

Coimisiún na Scrúduithe Stáit State Examinations Commission

Leaving Certificate 2017

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.

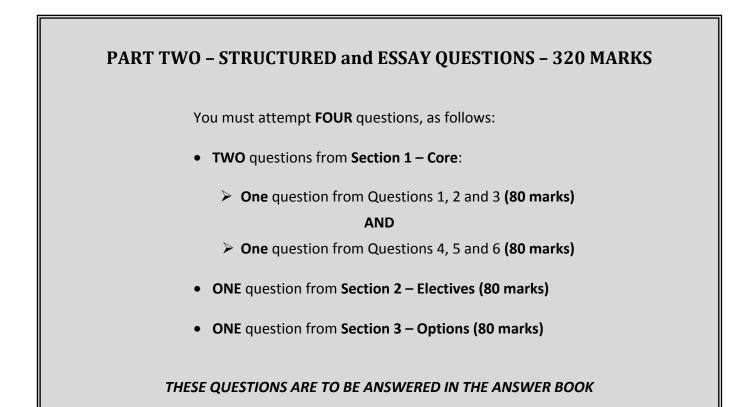
In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when 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. are 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					
		Award any 10 q	uestion	s @ 8 m	narks each.
		Mark all questions attempted and			
			lo grad		
Q.1	(;)	B 2m	Q.7	(;)	Castle 2m
Q.1	(i)	C	Q.7	(i) (ii)	Nature Reserve 2m
		A 2m		(iii)	1.8 – 2.2 (km) 2m
		D 2m		(iv)	10-12 (km ²) 2m
				()	10 12 (((())) = (())
	(ii)	Caledonian 1m	Q.8	(i)	False 1m
	. ,	Armorican 1m		(ii)	False 1m
				(iii)	True 1m
Q.2	(i)	B 1m (ii) Glacial 1m		(iv)	False 1m
		A 1m Fluvial 1m		(v)	True 1m
		D 1m Glacial 1m		(vi)	True 1m
		C 1m Karst 1m		(vii)	False 1m
				(viii)	True 1m
Q.3	(i)	D 1m	Q.9	В	Centre foreground 2m
	.,	A 1m		С	Left middleground 2m
		C 1m		D	Centre middleground 2m
		B 1m		Е	Centre background 2m
	(ii)	Any valid process 2m			
	(iii)	Groynes 2m			
Q.4	(i)	D 1m (ii) Chemical 1m	Q.10	(i)	Ulster 2m
	()	A 1m Chemical 1m		(ii)	False 2m
		B 1m Phy/Mech 1m		(iii)	Depressions 2m
		C 1m Phy/Mech 1m		(iv)	Isohyets 2m
	Th -		0.11	(;)	Dordor 3 m
Q.5		Burren 1m hern European Plain 1m	Q.11	(i) (ii)	Border 2m West 2m
	Wall			(ii) (iii)	Dublin 1m
		erdam 1m		(11)	Mid-East 1m
		de Calais 1m		(iv)	Valid explanation 1+1m
		erford Co Council 1m		(••)	
		nic World 1m			
		perate Oceanic 1m			
Q.6	(i)	River braiding 1m	Q.12	(i)	2,022,895 2m
		V-shaped valley or Meander 1m		(ii)	18,981 2m
		Plateau 1m		(iii)	6.3 (%) 2m
		Meander 1m		(iv)	Two valid reasons 1+1m
	(ii)	North West 2m			
	(iii)	Two valid patterns 1+1m			



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

1A. 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:

- > The area of the Reservoir west of Lee Bridge
- > The course of the River Lee from W 250 667 to W 314 709
- > The entire area of land above 200 metres at Cill na Martra
- > The entire area of coniferous plantation at W 25 66.

Sketch Outline 4 features @ 4 marks each:

4 marks (4/0) Shown 3 marks (graded 3/1/0) Label 1 mark

- Sketch outline must be drawn to half scale. Required size is 12cm x 9cm [allow a difference of up to 0.5cm]. The sketch must have four sides drawn.
- 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.
- > If the aerial photograph is used instead of the Ordnance Survey map 0 marks.
- > The features may be labelled on the sketch or in a key. If not labelled, 0 marks for showing.
- > There must be an attempt to show feature for naming marks to be awarded.
- Sketch may be drawn in the answer book or on graph paper.

[20m]

1B. Volcanic Activity

Examine the influence of volcanic activity on the development of the Irish landscape with reference to **each** of the following:

- Intrusive features
- Extrusive features.

Examination with reference to intrusive features	7/8 x SRP's
Examination with reference to extrusive features	7/8 x SRP's

- Credit a named intrusive feature and a named extrusive feature for 2 x SRP's from examination.
- Credit 1 x SRP for example of Irish landscape (intrusive) from examination.
- Credit 1 x SRP for example of Irish landscape (extrusive) from examination.
- Max 8 x SRP's if examination of influence of volcanic activity with reference to only intrusive or extrusive features.
- Question tied to Irish landscape.
- Max 1 x SRP for examination of intrusive features and max 1 x SRP for examination of extrusive if the examination is not relevant to the Irish landscape.
- Credit a relevant labelled diagram for 1 x SRP for intrusive features and 1 x SRP for extrusive features.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram to a max of 1 x SRP in total. This must be information not already given in the written account.

1C. Human Interaction with Surface Processes

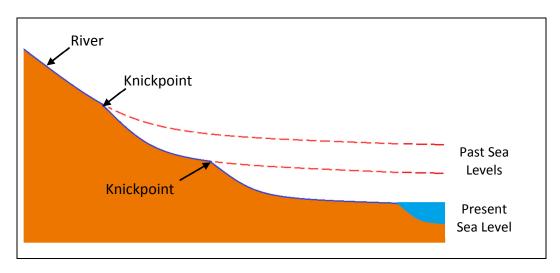
Human activity impacts on surface processes. Examine this statement with reference to **one** of the following:

- > The impact of flood control measures on river processes
- > The impact of coastal defence measures on coastal processes
- > The impact of human activities on mass movement processes.

Impact on process identified	2 marks
Examination	14 x SRP's

- Credit 2nd impact on process identified for 1 x SRP from examination. All further impacts require examination.
- Credit two named examples for 2 x SRP's from examination.
- Credit a relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 2 x SRP's. This must be information not already given in the written account.
- Discussion may be positive or negative.
- Max 2 x SRP's if merely a description of human activities with no reference to impact on surface processes.
- Question not tied to Ireland.

2A. Adjustment to Base Level



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

- (i) Explain briefly **two** reasons why river rejuvenation occurs.
- (ii) Explain briefly what is meant by the term *knickpoint*.
- (iii) Name **two** features of river rejuvenation not shown in the diagram above.
- (iv) How many times has river rejuvenation taken place in the diagram above?

[20m]

(i)	Reason 1 explained	2 + 2 marks
	Reason 2 explained	2 + 2 marks

- (ii) Valid explanation 2 + 2 marks
- (iii) Two features named
- (iv) Two

2 + 2 marks

4 marks

Page 7 of 46

2B. Chemical Weathering

With the aid of a labelled diagram(s), explain how chemical weathering has shaped **one** of the following:

- The surface karst landscape or
- The underground karst landscape.

[30m]

[30m]

Labelled diagram	4 marks (4/0)
Explanation	13 x SRP's

- Credit a named process of chemical weathering for 1 x SRP from explanation. All further processes require explanation.
- Credit a named landform for 1 x SRP from explanation.
- Credit one named example for 1 x SRP from explanation.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 1 x SRP's. This must be information not already given in the written account.
- Credit a max of 2 x SRP's if merely a description of chemical weathering with no reference to shaping of the surface or underground karst landscape.
- If explanation of both surface and underground features, mark both separately and award the highest mark.
- Question not tied to Ireland.

2C. The Tectonic Cycle

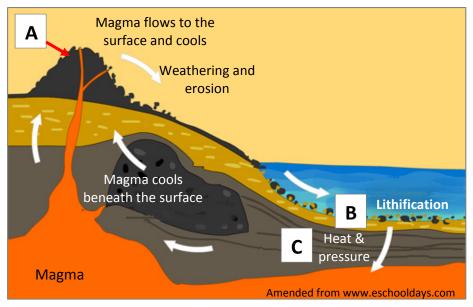
Examine how the tectonic cycle helps to explain the global distribution of **one** of the following:

- Volcanoes
- Earthquakes
- Fold mountains.

Reference to global distribution	2 + 2 marks
Examination	13 x SRP's

- Credit reference to the tectonic cycle for 1 x SRP from examination.
- Credit relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 2 x SRP's. This must be information not already given in the written account.
- If there is no reference to how the tectonic cycle helps to explain the global distribution of either volcanoes, earthquakes or fold mountains max 2 x SRP's.

3A. Rock Cycle



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

- (i) Name the category of rock formed at **A** and name the category of rock formed at **B**.
- (ii) Name the category of rock formed at **C** and name **one** specific Irish location where this rock can be found.
- (iii) Explain briefly what is meant by the term *lithification*.
- (iv) Explain briefly what is meant by the term *plutonic rock*.
- (v) Explain briefly how rocks are changed by either *thermal metamorphism* **or** *regional metamorphism*.

[20m]

Α 2 marks (i) Igneous rock В Sedimentary rock 2 marks (ii) С Metamorphic rock 2 marks One Irish location 2 marks Valid explanation (iii) 2 + 2 marks 2 + 2 marks Valid explanation (iv) Valid explanation 2 + 2 marks (v)

3B. Surface Processes

Answer (i) or (ii).

(i) Examine the impact of the **processes of erosion** on the formation of **one** fluvial landform, coastal landform **or** glacial landform that you have studied.

Process of erosion named	2 marks
Landform named	2 marks
Examination	13 x SRP's

- Credit 2nd process of erosion named for 1 x SRP from examination. All further references to processes of erosion require examination.
- Credit 1 x SRP for example from examination.
- Focus of question is on the impact of the processes of erosion on the formation of one landform. Explanation of processes of deposition 0 marks.
- Credit a relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 2 x SRP's. This must be information not already given in the written account.
- 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 **one** mass movement process that you have studied.

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

- > All further factors require description/explanation.
- Credit 1 x SRP for example from description/explanation.
- Credit a relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 2 x SRP's. This must be information not already given in the written account.
- Credit a max of 2 x SRP's if merely a description of mass movement with no reference to factors governing its operation.

3C. Seismic Activity

Explain how the occurrence of seismic activity can be predicted and its effects reduced.

Reference to prediction of seismic activity	2 marks
Reference to reducing impacts of seismic activity	2 marks
Explanation	13 x SRP's

- Credit 2nd reference to prediction of seismic activity for 1 x SRP from explanation. All further references much be explained.
- Credit 2nd reference to reducing impacts of seismic activity for 1 x SRP from explanation. All further references much be explained.
- Credit reference to occurrence of seismic activity for 1 x SRP from explanation.
- Credit a relevant labelled diagram for 1 x SRP.
- Diagram without labelling 0 marks.
- Credit additional relevant information on a labelled diagram for 2 x SRP's. This must be information not already given in the written account.
- Take a broad interpretation of prediction of seismic activity and reducing effects of seismic activity.
- Max 7 x SRP's if only prediction or only reduction of effects explained.

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

4A. 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 course of a named river in the region
- The outline of a named feature of relief (upland or lowland) in the region
- **Two** named urban centres in the region.

Map outline
4 features @ 4 marks each

4 marks graded (4/2/0) Shown 2 marks graded (2/1/0) Named 2 marks

- > Do not accept an outline map of an Irish or a European region.
- > Accept any valid type of urban centre irrespective of size.
- > Outline map may be drawn in the answer book or on graph paper.
- Names may be written on the sketch map or in a key.
- Credit marks for naming of required features if names are valid and correct even if features are not shown or are shown incorrectly.
- Where features are shown but named incorrectly or not named at all, then 0 marks for showing and 0 marks for naming.

[20m]

4B. Tertiary Economic Activity – European Region

Account for the development of **one** tertiary economic activity in a **European** region (not in Ireland), that you have studied.

[30m]

Examination

15 x SRP's

- Credit factors influencing the development of a named tertiary economic activity for 2 x SRP's from examination. All further factors require examination.
- Credit two specific examples of tertiary economic activities for 2 x SRP's from examination.
- A valid labelled sketch map can receive 1 x SRP from examination and if additional relevant information on the sketch not already in the written account it can receive a further 1 x SRP.
- Accept examination of only one tertiary economic activity (transport, tourism, financial services etc.). If more than one tertiary economic activity examined, mark each separately and award the highest mark.
- > Do not accept examination of an Irish or Continental/Sub-continental region.
- > Examination without reference to named or clearly inferred region 0 marks.
- Max 2 x SRP's if merely a description of the activity with no reference to development of the activity.
- > Accept a positive or negative interpretation of development.

4C. Primary Economic Activity – Irish Region

Examine the physical factors that influence the development of **one** primary economic activity in an **Irish** region that you have studied.

Physical factors identified	2 + 2 marks
Examination	13 x SRP's

- Credit two specific examples of primary economic activities for 2 x SRP's from examination.
- Accept examination of one primary economic activity only (e.g. agriculture, forestry, fishing or mining). Forestry can be examined as one primary economic activity or it can form part of an examination of agriculture.
- If more than one primary economic activity examined, mark each separately and award the highest mark.
- Only accept examination of the influence of physical factors on the development of the primary activity.
- Max 2 x SRP's if merely a description of the primary economic activity with no reference to the physical factors influencing its development.
- > Do not accept examination of a European or Continental / Sub-Continental region.
- > Examination without link to a named or clearly inferred region 0 marks.
- A valid labelled sketch map can receive 1 x SRP from examination and if additional relevant information on the sketch not already in the written account it can receive a further 1 x SRP.

5A. Overseas Travel

			Trips to Ireland by Area of Residence			
Year	Irish Residents Trips Overseas	Trips to Ireland	Great Britain	Other Europe	North America	Other Areas
2008	7,901,500	7,839,800	3,866,000	2,616,700	1,007,900	349,200
2009	7,066,900	6,963,600	3,274,900	2,402,300	979,500	306,900
2011	6,280,400	6,500,200	2,867,200	2,279,600	995,400	358,000
2013	6,298,800	6,974,700	2,917,400	2,465,800	1,158,600	432,900
2015	6,965,000	8,636,600	3,554,400	3,040,500	1,503,300	538,400

Overseas Travel – Trips into and out of Ireland

Amended from CSO statistics

Examine the table above showing the number of trips into and out of Ireland in selected years and answer each of the following questions.

- (i) In which year did trips into Ireland first exceed trips overseas by Irish residents?
- (ii) Which area of residence had the highest number of trips to Ireland for each of the selected years? State **two** reasons for this.
- (iii) What was the trend in the number of Irish residents' trips overseas between 2013 and 2015? State **one** reason for this trend.
- (iv) Explain briefly **two** factors that impact on overseas travel.

[20m]

(i)	2011	2 marks
(ii)	Great Britain	2 marks
	Two reasons stated	2 + 2 marks
(iii)	Increasing	2 marks
	Reason stated	2 marks
(iv)	Factor 1 explained	2 + 2 marks
	Factor 2 explained	2 + 2 marks

5B. Population Distribution – Continental / Sub-Continental Region

Account for the distribution of population throughout a **Continental / Sub-Continental** region (not in Europe) that you have studied.

[30m]

Examination

15 x SRP's

- Credit two named locations within the region for 2 x SRP's from examination.
- Credit reference to factors affecting population distribution for 2 x SRP's from examination.
- > Do not accept an examination of an Irish or European region.
- Examination without reference to a named or clearly inferred region 0 marks.
- Max 2 x SRP's if merely a description of population distribution without explanation.
- A valid labelled sketch map can receive 1 x SRP from examination and if additional relevant information on the sketch not already in the written account it can receive a further 1 x SRP.

5C. The European Union

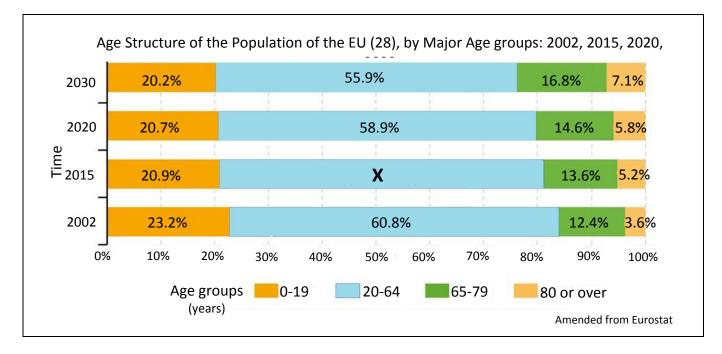
Explain **each** of the following challenges currently facing European Union member states:

- Social challenges
- Economic challenges.

Social challenge identified	2 marks
Explanation of social challenges	6/7 x SRP's
Economic challenge identified	2 marks
Explanation of economic challenges	6/7 x SRP's

- Max 7 x SRP's if only social or economic challenges explained.
- The answer can be based on one member state, a number of member states, the EU in general or a combination of these.

6A. European Union Population



Examine the chart above showing the age structure of the population of the European Union (EU 28) in 2002 and 2015 and the projected age structure of the population in 2020 and 2030 and answer each of the following questions.

- (i) Calculate **X**, the percentage of the EU (28) population aged between 20 and 64 years in 2015.
- (ii) In which age group is the percentage of the population projected to almost double, from 2002 to 2030? State **one** reason for this projected increase.
- (iii) In which **two** age groups is the percentage of the population projected to decline from 2002 to 2030?
- (iv) Explain briefly **two** challenges presented by the projected decline in the percentage of population in these two age groups.

[20m]

(i)	X 60.3 (%)	4 marks
(ii)	80 (years) or over	2 marks
	One reason stated	2 marks
(iii)	0-19 (years) & 20 to 64 (years)	2 + 2 marks
(iv)	Challenge one explained	2 + 2 marks
	Challenge two explained	2 + 2 marks

6B. Secondary Economic Activity – Continental / Sub-Continental Region

Examine the development of secondary economic activity in a **Continental / Sub-Continental** region (not in Europe) that you have studied, with reference to **two** of the following factors:

- Markets
- Infrastructure
- Government policy
- Raw materials.

[30m]

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

- Credit two specific examples of secondary economic activities for 2 x SRP's from examination.
- > Do not accept examination of an Irish or European region.
- Examination without reference to a named or clearly inferred region 0 marks.
- Max 1 x SRP 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 examined.
- > Positive or negative interpretation is acceptable.
- A valid labelled sketch map can receive 1 x SRP from examination and if additional relevant information on the sketch not already in the written account it can receive a further 1 x SRP.

6C. Concept of a Region

Explain **three** differences between the characteristics of core regions and the characteristics of peripheral regions, with reference to examples that you have studied.

Core region named	2 marks
Peripheral region named	2 marks
Three differences explained	13 x SRP's (5/4/4 x SRP's)

- If merely a description of one or both types of region with no differences explained max 2 x SRP's.
- A valid labelled sketch map can receive 1 x SRP from examination and if additional relevant information on the sketch not already in the written account it can receive a further 1 x SRP.
- Differences could be economic, social, environmental, physical etc.
- > Positive or negative interpretation is acceptable.

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

7A. Energy Production

DECD Electricity Generation Mix 2015 (%)		
Electricity Source	2015	
Hydro	14%	
Nuclear	18%	
Gas	26%	
Coal	30%	
Oil	2%	
Other	10%	

OECD Electricity Generation Mix 2015 (%)

Amended from www.iea.org

Examine the data above showing the electricity generation mix, for the Organisation for Economic Cooperation and Development (OECD) in 2015 and answer each of the following questions.

(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 using energy sources other than fossil fuels.

Valid explanation 2 + 2 marks

Page 19 of 46

[4m]

[16m]

7B. Location of Economic Activity

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

Explain **two** reasons why a multinational company would choose to locate in the area covered by the map **and** explain **one** reason why a multinational company might choose not to locate in this area.

Use evidence from the Ordnance Survey map to support each reason.

[30m]

Three reasons @ 10 marks each.			
Reason stated	2 marks		
Map evidence	2 marks		
Explanation	3 x SRP's		
	Reason stated Map evidence		

- Two reasons must deal why a multinational company would choose to locate in the area covered by the map and one reason why it might choose not to locate in this area.
- > Accept a maximum of two reasons on transport.
- > Where more than three reasons are explained mark each and award highest mark.
- If the aerial photograph is used allow marks for stating reasons only if valid and relevant to the Ordnance Survey map.

7C. Colonialism

Examine the challenges resulting from colonialism faced by a developing economy that you have studied.

Challenges identified	2 + 2 marks
Developing economy named	2 marks
Examination	12 x SRP's

- All further challenges require examination.
- Discussion without reference to a named developing economy max 2 x SRP's.
- Focus of the question is on the challenges faced by a developing economy as a result of colonialism.
- Max 2 x SRP's if merely a description of colonialism with no reference to the challenges faced by the developing economy as a result of colonialism.
- Max 2 x SRP's if merely a description of the developing economy with no reference to challenges faced as a result of colonialism.

8A. 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:

- The built up area of Macroom
- The entire route of the R584 road
- The entire route of the N22 road
- An electricity transmission line.

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

- Sketch outline must be drawn to half scale. Required size is 12cm x 9cm [allow a difference of up to 0.5cm]. The sketch must have four sides drawn.
- 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.
- If the aerial photograph is used instead of the Ordnance Survey map 0 marks.
- > The features may be labelled on the sketch or in a key. If not labelled, 0 marks for showing.
- > There must be an attempt to show feature for naming marks to be awarded.
- Sketch may be drawn in the answer book or on graph paper.

[20m]

8B. Multinational Company and Globalisation

Examine how globalisation impacts on world trade with reference to the operations of **one** multinational company that you have studied.

[30m]

Multinational company named	2 marks
Impact of globalisation on world trade identified	2 marks
Examination	13 x SRP's

- Credit 2nd impact identified for 1 x SRP from examination. All further impacts require examination.
- > Discussion without link to a named multinational company max 2 x SRP's.
- Max 2 x SRP's if merely a description of a multinational company.
- The multinational company need not be an Irish based company. Question not tied to Ireland.

8C. Economic Activity – Environmental Impact

Discuss how the environmental impact of economic activity can be controlled by a sustainable approach to development.

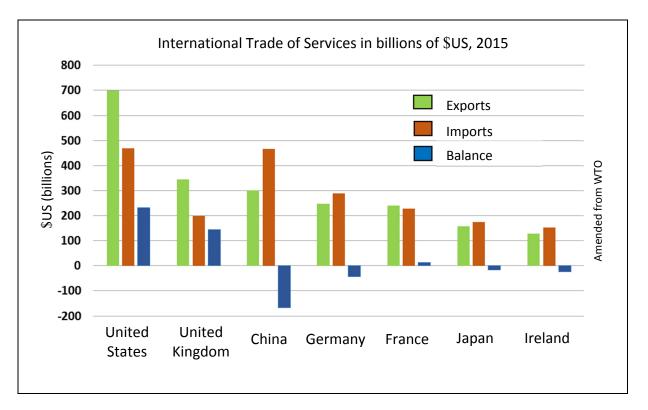
[30m]

Examination

15 x SRP's

- Credit two examples of sustainable approach to development for 2 x SRP's from examination.
- Examination of environmental impact of economic activity without reference to sustainable approach to development max 2 x SRP's.
- Examination of sustainable approach to development without reference to environmental impact of economic activity max 2 x SRP's.
- Economic activity can refer to one economic activity e.g. primary, secondary or tertiary or any combination of these activities.

9A. International Trade



Examine the graph above showing information regarding international trade of services in 2015 and answer each of the following questions.

- (i) Which two countries had the highest value of services exported?
- (ii) Calculate the difference (in \$US) between the value of services exported from China and the value of services exported from the United States.
- (iii) Name **two** countries with a trade surplus.
- (iv) Explain briefly one disadvantage of a trade deficit.
- (v) Name **two** services exported from Ireland.

[20m]

United States and United Kingdom 2 + 2 marks (i) (ii) (\$) 400 billion 4 marks or (\$) 400 2 marks (iii) Two countries named 2 + 2 marks Valid explanation 2 + 2 marks (iv) (v) Two services named 2 + 2 marks

9B. Economic Activity in a Developed Economy

Examine the development of **one** of the following with reference to a developed economy that you have studied:

- Footloose industries
- Financial services
- Mass tourism.

[30m]

Developed economy named	2 marks
Examination	14 x SRP's

- Credit 1 x SRP for example of the activity from examination.
- Examination without reference to a named developed economy max 2 x SRP's.
- Examination of a developing economy 0 marks.
- If more than one developed economy examined, mark each separately and award the highest mark.
- Max 2 x SRP's if merely a description of the activity with no reference to the development of the activity.

9C. European Union Policy

Examine the impact of European Union policy on regional development in Ireland.

Impact on regional development identified	2 marks
Examination	14 x SRP's

- Credit 2nd impact identified for 1 x SRP from examination. All further impacts require examination.
- Credit reference to a European Union policy for 1 x SRP from examination. All further reference to policies require examination.
- Examination without reference to a European Union policy max 2 x SRP's.
- > If merely a description of a policy without reference to regional development max 2 x SRP's.
- Both positive and negative interpretation acceptable.
- > Impacts can be economic, social, environmental etc.

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

10A. Aerial Photograph

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 large sports field
- The triangular street pattern in the centre middleground
- An ecclesiastical building in the left middleground.

[20m]

Sketch Outline		
4 features @ 4 marks each		

4 marks (4/0) Shown 3 marks (graded 3/1/0) Named 1 mark

- Sketch outline must be drawn half the length and half the breadth. The measurements required are 14.2 cm by 9.25 cm but allow 0.5 cm difference on each side. The sketch must have four sides drawn.
- 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.
- If Ordnance Survey map is used instead of the aerial photograph 0 marks.
- > The features must be labelled on the sketch or in a key. If not labelled, 0 marks for showing.
- There must be an attempt to show feature for naming marks to be awarded.
- Sketch may be drawn in the answer book or on graph paper.

10B. Dynamics of Population

Examine how changing fertility and mortality rates impact on population structure with reference to example(s) that you have studied.

[30m]

Impact of changing fertility rates identified	2 marks
Impact of changing mortality rates identified	2 marks
Example of where impacts occur	2 marks
Examination	12 x SRP's

- \blacktriangleright Credit 2nd named example of where impacts occur for 1 x SRP from examination.
- Emphasis of the question is on the impact of changing fertility and mortality rates.
- Discussion of changing fertility and mortality rates with no reference to impact on population structure max 2 x SRP's.
- Max 6 x SRP's if discussion on changing fertility or changing mortality rates only.

10C. Urban Issues

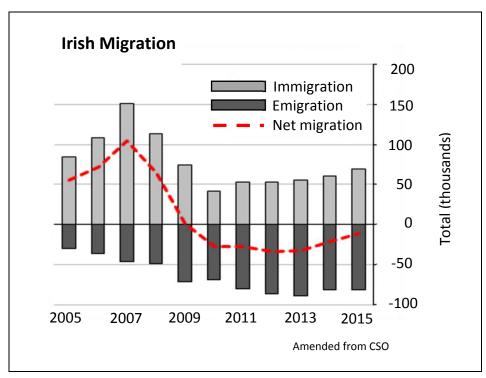
Discuss any two of the following issues that may arise from the growth of urban settlements:

- Heritage issues
- Planning issues
- Environmental issues.

Discussion of Issue 1	7/8 x SRP's
Discussion of Issue 2	7/8 x SRP's

- Credit 1 x SRP for example of issue 1.
- Credit 1 x SRP for example of issue 2.
- Credit 1 x SRP for named example of an urban settlement.

11A. Irish Migration



Examine the graph of Irish migration above and answer each of the following questions.

- (i) In which year was the number of people immigrating equal to the number of people emigrating?
- (ii) When did immigration exceed emigration by more than 100,000?
- (iii) In how many years was emigration greater than immigration?
- (iv) Explain briefly **one** reason why immigration declined between 2007 and 2010.
- (v) Explain briefly the term *net migration*.
- (vi) Name **two** barriers to migration.

[20m]

- (i) 2009 2 marks
- (ii) 2007 2 marks
- (iii) Six 4 marks
- (iv) Valid explanation 2 + 2 marks
- (v) Valid explanation 2 + 2 marks
- (vi) Two barriers named 2 + 2 marks

11B. Urban Land Use

Describe and explain the land-use zones in any city that you have studied.

Land-use zones identified	2 + 2 marks
City named	2 marks
Description/explanation	12 x SRP's

- > Any further land-use zones identified require description/explanation.
- Description/explanation without reference to a named or clearly inferred city: Credit marks for identifying land-use zones only. No marks for description/explanation.
- Reference to city can be a named city or a specific part of a named city.
- Max 6 x SRP's for description/explanation of one land-use zone only.

11C. Dynamics of Population

Examine the impact of any **one** of the following factors on levels of population growth, with reference to example(s) that you have studied:

- Development of resources
- Income levels
- Society and culture
- Technology.

Impact on population growth identified	2 marks
Example of location	2 marks
Examination	13 x SRP's

- Credit 2nd impact identified for 1 x SRP from examination.
- > All further impacts must be examined.
- Credit 2nd example of location for 1 x SRP from examination.
- Discussion without reference to impact on population growth max 2 x SRP's.
- Positive or negative interpretation is acceptable.

[30m]

12A. Population Dynamics

Region	1960	2015
Ireland	54%	37%
Japan	37%	7%
United States	30%	18%

Rural population (% of total population)

Amended from World Bank

Examine the data above showing rural population as a percentage of the total population in selected regions in 1960 and 2015.

(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** reason for the trend in rural population indicated in the table above.

[4m]

[16m]

Valid explanation 2 + 2 marks

12B. Migration

Examine how ethnic and religious issues can arise as a result of migration.

Ethnic issue identified 2 marks Religious issue identified 2 marks Examination 13 x SRPs

- \geq All further issues identified require examination.
- \geq Credit a named example of where issues arise for 1 x SRP from examination.
- \geq Max 6 x SRP's if only ethnic or religious issues examined.
- \triangleright Discussion without reference to migration max 2 x SRP's.
- \geq Discussion without reference to ethnic or religious issues max 2 x SRP's.
- \triangleright Accept a positive or negative interpretation of issues.

12C. **Urban settlement**

Answer the following question using evidence from the aerial photograph **OR** from the 1:50 000 Ordnance Survey map and legend to support your answer. Do not refer to both in your answer.

Explain three reasons why the town of Macroom developed at its present location.

[30m]

Three reasons @ 10 marks each	
For each reason:	
Reason stated	2 marks
Aerial photograph OR OS map evidence	2 marks
Examination	3 x SRP's

- Accept a max of two reasons on different modes of transport.
- If both the Ordnance Survey map and the aerial photograph are used mark separately and award the highest mark.

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
For each aspect:		
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. Empowering people is a way of linking economic growth with human development. Discuss this statement with reference to any **three** of the following:

20 marks graded*

National debt

Overall Coherence

- Aid programmes
- Land ownership patterns
- Differing gender roles in society.

Number of aspects	3@20marks each
For each aspect:	
Identifying aspect	4 marks
Discussion	8 x SRP's

Focus of the question is on how empowering people is a way of linking economic growth with human development.

- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

14. Discuss the causes and impacts of **one** global environmental issue that you have studied.

[80m]

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

- > Focus of the question is on the causes and impacts of an identified global environmental issue.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

[80m]

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

- > Focus of the question is the contribution that fair trade can make to sustainable development.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (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. Discuss how soil development is influenced by any **three** of the following factors:

- Mineral matter
- Air
- Water
- Organic content.

[80m]

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

- > Focus of the question is on how soil development is influenced by the named factors.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

17. Discuss how human activity can have both positive and negative impacts on soil characteristics.

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

- Focus of the question is on how soil characteristics can be impacted by human activity positively and negatively.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

- **18.** Examine how **each** of the following activities impact on biomes:
 - The felling of tropical rain forests
 - Intensive agricultural practices
 - Industrial development.

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

- > Focus of the question is on how human activities impact on biomes.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).
- > Answer can be based on more than one biome.

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. Conflicts can occur between political structures and cultural groups. Discuss.

[80m]

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

- > Focus of question is on the conflicts that can occur between political structures and cultural groups.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).
- **20.** Examine the importance of language as a cultural indicator.

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

- > Focus of the question is on the importance of language 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 from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

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

- > Focus of the question is on the ways culture and identity are expressed by people in everyday life.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (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. Examine how exchanges of water between oceans and atmosphere give rise to distinctive weather and climate regimes.

[80m]

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

- Focus of the question is how exchanges of water between oceans and atmosphere give rise to distinctive weather and climate regimes.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).
- **23.** Give an account of how atmosphere-ocean phenomena (e.g. pressure, temperature, wind and humidity) are measured and examine the importance of such measurements.

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

- Focus of the question is on how atmosphere-ocean phenomena are measured and how important those measurements are.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

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

- > Focus of the question is on accounting for the specific characteristics of one global climate.
- Select scheme according to number of aspects discussed.
- Allow for up to 3 examples to a max of 3 x SRP's from discussion (different examples and in different aspects).
- Allow for up to 2 labelled illustrations to a max of 2 x SRP's from discussion (different illustrations and in different aspects).

Geographical Investigation

Read entire report before commencing marking to familiarise yourself with the entire investigation.

Simple statements are not acceptable. Require qualification.

1. INTRODUCTION 5 marks:

4 x SRP's:1 mark eachOverall Coherence/Conformity to prescribed length:1 mark

- > Aims must relate to investigation and must be specific and qualified.
- **2. PLANNING** 5 marks:

4 x SRP's:1 mark eachOverall Coherence/Conformity to prescribed length: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: Overall Coherence/Conformity to prescribed length: 9 x SRP's @ 2 marks each 4 marks graded (4/2/0)

- The gathering section must be activity based. This section deals with the reporting on how the gathering was undertaken. It should include 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 e.g. how/where?
- Credit may be given to diagrams/sketches if they illustrate the activity of gathering. One SRP per task/method for well-drawn, neat, relevant labelled 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 this written section).
- Sketches/diagrams must be on the appropriate pages in the gathering section.
- > No marks for results in this written 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/Conformity to prescribed length:	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 mentioned in Section 3.

5. ORGANISATION & PRESENTATION OF RESULTS 20 marks:

Presentation:8 x SRP's @ 2 marks eachOverall Coherence/Conformity to prescribed length: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 SRPs 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 and labelled points / bars	2 x SRP's = 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 and labelled sectors	2 x SRP's = 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 x 2 labelled:	2 x SRP's = 4 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's = 4 marks

Appendix 1

List of Geographical Investigation Topics 2017

- 1. Pollution A local study.
- 2. The impact of land-use on traffic patterns.
- 3. A study of migration and its impact on population in a rural or urban setting.
- 4. The economic and environmental impacts of **one** economic activity in a local area.
- 5. A study of the geology of a local area and its impact on landscape development.
- 6. An investigation of the impact of process(es) of transportation and/or deposition on the formation of **one** glacial, fluvial or coastal landform.

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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