used in context and not contradicted, and where there is evidence of incorrect use or contradiction, the marks may not be awarded.
- As a general rule, if in doubt about the validity of any answer, examiners must consult their advising examiner before awarding marks.
- The suggestions, examples etc. in the scheme are not exhaustive and alternative valid answers etc. may be acceptable.
- For the purpose of marking a Significant Relevant Point (SRP) is a single piece of factual information, to which an examiner will assign a mark weighting as prescribed in the marking scheme (typically 2 marks). As previously advised in Circular S85/09 and in the Sample Marking Indicators available on the SEC website each SRP should emerge from the information put forward by the candidate, leading to an overall coherent response to the question.

PART ONE -SHORT ANSWER QUESTIONS - 80 MARKS

Any 10 questions @ 8 marks each.

Mark all questions attempted and award questions with highest mark.

No grading.

<p>Q.1 (i) E 1m D 1m F 1m B 1m A 1m C 1m (ii) True 2m</p>	<p>Q.7 D 1m Cultural 1m A 1m Physical 1m B 1m Physical 1m C 1m Cultural 1m</p>
<p>Q.2 (i) B 1m C 1m D 1m A 1m (ii) (a) False 2m (b) True 2m</p>	<p>Q.8 B Left middleground/Left centre 2m C Centre middleground 2m D Centre middleground 2m E Right middleground/Right centre 2m</p>
<p>Q.3 (i) B 1m C 1m A 1m F 1m E 1m D 1m (ii) False 2m</p>	<p>Q.9 (i) D 2m (ii) A 2m (iii) C 2m (iv) B 2m</p>
<p>Q.4 (i) Sand 1m Quartzite 1m Shells etc. 1m Marble 1m Magma 1m Gneiss 1m (ii) (a) Basalt 1m (b) Limestone 1m</p>	<p>Q.10 (i) Finland 2m (ii) 19 2m (iii) Two valid answers 1+1m (iv) Two valid answers 1+1m</p>
<p>Q.5 Cut Off meander 1m Fluvial 1m V-shaped valley 1m Fluvial 1m Lagoon 1m Coastal 1m Drumlin 1m Glacial 1m</p>	<p>Q.11 (i) UK 2m (ii) 6,597 2m (iii) 8,062 2m (iv) Any valid explanation 1+1m</p>
<p>Q.6 (i) 6-8 (km²) 2m (ii) North West/NW/NNW 2m (iii) 5.3-5.7 (km) 2m (iv) L 972/3 793/4 2m</p>	<p>Q.12 (i) Dublin 2m (ii) Shannon 2m (iii) 7.6(%) 2m (iv) Any valid explanation 1+1m</p>

PART TWO – STRUCTURED and ESSAY QUESTIONS – 320 MARKS

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

- **TWO** questions from **Section 1 – Core**:
 - **One** question from Questions 1, 2 and 3 **(80 marks)**
 - AND**
 - **One** question from Questions 4, 5 and 6 **(80 marks)**
- **ONE** question from **Section 2 – Electives (80 marks)**
- **ONE** question from **Section 3 – Options (80 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**

AND

ONE from **Regional Geography**

PATTERNS AND PROCESSES IN THE PHYSICAL ENVIRONMENT

Questions 1 to 3

Attempt **ONE** question

Question 1

A. Ordnance Survey Map

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

Draw a sketch map of the area shown to half scale.

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

- Westport Bay
- The entire course of the Owenwee River
- The entire area of Kinlooney Lough at M 03 81
- The entire area of land above 200 metres in the south-west of the map.

[20m]

Sketch Outline

4 marks

4 features @ 4 marks each:

Shown 3 marks (graded 3/1/0)

Label 1 mark

- If sketch is traced or only a section of the map is drawn, lose 4 marks for sketch outline and lose 3 marks for showing per item. Allow naming marks only.
- Sketch outline means to half scale. Required size is 12cm x 9cm [allow a difference of up to $\frac{1}{2}$ cm]. The sketch must have four sides drawn.
- If the aerial photograph is used instead of the Ordnance Survey map 0 marks.
- Labels may be written on the sketch map or in a key.
- There must be an attempt to show feature for naming marks to be awarded. If not shown, 0 marks for naming.
- The features must be labelled on the sketch or in a key. If not labelled, 0 marks for showing.

B. Rocks

Explain the formation of **one** igneous rock and **one** metamorphic rock, with reference to Irish examples.

[30m]

One Irish igneous rock named	2 marks
One Irish metamorphic rock named	2 marks
Explanation of formation of igneous rock	6/7 x SRP's
Explanation of formation of metamorphic rock	6/7x SRP's

- Credit relevant labelled diagram for 1 x SRP for each rock.
- Credit extra relevant information on labelled diagram to a max of 1 x SRP in total.
- Diagram without labelling 0 marks.
- Focus of the question is on the formation of the rocks.
- Max 1 x SRP (for each rock) if no reference to formation of the rocks but merely a description of the rocks.
- Question tied to Irish examples.
- If only one rock dealt with max 7 x SRP's.
- Where explanation of formation of more than one igneous/metamorphic rock given, mark all and award the highest mark.

C. Weathering

Explain **one** process of physical weathering and **one** process of chemical weathering.

[30m]

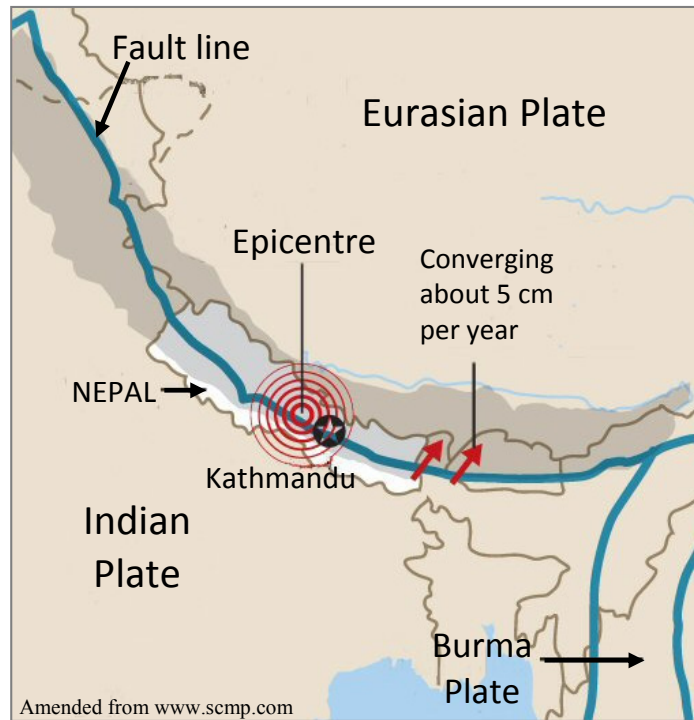
Physical weathering process named	2 marks
Chemical weathering process named	2 marks
Explanation of physical weathering	6/7 x SRP's
Explanation of chemical weathering	6/7 x SRP's

- Credit relevant labelled diagram for 1 x SRP for each process of weathering.
- Credit extra relevant information on labelled diagram to a max of 1 x SRP in total.
- Diagram without labelling 0 marks.
- Question not tied to Ireland.
- If only physical weathering process or chemical weathering process explained max 7 x SRP's.

Question 2

A. Earthquakes

Nepal Earthquake, 25 April 2015, Magnitude 7.8



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

- (i) What was the magnitude of the earthquake in Nepal in 2015?
- (ii) The movement of which **two** plates resulted in the earthquake in Nepal?
- (iii) What type of plate boundary is shown above?
- (iv) Name **two** other types of plate boundaries.
- (v) Explain briefly what is meant by the term *epicentre*.
- (vi) Explain briefly **one** way of reducing the impact of earthquakes.

[20m]

- | | | |
|-------|-------------------------------|-------------|
| (i) | 7.8 | 2 marks |
| (ii) | Indian and Eurasian | 2 + 2 marks |
| (iii) | Converging/Destructive | 2 marks |
| (iv) | Diverging etc. & Neutral etc. | 2 + 2 marks |
| (v) | Valid explanation | 2 + 2 marks |
| (vi) | Valid explanation | 2 + 2 marks |

B. Landform Development

Answer (i) or (ii).

- (i) Examine the impact of the **processes of deposition** on the formation of any **one** landform that you have studied.

[30m]

Landform named 2 marks
Examination 14 x SRP's

- Credit 1 x SRP for reference to process of deposition. All further references to processes of deposition require examination.
- Credit one example for 1 x SRP from examination.
- Focus of question is on the impact of the processes of deposition on the formation of one landform. Examination of processes of erosion 0 marks.
- Credit relevant labelled diagram for 1 x SRP.
- Credit extra relevant information on labelled diagram for 2 x SRP's.
- Diagram without labelling 0 marks.
- Credit a max of 2 x SRP's if merely a description of landform with no reference to formation.
- Question not tied to Ireland.

Or

- (ii) Describe and explain the **factors governing the operation** of any **one** mass movement process that you have studied.

[30m]

Mass movement process named 2 marks
Factors identified 2 + 2 marks
Description/Explanation of process 12 x SRP's

- All further factors require examination.
- Credit relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit extra relevant information on labelled diagram for 2 x SRP's.
- Credit a max of 2 x SRP's if merely a description of mass movement with no reference to factors governing its operation.
- Credit one example for 1 x SRP from description/explanation.

C. Fluvial Adjustment

Examine how changes in base level impact on geomorphic processes and landforms in a fluvial environment.

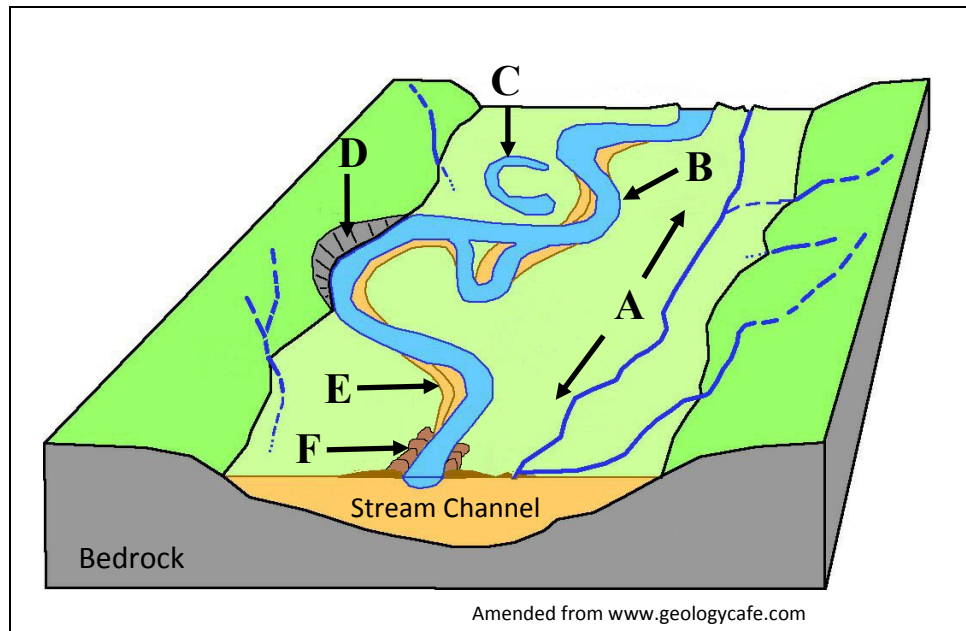
[30m]

Impact on processes identified	2 marks
Impact on landform identified	2 marks
Examination	13 x SRP's

- All further impacts (on process or landforms) require examination.
- Credit relevant labelled diagram for 1 x SRP.
- Credit extra relevant information on labelled diagram for 2 x SRP's.
- Diagram without labelling 0 marks.
- Credit one example for 1 x SRP from examination.

Question 3

A. Fluvial landforms



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

- (i) Name each of the fluvial landforms **A**, **B**, **C**, **D**, **E** and **F**.
- (ii) Explain briefly what is meant by the term *bedrock*.
- (iii) Explain briefly what is meant by the term *alluvium*.

[20m]

- | | | | |
|-------|----------|----------------------------|-------------|
| (i) | A | Flood Plain | 2 marks |
| | B | Meander | 2 marks |
| | C | Ox-bow lake | 2 marks |
| | D | River cliff/cut bank etc. | 2 marks |
| | E | Point Bar/river beach etc. | 2 marks |
| | F | Levees | 2 marks |
| (ii) | | Any valid explanation | 2 + 2 marks |
| (iii) | | Any valid explanation | 2 + 2 marks |

B. Landscape Development

Examine how different rock types produce distinctive landscapes, with reference to examples that you have studied.

[30m]

Rock 1 and associated landscape named	2 marks
Rock 2 and associated landscape named	2 marks
Examination	13 x SRP's

- All further rock types and associated landscapes require examination.
- Question not tied to Ireland.
- Credit 1 x SRP for relevant labelled diagram.
- Credit extra relevant information on labelled diagram for 2 x SRP's.
- Diagram without labelling 0 marks.
- Description of either the rock or the landscape with no reference to the relationship between rock and landscape max 2 x SRP's.
- Rock type and landscape must be linked to get 2 marks.

C. Constructive Plate Boundaries

Discuss the geographical distribution and the impacts of constructive plate boundaries.

[30m]

Impact identified	2 marks
Reference to geographical distribution	2 marks
Discussion	13 x SRP's

- All further impacts require discussion.
- Credit relevant labelled diagram for 1 x SRP.
- Credit extra relevant information on labelled diagram for 2 x SRP's.
- Diagram without labelling 0 marks.
- Max 6x SRP's if discussion only on distribution of constructive plate boundaries.
- Max 6x SRP's if discussion only on impacts of constructive plate boundaries.

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

A. Map Skills

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

On it, show and name each of the following:

- The outline of a named feature of relief (upland or lowland)
- A named urban centre
- The outline of a named agricultural **or** industrial region
- The course of a named river.

[20m]

Map outline

4 marks graded (4/2/0)

4 features @ 4 marks each

Shown 2 marks graded (2/1/0)

Named 2 marks

- Do not accept Irish or European region.
- Accept any valid type of urban centre irrespective of size.
- Names may be written on the sketch map or in a key.

B. European Union

Examine the impact of the expansion of the European Union on member states, with reference to both economic and social impacts.

[30m]

Economic impact identified	2 marks
Social impact identified	2 marks
Examination	13 x SRP's

- All further economic and social impacts require examination.
- Max 2 x SRP's if merely a description of expansion of the EU with no examination of impacts of expansion on member states.
- Max 2 x SRP's if there is no reference to expansion of the EU.
- Max 7 x SRP's if only economic or social impacts examined.
- Impacts may be positive or negative.
- Question not tied to Ireland.

C. Secondary Economic Activity

Examine the development of secondary economic activity in an **Irish** region that you have studied, with reference to any **two** of the following factors:

- Raw materials
- Transport
- Labour
- Markets.

[30m]

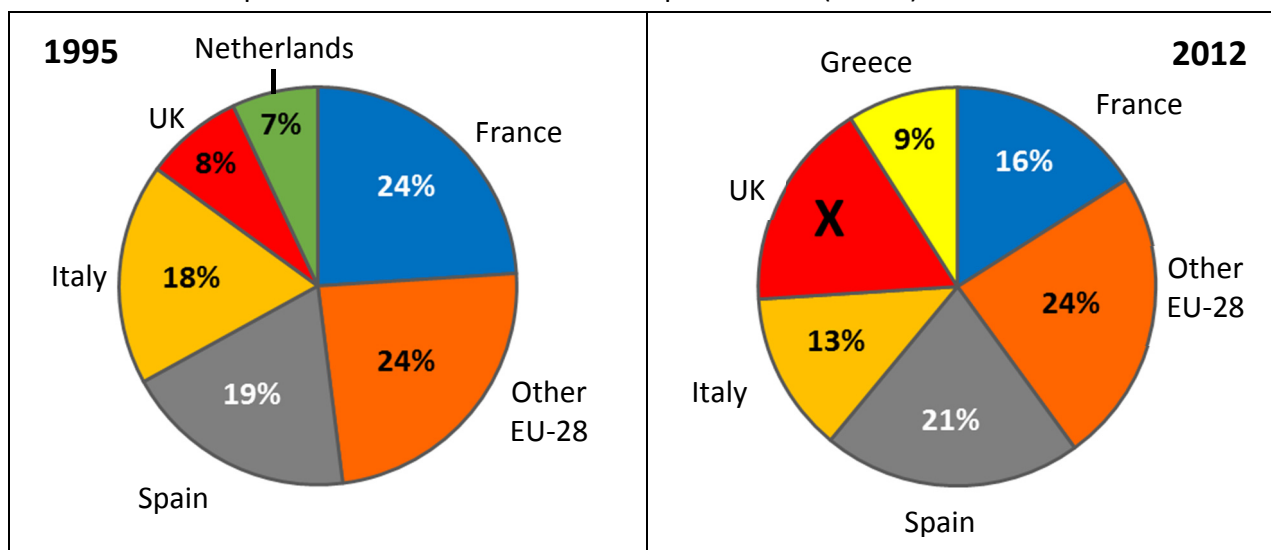
Factor 1 examination	8 x SRP's
Factor 2 examination	7 x SRP's

- Do not accept European or Continental/Sub-continental region.
- Examination without reference to named or clearly inferred region 0 marks.
- Max 2 x SRP's per factor if merely a description of the factor with no reference to development of secondary economic activity.
- Max 8 x SRP's if only one factor discussed.
- Positive or negative interpretation is acceptable.
- A valid labelled sketch map can receive 1 x SRP from examination and if extra relevant information on the sketch it can receive a further 1 x SRP.

Question 5

A. Economic Activity

Main Aquaculture Producers in the European Union (EU-28) in 1995 and 2012



Amended from Eurostat 2015

Examine the charts above showing the main aquaculture producers in the European Union (EU-28) in 1995 and 2012 and answer each of the following questions.

- Calculate **X**, the percentage of EU-28 aquaculture produced by the UK in 2012.
- Which single country produced over one-fifth of EU-28 aquaculture production in 2012 **and** what percentage did that country produce in 1995?
- With reference to the charts above, which country was no longer one of the main EU-28 aquaculture producers in 2012 **and** which country replaced it?
- Explain briefly **one** positive impact of European Union policy on the fishing industry.
- Explain briefly **one** negative impact of European Union policy on the fishing industry.

[20m]

- | | | |
|-------|------------------------|-------------|
| (i) | 17(%) | 4 marks |
| (ii) | Spain and 19(%) | 2 + 2 marks |
| (iii) | Netherlands and Greece | 2 + 2 marks |
| (iv) | Any valid explanation | 2 + 2 marks |
| (v) | Any valid explanation | 2 + 2 marks |

B. Agriculture in a Continental / Sub-Continental Region

Account for the development of agriculture in a **Continental / Sub-Continental** region (not in Europe), that you have studied, with reference to any **two** of the following factors:

- Soil
- Relief
- Climate.

[30m]

Account of Factor 1

8 x SRP's

Account of Factor 2

7 x SRP's

- Do not accept Irish or European regions.
- Discussion without link to named or clearly inferred region 0 marks.
- Max 2 x SRP's per factor if merely a description of factor with no reference to the development of agriculture.
- Positive or negative interpretation of development is acceptable.
- A valid labelled sketch map can receive 1 x SRP from account and if extra relevant information on the sketch, it can receive a further 1 x SRP.

C. Concept of a Region

Examine how culture **or** the physical landscape can be used to define regions, with reference to examples that you have studied.

[30m]

Example of region

2 marks

Examination

14 x SRP's

- Credit second example of a region for 1 x SRP from examination.
- A valid labelled sketch map can receive 1 x SRP from examination and if extra relevant information on the sketch, it can receive a further 1 x SRP.
- Positive or negative interpretation is acceptable.

Question 6

A. Unemployment

Unemployment Statistics in Selected Countries

Country	Unemployment as % of Total Population		Youth Unemployment as % of Active Population (15 to 24 years)			
	2008	2014	2008	2012	2013	2014
Germany	7.4	5.3	10.4	8.0	7.8	7.7
Ireland	6.4	11.3	13.3	30.4	26.8	23.9
Greece	7.8	26.5	21.9	55.3	58.3	52.4
France	7.4	10.3	19.0	24.4	24.8	24.0

Amended from Eurostat

Examine the table above showing unemployment as a percentage of total population and youth unemployment as a percentage of active population, in selected countries, and answer each of the following questions.

- (i) Which **two** countries had the same percentage of total population unemployed in 2008?
- (ii) What was the trend in the percentage of total unemployed in Ireland between 2008 and 2014?
- (iii) Explain briefly **one** reason for this trend.
- (iv) Which country's youth unemployment, as a percentage of active population, decreased between 2008 and 2014?
- (v) Which country had the greatest increase in its youth unemployment, as a percentage of active population, between 2008 and 2014?
- (vi) What has been the trend in Ireland's youth unemployment, as a percentage of active population, from 2012 to 2014 inclusive? State **one** reason for this trend.

[20m]

- | | | |
|-------|-------------------------|-------------|
| (i) | Germany and France | 2 + 2 marks |
| (ii) | Increasing, rising etc. | 2 marks |
| (iii) | Any valid explanation | 2 + 2 marks |
| (iv) | Germany | 2 marks |
| (v) | Greece | 4 marks |
| (vi) | Declining/falling etc. | 2 marks |
| | Any valid reason stated | 2 marks |

B. Dynamics of Regions - Climate

Examine the importance of climate to the economic development of any **two** contrasting **European** regions (not in Ireland), that you have studied.

[30m]

Examination of region 1	8 x SRP's
Examination of region 2	7 x SRP's

- Credit 1 x SRP per region for identifying the importance of climate to economic development. All further references to the importance of climate require examination.
- Do not accept Irish or Continental Sub / Continental region.
- Max 8 x SRP's if only one region examined. Discussion without link to any named or clearly inferred regions 0 marks.
- Max 2 x SRP's per region if merely a description of climate with no reference to economic development.
- Max 2 x SRP's per region if merely a description of economic development with no reference to climate.
- A valid labelled sketch map can receive 1 x SRP from examination and if extra relevant information on the sketch, it can receive a further 1 x SRP.
- Positive or negative interpretation is acceptable.

C. Urban Development

Examine how **two** of the following factors have influenced the development of any urban area that you have studied:

- Transport
- Location
- Primary economic activity.

[30m]

Named urban area	2 marks
Factor 1 examination	7 x SRP's
Factor 2 examination	7 x SRP's

- Discussion without link to named or clearly inferred urban area 0 marks.
- Max 2 x SRP's per factor if merely a description of each factor with no reference to the development of urban area.
- Accept any valid type of urban area or part thereof irrespective of size.
- A valid labelled sketch map can receive 1 x SRP from examination and if extra relevant information on the sketch, it can receive a further 1 x SRP.
- Positive or negative interpretation is acceptable.
- Question not tied to Ireland.

SECTION 2 – ELECTIVES

Questions 7 to 12

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

Patterns and Processes in Economic Activities

OR

Patterns and Processes in the Human Environment

PATTERNS AND PROCESSES IN ECONOMIC ACTIVITIES

Questions 7 to 9

Question 7

A. Ordnance Survey Map

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

Draw a sketch map of the area shown to half scale.

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

- A railway line
- The N59
- The R335
- The built up area of Westport.

[20m]

Sketch Outline

4 marks

4 features @ 4 marks each:

Shown 3 marks (graded 3/1/0)

Label 1 mark

- If sketch is traced or only a section of the map is drawn, lose 4 marks for sketch outline and lose 3 marks for showing per item. Allow naming marks only.
- Sketch outline means to half scale. Required size is 12cm x 9cm [allow a difference of up to $\frac{1}{2}$ cm]. The sketch must have four sides drawn.
- If the aerial photograph is used instead of the Ordnance Survey map 0 marks.
- Labels may be written on the sketch map or in a key.
- There must be an attempt to show feature for naming marks to be awarded. If not shown, 0 marks for naming.
- The features must be labelled on the sketch or in a key. If not labelled, 0 marks for showing.

B. Multinational Company

Explain the factors that influence the operations of any **one** multinational company that you have studied.

[30m]

MNC named	2 marks
Factors identified	2 + 2 marks
Explanation	12 x SRP's

- All further factors require explanation.
- Discussion without link to named MNC 0 marks.
- Max 2 x SRP's if merely a description of MNC without explanation of factors influencing its operations.

C. Economic Activity - Conflict

Examine how conflict may arise between the exploitation of natural resources and the need to protect the environment, with reference to example(s) that you have studied.

[30m]

Example	2 marks
Examination	14 x SRP's

- Credit second named example for 1 x SRP from examination.
- Max 7 x SRP's for discussion of one side of the conflict only.
- Question is not tied to Ireland.
- Max 2 x SRP's if no reference to conflict.

Question 8

A. Human Development Index

Human Development Index (HDI) Data for Selected Regions

Region	HDI 1990	HDI 2014	Gross National Income 2014	Life expectancy at birth (years) 2014	Mean years of schooling 2014
Norway	0.849	0.944	\$64,992	81.6	12.6
Ireland	0.770	0.916	\$39,568	80.9	12.2
USA	0.859	0.915	\$52,947	79.1	12.9
Brazil	0.608	0.755	\$15,175	74.5	7.7
Haiti	0.417	0.483	\$1,669	62.8	4.9
Mali	0.233	0.419	\$1,583	58.0	2.0

Amended from www.undp.org

Examine the table above showing Human Development Index data for selected regions and answer each of the following questions.

- (i) Which region had the highest Human Development Index in 1990 **and** which country had the highest Human Development Index in 2014?
- (ii) Calculate the difference (in dollars) between gross national income in Norway and the gross national income in Mali in 2014.
- (iii) Which region had the highest mean years of schooling in 2014?
- (iv) Explain briefly **one** reason why the mean years of schooling are higher in countries such as Norway and Ireland.
- (v) Name **one** indicator used to calculate the Human Development Index.
- (vi) Explain briefly **one** advantage of using the Human Development Index as a measure of economic development.

[20m]

- | | | |
|-------|-----------------------|-------------|
| (i) | USA and Norway | 2 + 2 marks |
| (ii) | (\$)63,409 | 4 marks |
| (iii) | USA | 2 marks |
| (iv) | Any valid explanation | 2 + 2 marks |
| (v) | Any valid indicator | 2 marks |
| (vi) | Any valid explanation | 2 + 2 marks |

B. Renewable Energy

Examine how the development of renewable energy is crucial for Ireland's environment and economy.

[30m]

Importance for Ireland's environment identified	2 marks
Importance for Ireland's economy identified	2 marks
Examination	13 x SRP's

- Max 7 x SRP's if examination of environment with no reference to economy.
- Max 7 x SRP's if examination of economy with no reference to environment.
- Max 2 x SRP's if only a description of renewable energy with no reference to Ireland's environment or Ireland's economy.
- Credit one example of renewable energy for 1 x SRP from examination.

C. Tertiary Economic Activity

Using evidence from the 1:50 000 Ordnance Survey map accompanying this paper, discuss the potential for the development of tourism in the area shown on the map, with reference to each of the following:

- Accessibility
- Attractions
- Services (excluding transport).

[30m]

Three headings @ 10 marks each

For each of the **three** headings:

Map evidence/location	2 marks
Discussion	4 x SRP's

- Map reference can be grid reference or named road etc.
- All map evidence and discussion must be linked to tourism.
- Accept all forms of relevant transport (road, rail, river, sea etc.).
- If answer based on aerial photograph, allow 1 x SRP per heading.

Question 9

A. Irish Trade

Ireland's Top Export Partners, 2014

Export Partner	% of Total Exports
USA	22.2%
UK	15.1%
Belgium	13.2%
Germany	6.6%
Switzerland	5.9%
France	5.2%

Amended from www.wikipedia.org

Examine the data above showing Ireland's top export partners in 2014 and answer each of the following questions.

[20m]

- (i) Using graph paper, draw a suitable graph to illustrate this data.

	Bar Chart	Pie Chart
Title	2 marks	2 marks
Vertical axis named	1 mark	1 + 1 mark (Circle & Centred)
Horizontal axis named	1 mark	
6 items illustrated	2 marks each graded (2/1/0)	2 marks each graded (2/1/0)

- Accept any suitable graph / chart.
- Naming of graph / chart type is not sufficient for title marks. The title must have reference to chart content and it can be written anywhere on the graph.
- If graph paper is not used deduct 2 marks from total.
- Apply the 2 marks graded if the numbered spaces and the column widths are not plotted accurately.

- (ii) Explain briefly **one** advantage for a country of having a large number of export partners.

Any valid explanation 2 + 2 marks

B. Economic Development

Examine how **two** of the following factors influence the level of economic development in any developing economy that you have studied:

- Physical factors
- Social factors
- Cultural factors
- Political factors.

[30m]

Developing economy named	2 marks
Factor 1 examined	7 x SRP's
Factor 2 examined	7 x SRP's

- Discussion without reference to a named developing economy max 2 x SRP's.
- Max 1 x SRP per factor if merely a description of the factor with no reference to influence on levels of economic development.
- Max 7 x SRP's if only one factor examined.
- Positive or negative interpretation is acceptable.

C. European Union Policy

Examine how European Union Policy influences economic activity in Ireland.

[30m]

Influence on economic activity identified	2 marks
Examination	14 x SRP's

- Credit second influence on economic activity identified for 1 x SRP. All further influences require examination.
- Credit reference to EU policy for 1 x SRP. All further policies require examination.
- Discussion without reference to European Union policy max 2 x SRP's.
- Discussion without reference to economic activity in Ireland max 2 x SRP's.
- Positive or negative interpretation is acceptable.

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

A. Population - Ireland

Predicted Irish Population by Broad Age Group and Sex in 2040

Age Group (years)	Males (%)	Female (%)
0 – 14	17%	16%
15 – 64	64%	62%
65+	19%	22%

Amended from US Census Bureau

Examine the data above showing the predicted Irish population, by broad age group and sex in 2040 and answer each of the following questions.

[20m]

(i) Using graph paper, draw a suitable graph to illustrate this data.

	Bar Chart	Pie Chart
Title	2 marks	2 marks
Vertical axis named	1 mark	1 + 1 mark (Circle & Centred)
Horizontal axis named	1 mark	
6 items illustrated	2 marks each graded (2/1/0)	2 marks each graded (2/1/0)

- Accept any suitable graph / chart.
- Naming of graph / chart type is not sufficient for title marks. The title must have reference to chart content and it can be written anywhere on the graph.
- If graph paper is not used deduct 2 marks from total.
- Apply the 2 marks graded if the numbered spaces and the column widths are not plotted accurately.

(ii) Explain briefly **one** advantage of predicting future population characteristics.

Any valid explanation 2 + 2 marks

B. Urban Functions

Name, locate (using accepted notation) and explain **three** different urban functions evident on the aerial photograph of Westport accompanying this paper.

[30m]

Three different urban functions @ 10 marks each

For each urban function:

Function named	2 marks
Function located	2 marks
Function explained	3 x SRP's

- Aerial photograph evidence must be correct notation e.g. left background etc.
- If no aerial photograph evidence given, only lose aerial photograph evidence marks.
- Credit 1 x SRP for example of each of the functions named.

C. Population

Examine how levels of development are influenced by population characteristics such as population structure, density and growth etc., with reference to examples that you have studied.

[30m]

Examples	2 + 2 marks
Examination	13 x SRP's

- Discussion without reference to population characteristics max 2 x SRP's.
- Discussion without reference to influence on levels of development max 2 x SRP's.
- Positive or negative interpretation is acceptable.

Question 11

A. Aerial Photograph

Examine the aerial photograph of Westport accompanying this paper.
Draw a sketch map of the aerial photograph, half the length and half the breadth.
On it, correctly show and label each of the following:

- The river
- A bridge
- A large car park in the background
- The main road running from the centre foreground to the right background.

[20m]

Sketch Outline	4 marks
4 features @ 4 marks each	Shown 3 marks (graded 3/1/0)
	Named 1 mark

- If sketch is traced or only a section of the aerial photograph is drawn, lose 4 marks for sketch outline and lose 3 marks for showing per item. Allow naming marks only.
- The measurement required are 14.2 cm by 9.25 cm but allow 0.5 cm ($2\frac{1}{2}$ small squares) difference on each side.
- If Ordnance Survey map is used instead of aerial photograph 0 marks.
- Labels may be written on the sketch map or in a key.
- There must be an attempt to show feature for naming marks to be awarded. If not shown, 0 marks for naming.
- The features must be labelled on the sketch or in a key. If not labelled, 0 marks for showing.

B. Irish Migration

Describe and explain changes in patterns of migration to and from Ireland over time.

[30m]

Changing pattern to Ireland identified	2 marks
Changing pattern from Ireland identified	2 marks
Description/Explanation	13 x SRP's

- All further changes in patterns require explanation.
- If discussion of only migration to Ireland or only of migration from Ireland max 7 x SRP's.
- If description of changes in patterns of migration with no explanation max 7 x SRP's.

C. Urban Growth – Developing World City

Problems can develop from the growth and expansion of urban centres.

Discuss this statement with reference to **one** developing world city that you have studied.

[30m]

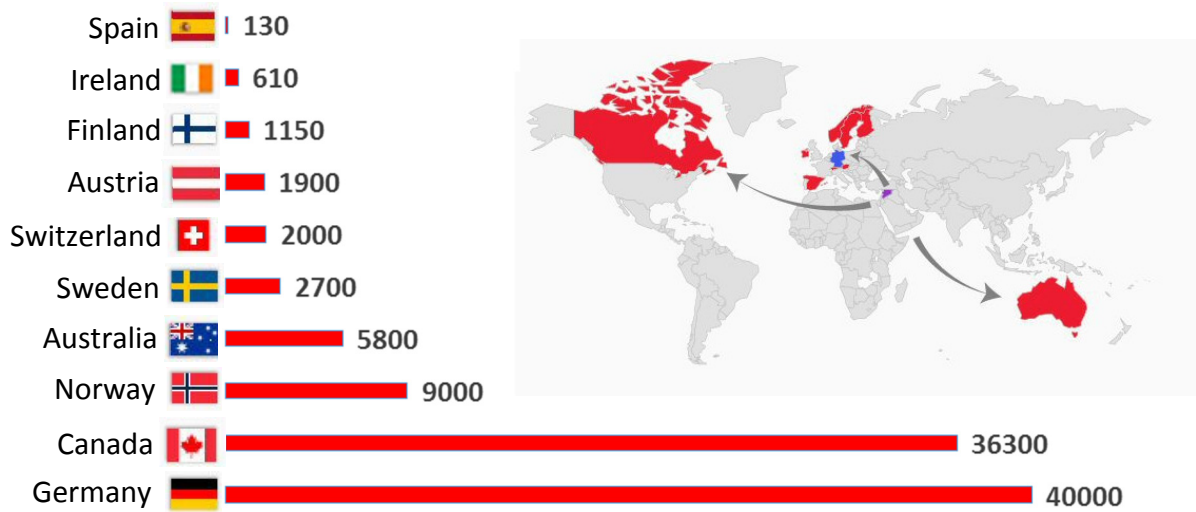
Example of developing world city	2 marks
Problems identified	2 + 2 marks
Discussion	12 x SRP's

- All further problems require discussion.
- Accept any valid example of a developing world city or part there of irrespective of size.
- Discussion without reference to problems max 2 x SRP's.
- Discussion without reference to named developing world city max 2 x SRP's.
- Max 2 x SRP's for discussion on solutions.

Question 12

A. Migration

Confirmed Numbers of Places Pledged by Selected Countries to Syrian Refugees
as of 11 December, 2015



Note: Figures relate to both resettlement of Syrian refugees and other forms of legal admission.

Amended from UNHCR and *The Independent*

Examine the chart above showing the confirmed number of places pledged by selected countries to Syrian refugees as of the 11 December, 2015 and answer each of the following questions.

- How many places did Ireland pledge to Syrian refugees as of the 11 December, 2015?
- Which country, that is not a member of the European Union, pledged the most number of places?
- Calculate the total number of places pledged by the European Union member states listed above.
- List **two** push factors that result in people migrating.
- Explain briefly **one** challenge faced by countries receiving large numbers of migrants.
- Explain briefly **one** positive impact of immigration for the receiving country.

[20m]

- | | | |
|-------|-----------------------------|-------------|
| (i) | 610 | 2 marks |
| (ii) | Canada | 2 marks |
| (iii) | 46,490 | 4 marks |
| (iv) | Any two push factors listed | 2 + 2 marks |
| (v) | Any valid explanation | 2 + 2 marks |
| (vi) | Any valid explanation | 2 + 2 marks |

B. Central Place Theory

Describe and explain Central Place Theory with reference to example(s) that you have studied.

[30m]

Example	2 marks
Description/Explanation	14 x SRP's

- Credit second named example for 1 x SRP from description/explanation.
- Question not tied to Ireland.
- Max 7 x SRP's if description of theory with no explanation.
- A valid labelled diagram can receive 1 x SRP from description/explanation and if extra relevant information on the diagram it can receive a further 1 x SRP.

C. Urban Development

Examine how urban centres change over time with reference to example(s) that you have studied.

[30m]

Change identified	2 marks
Example	2 marks
Examination	13 x SRP's

- Credit second example for 1 x SRP from examination.
- Credit second change identified for 1 x SRP. All further changes require examination.
- If no reference to urban centre max 2 x SRP's.
- Urban centre can be a city, town or a specific part of a city or town.

SECTION 3 – OPTIONS

Questions 13 to 24

Attempt **ONE** question

Note: 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.

Questions 13 - 24

Outline Marking Scheme and Overall Coherence (OC) marking descriptors

Outline Marking Scheme:

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

Marking Descriptors Overall Coherence (OC):

In awarding Overall Coherence (OC) the examiner will consider how well the candidate deals with the set question and will follow the following marking descriptors:

*Overall Coherence (20 marks)		
Excellent	20	Excellent ability to relate knowledge to the set question. Excellent, comprehensive response demonstrating detailed knowledge of subject matter.
Very Good	17	Considerable strength in relating the knowledge to the set question. Very good response demonstrating very broad knowledge of the subject matter.
Good	14	Reasonable capacity to relate knowledge appropriately to the set question. Good response with worthwhile information. Broad knowledge of the subject matter demonstrated.
Fair	10	Some effort to relate knowledge to the set question. Some relevant information presented but insufficient application of information to set question.
Weak	6	Very limited engagement with set question. Identified some relevant information.
Poor	0	Failure to address the question resulting in a largely irrelevant answer.

Global Interdependence

Note: 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.

13. Views of development and underdevelopment involve contrasting models and approaches to development.
Discuss.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is on the idea that there are different views of development and underdevelopment.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

14. Examine sustainable development as a model for future development.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of the question is on sustainable development as a model for future development.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

15. Discuss the human and natural causes of desertification and deforestation.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is on human and natural causes of desertification and deforestation.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

Geoecology

Note: 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.

16. Examine the general composition and characteristics of any **one** soil type.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is the composition and characteristics of one soil type.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

17. Various soil patterns have developed in different regions of the world because of the action of different soil forming processes.
Discuss.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of the question is on different soil patterns developing around the world as a result of soil forming processes.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

18. Examine the characteristics of **one** biome that you have studied, with reference to any **three** of the following:

- Climate
- Soils
- Flora
- Fauna.

[80m]

Number of aspects	3 @ 20 marks each
Identifying aspect	4 marks
Discussion	8 x SRP's
Overall Coherence	20 marks graded*

- Focus of question is on any three characteristics of one biome.
- Apply a three aspect scheme.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

Culture and Identity

Note: 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.

19. Examine the importance of religion as an indicator of culture.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is how religion is important as a cultural indicator.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

20. Many states have different cultural groups within their borders.
Discuss.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is different cultural groups exist within states.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

21. Identity as a concept entails a variety of cultural factors.
Discuss this statement with reference to a case study of a European region that you have studied.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is how identity is shaped by cultural factors.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

The Atmosphere - Ocean Environment

Note: 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.

22. Circulation in both the atmosphere and the oceans gives rise to different weather patterns.

Discuss.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of the question is how the movement of air and sea result in different weather patterns.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

23. Climate characteristics change over time and space.

Discuss.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is on how climate characteristics change over time and space.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

24. Examine how climate characteristics influence economic development.

[80m]

Number of aspects	3 @ 20 marks each	4 @ 15 marks each
Identifying aspect	4 marks	3 marks
Discussion	8 x SRP's	6 x SRP's
Overall Coherence	20 marks graded*	20 marks graded*

- Focus of question is on the impact of climate characteristics on economic development.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's (different illustrations and in different aspects).

GEOGRAPHICAL INVESTIGATION

1. INTRODUCTION (5 marks):

4 x SRP's: 1 mark each

Overall Coherence: 1 mark

- Aims must relate to investigation and must be specific and qualified.

2. PLANNING (5 marks):

4 x SRP's: 1 mark each

Overall Coherence: 1 mark

- Identifying information required and methods of gathering.
- Reference to revision must be specific.
- All statements must be qualified e.g. practicing equipment where/how/why?
- Work completed solely by the teacher = 0 marks.

3. GATHERING OF DATA (40 marks):

Two methods / tasks @ 20 marks each.

For each method / task: 9 x SRP's @ 2 marks each

Overall coherence: 4 marks graded (4/2/0)

- The gathering section must be activity based. This section deals with the reporting/description of the activities carried out.
- A method may be a task which is a group of relevant linked activities. Tasks/methods must be reported in the context of the stated aims.
- Secondary sources of information can generate primary data.
- Simple statements are not sufficient e.g. I observed the features, I recorded the results, I sketched the landform etc. There must be some qualification of the statement.
- Credit may be given to diagrams/sketches if they illustrate the activity of gathering. One SRP per task/method for well-drawn, neat, relevant annotated sketches/diagrams that are activity based and illustrate the gathering process.
- A further one SRP per task/method can be awarded in the event that there is additional information on a sketch (not in the written section).
- Sketches/diagrams must be on the appropriate pages in the gathering section.
- No marks for results in this section.
- Coherence is an overall mark awarded for the relevance of the work in this section to the stated aims.

4. RESULTS, CONCLUSIONS, EVALUATION (30 marks):

Three headings @ 8 marks each.

For each heading: 4 x SRP's @ 2 marks each

Overall coherence: 6 marks graded (6/4/2/0)

- Marks only awarded for Results / Conclusions / Evaluations if in the appropriate section of the reporting booklet.
- Results / Conclusions / Evaluations must be tied to aims and tied to activities carried out in the gathering of information section (Section 3).
- Results can be extracted from charts/table on appropriate graph pages.
- Conclusions are based directly or indirectly on the results, otherwise it is evaluation.
- Conclusions are not tied to a specific result but must be relevant to the tasks completed in Section 3.
- Evaluations should demonstrate higher order thinking and should have a range of themes. They should relate to the aims in Section 1 and the tasks completed in Section 3. They must be specific and qualified.
- Evaluation can be forward-thinking as well as retrospective.
- No double marking of information relating to issues in Section 3.

5. ORGANISATION & PRESENTATION OF RESULTS (20 marks):

Presentation: 8 x SRP's @ 2 marks each

Overall coherence: 4 marks graded (4/2/0)

- There must be two different forms of presentation of results e.g. graphs, chart, map, table, sketch etc.
- Results must be presented on the appropriate graph pages in Section 4 of the reporting booklet.
- Maximum of 4 x SRP's per method of presentation.
- Overall Coherence refers to the quality and clarity of the presentation. It is 4 marks for the overall presentation. Cannot be awarded OC marks if only one method of presentation is evident.

BREAKDOWN OF PRESENTATION MARKS

BAR CHART / TREND GRAPH / SCATTER GRAPH etc. :

Suitable Title	2 marks
1 axis with units or scale:	1 x SRP = 2 marks
Each of 2 correctly drawn & labelled points / bars:	2 x SRP = 4 marks

PIE CHART:

Suitable Title:	1 x SRP = 2 marks
Circle with correctly placed centre:	1 x SRP = 2 marks
Each of 2 correctly drawn & labelled sectors:	2 x SRP = 4 marks

RANK ORDER TABLE / TABLE:

Multiple Row/Column Table

Suitable Title:	1 x SRP = 2 marks
Box:	1 x SRP = 2 marks
Rows / Columns x2 labelled:	2 x SRP = 2 + 2 marks

Single Row / Column Table

Suitable Title:	1 x SRP = 2 marks
Box:	1 x SRP = 2 marks
Row / Column labelled:	1 x SRP = 2 marks
Relevant information:	1 x SRP = 2 marks

SKETCH/MAP:

Suitable Title:	1 x SRP = 2 marks
Frame:	1 x SRP = 2 marks
Two relevant pieces of information re results:	2 x SRP = 4 marks

Appendix 1

List of Geographical Investigation Topics 2016

1. Traffic patterns in a local area.
2. Population in a local area.
3. A local environmental issue.
4. Changing land-use in a local area.
5. Local weather patterns.
6. The impact of geomorphic process/processes and/or human activity on the development of landform(s) in a glaciated or fluvial or coastal or karst environment.

Appendix 2



Coimisiún na Scrúduithe Stáit

Marcanna Breise as ucht freagairt trí Ghaeilge

Léiríonn an tábla thíos an méid marcanna breise ba chóir a bhronnadh ar iarrthóirí a ghnóthaíonn níos mó ná 75% d'iomlán na marcanna.

N.B. Ba chóir marcanna de réir an ghnáthráta a bhronnadh ar iarrthóirí nach ngnóthaíonn níos mó ná 75% d'iomlán na marcanna don scrúdú. Ba chóir freisin an marc bónais sin a **shlánú síos**.

Tábla 400 @ 10%

Bain úsáid as an tábla seo i gcás na n-ábhar a bhfuil 400 marc san iomlán ag gabháil leo agus inarb é 10% gnáthráta an bhónais.

Bain úsáid as an ngnáthráta i gcás 300 marc agus faoina bhun sin. Os cionn an mharc sin, féach an tábla thíos.

Bunmharc	Marc Bónais
301 - 303	29
304 - 306	28
307 - 310	27
311 - 313	26
314 - 316	25
317 - 320	24
321 - 323	23
324 - 326	22
327 - 330	21
331 - 333	20
334 - 336	19
337 - 340	18
341 - 343	17
344 - 346	16
347 - 350	15

Bunmharc	Marc Bónais
351 - 353	14
354 - 356	13
357 - 360	12
361 - 363	11
364 - 366	10
367 - 370	9
371 - 373	8
374 - 376	7
377 - 380	6
381 - 383	5
384 - 386	4
387 - 390	3
391 - 393	2
394 - 396	1
397 - 400	0

Geographical Investigation – Not included in total for bonus marks.

Note: Modified marking scheme available for candidates who sat a modified examination paper.

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