



Coimisiún na Scrúduithe Stáit State Examinations Commission

LEAVING CERTIFICATE EXAMINATION, 2015

GEOGRAPHY – HIGHER LEVEL

FRIDAY, 5 JUNE – MORNING, 9.30 - 12.20

Examination Number

For the Examiner's Use Only

Part One Short-Answer Questions	Total Mark	Adv. Ex.	App. Ex.	App. Adv.
Question 1				
Question 2				
Question 3				
Question 4				
Question 5				
Question 6				
Question 7				
Question 8				
Question 9				
Question 10				
Question 11				
Question 12				
Accumulated Mark				
Disallowed Marks				
Net Mark				

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

Otherwise, you will lose marks.

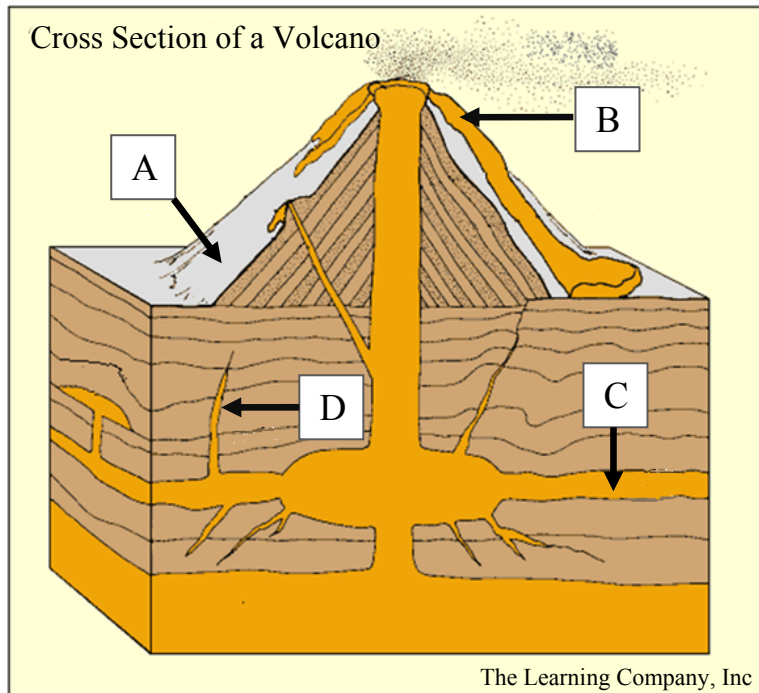
PART ONE – SHORT-ANSWER QUESTIONS – 80 MARKS

Attempt any **TEN** questions.

All questions carry equal marks.

THESE QUESTIONS ARE TO BE ANSWERED IN THE SPACES PROVIDED

1. Structure of a Volcano



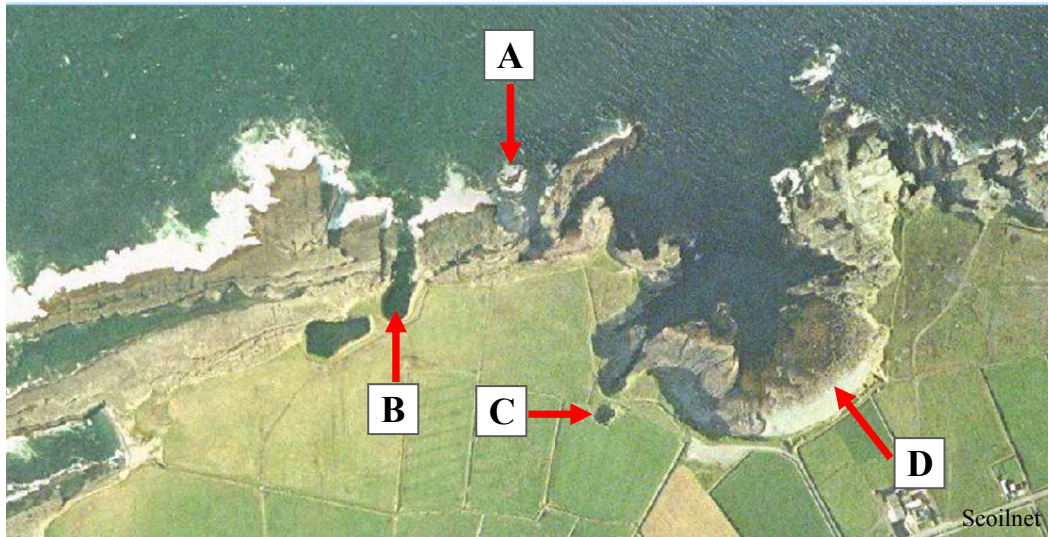
Examine the diagram above and answer each of the following questions.

- (i) Match each of the letters **A**, **B**, **C** and **D** with the feature that best matches it in the table below.
- (ii) Indicate whether plutonic processes or volcanic processes are most associated with each of the features, by ticking the correct box in the table below.

Feature	(i) Letter	(ii) Plutonic	(ii) Volcanic
Sill			
Pyroclastic sediment			
Dyke			
Lava flow			

[8m]

2. Aerial Photograph



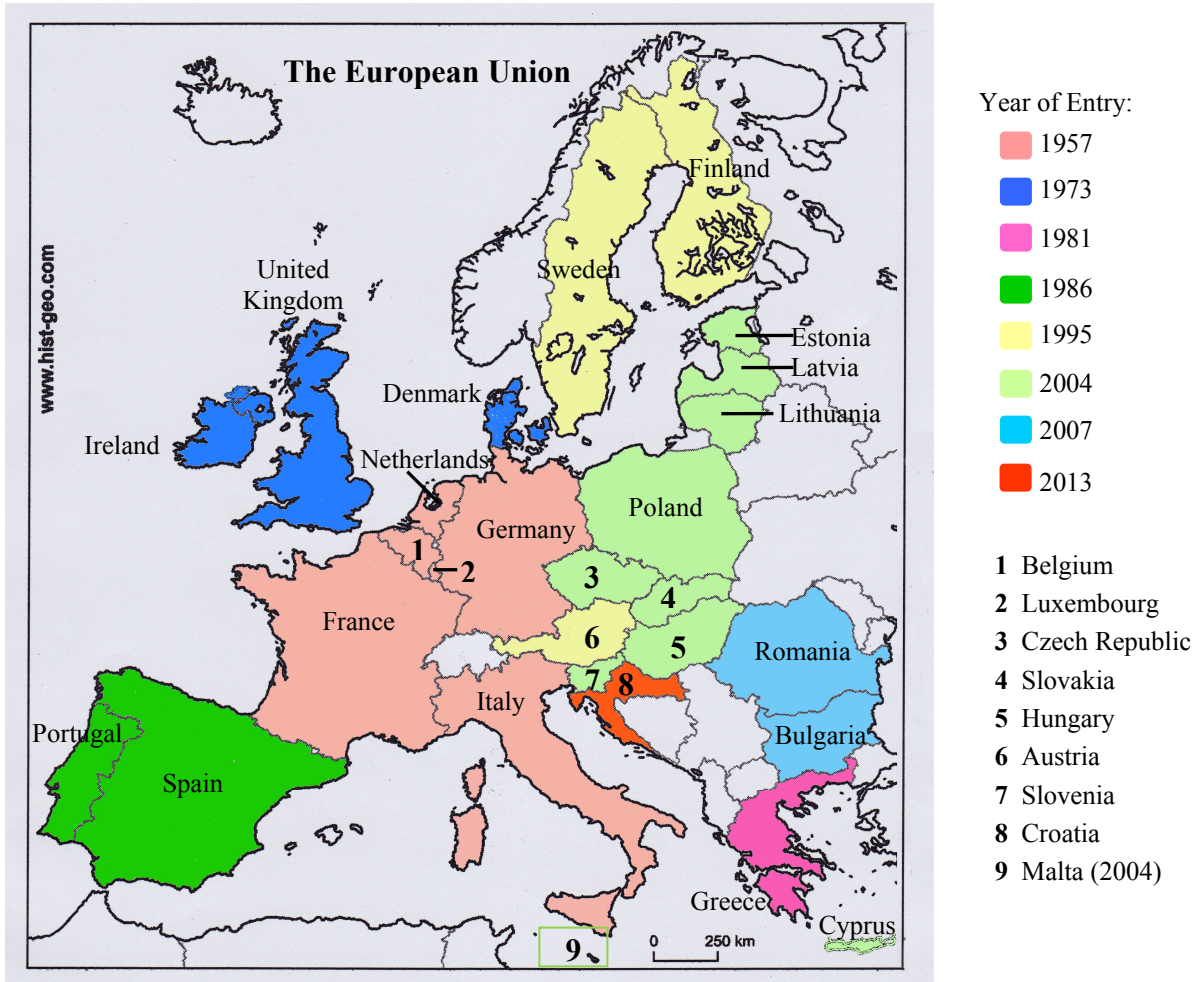
Examine the aerial photograph above and answer each of the following questions.

- (i) Match each of the letters **A**, **B**, **C** and **D** with the landform that best matches it in the table below.
- (ii) Indicate whether processes of coastal erosion or coastal deposition are most associated with the formation of each of the landforms, by ticking the correct box in the table below.

Landform	(i) Letter	(ii) Processes of coastal erosion	(ii) Processes of coastal deposition
Blow hole			
Sea stack			
Bay-head beach			
Geo			

[8m]

3. European Union

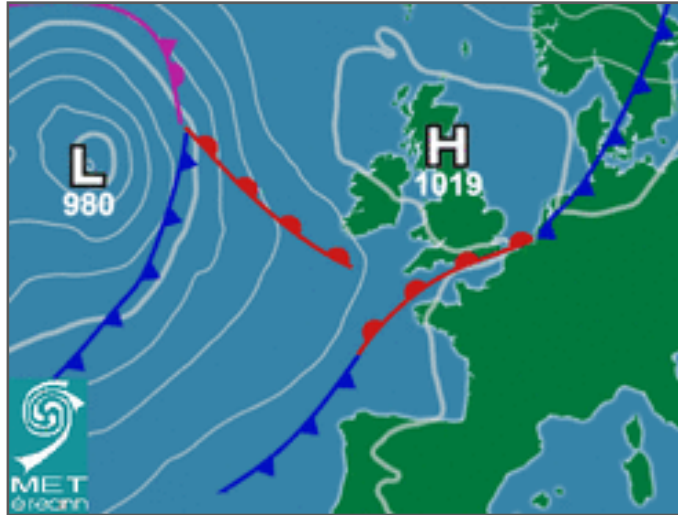


Examine the map of Europe above showing the member states of the European Union and indicate whether each of the following statements is true or false, by circling the correct option in each case.

- (i) Only six countries joined the European Union in 2004. *True* *False*
- (ii) Belgium joined the European Union in the same year as the Netherlands. *True* *False*
- (iii) Denmark joined the European Union in 1971. *True* *False*
- (iv) Slovakia joined the European Union in 2013. *True* *False*

[8m]

4. Weather Chart

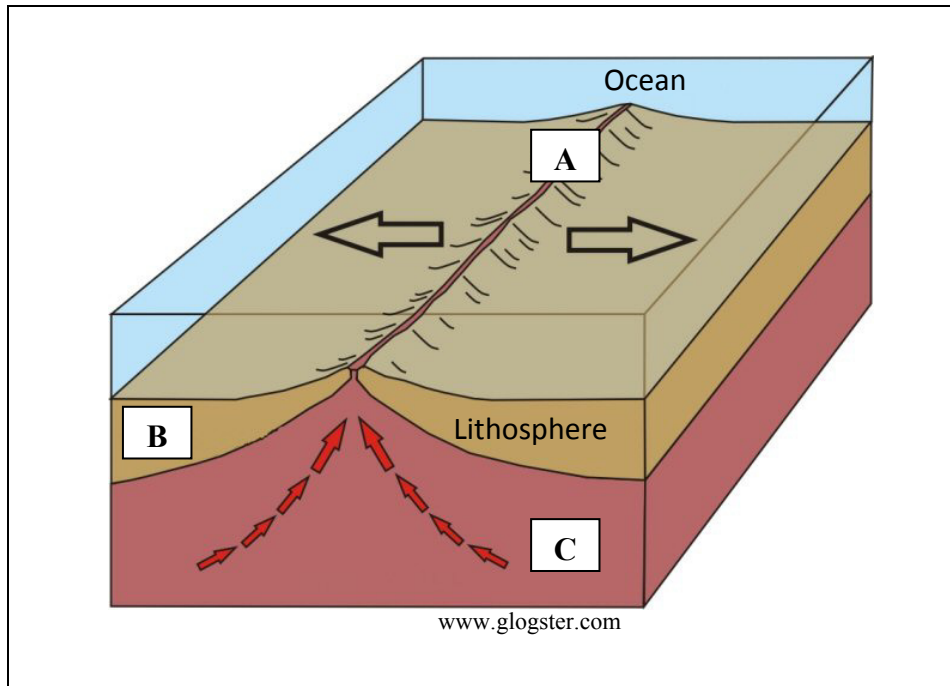


Examine the weather chart above and indicate whether each of the following statements is true or false, by circling the correct option in each case.

- (i) The pressure over the south west coast of Ireland is 1022 hPa. *True* *False*
- (ii) There is a warm front located on the south coast of England. *True* *False*
- (iii) Ireland is under the influence of a north-easterly airflow. *True* *False*
- (iv) Winds over Ireland are strong to gale force. *True* *False*

[8m]

5. Plate Tectonics



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

- (i) Name the type of plate boundary illustrated in the diagram above.

- (ii) Name the feature at **A**.

- (iii) Name an igneous rock formed at **B**.

- (iv) Name the part of the upper mantle at **C**.

[8m]

6. Mass Movement



www.easyweb.easynet.co.uk



www.wordpress.com



www.ukgeohazards.info



www.stacey.peak-media.co.uk

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

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

Process	Letter
Rotational slump	
Soil creep	
Landslide	
Mudflow	

- (ii) Name any **two** factors that influence the operation of mass movement processes.

1. _____

2. _____

- (iii) Name **one** example of a very rapid mass movement process and name **one** example of a very slow mass movement process.

Very rapid mass movement process _____

Very slow mass movement process _____

[8m]

7. Ordnance Survey Map

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

- (i) Measure the straight line distance, in kilometres, from the 18 hole golf course at V 851 712 to the parking at V 862 773.
-
- (ii) Calculate the approximate area of the Kenmare River west of Easting 88, shown on the map.
-
- (iii) State **one** piece of evidence to show there may be permeable rock present at V 92 77.
-
- (iv) Name **one** species of tree that may be found in the natural woodland at V 87 74.
-

[8m]

8. Aerial Photograph and Ordnance Survey Map

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

- (i) Give a six-figure grid reference for the large church located in the centre foreground of the aerial photograph.
-
- (ii) In what direction was the camera pointed when the aerial photograph was taken?
-
- (iii) Name the main road that runs through the aerial photograph from the centre background to the centre foreground.
-
- (iv) State **one** piece of evidence, from the Ordnance Survey map or the aerial photograph, that indicates that Kenmare is a plantation town.
-

[8m]

9. Map Skills

Figure 1: Line X-Y along Northing 76

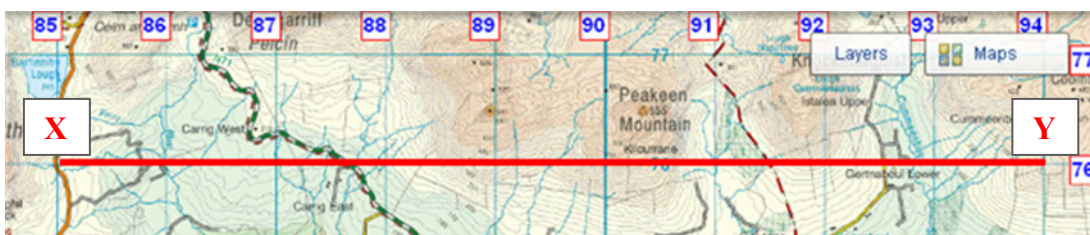


Figure 2: Elevation Profile of the Cross-Section of the line X-Y

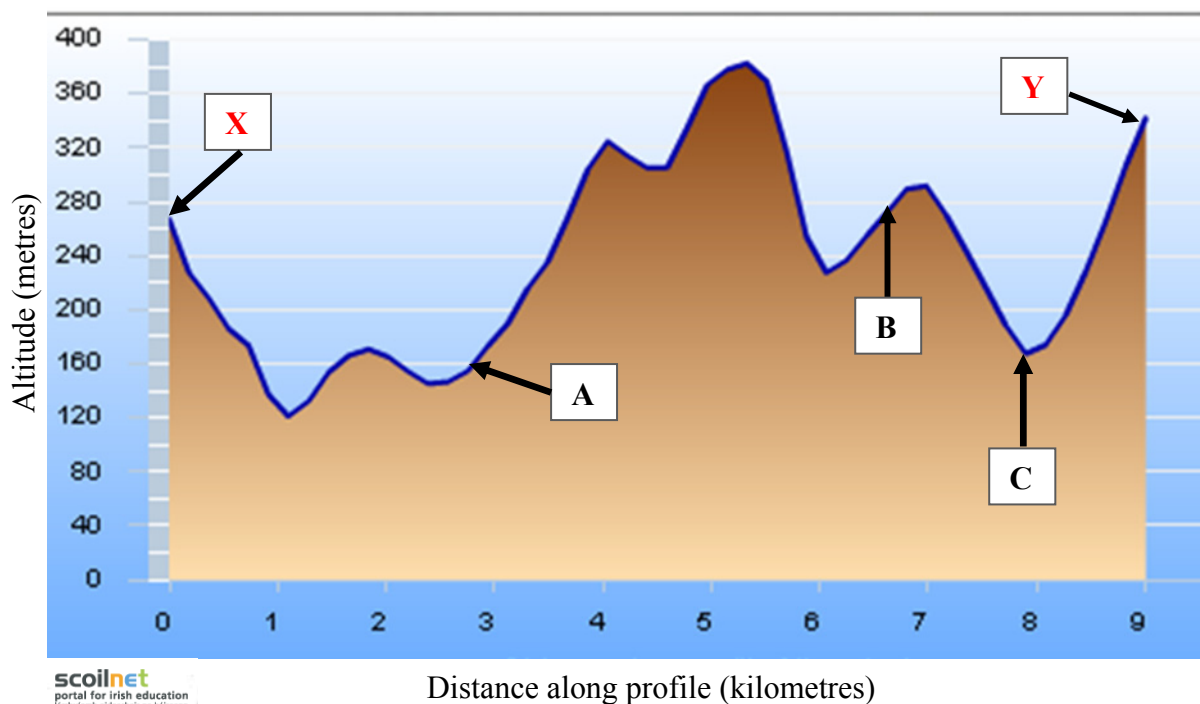


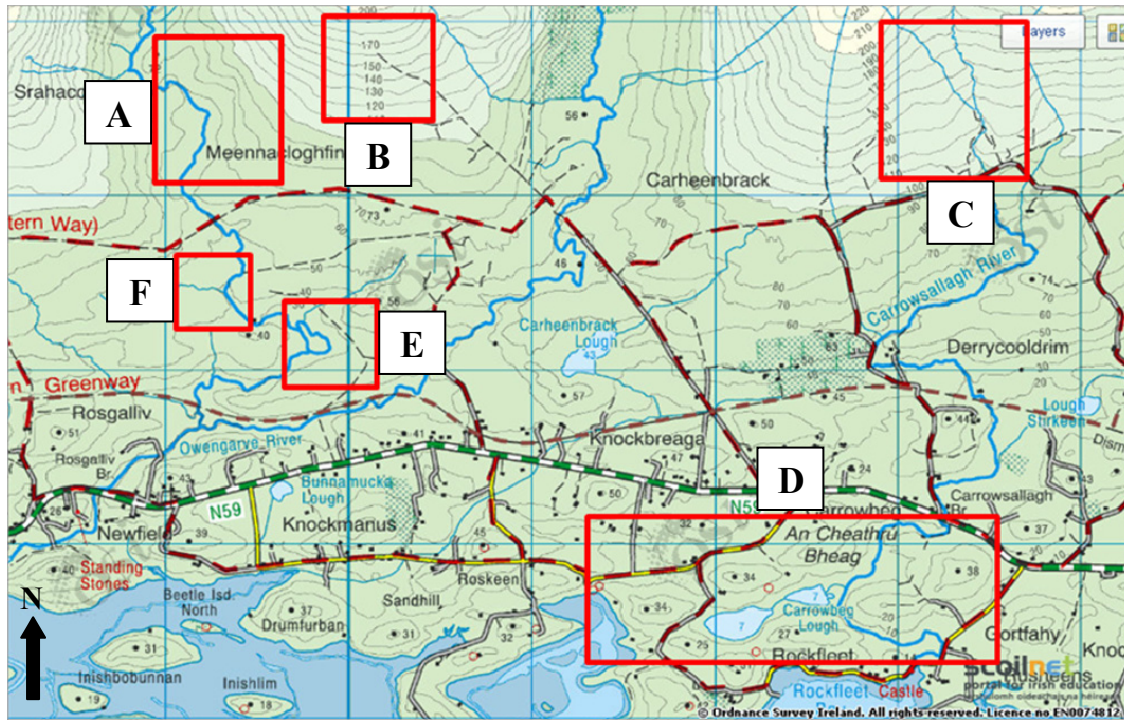
Figure 1 shows a line X-Y along Northing 76 on the Ordnance Survey map accompanying this paper. Figure 2 shows the elevation profile of the cross-section of the line X-Y.

Using the 1:50 000 Ordnance Survey map and legend accompanying this paper and the information given above, answer each of the following questions.

- (i) Name the road at A. _____
- (ii) Name the waymarked walk at B. _____
- (iii) Name the stream/river at C. _____
- (iv) Calculate the difference in the altitude between the road at A on the Elevation Profile (Figure 2) and the triangulation pillar at Peakeen Mountain on the Ordnance Survey map.

[8m]

10. Landform and Pattern Recognition



Examine the Ordnance Survey map extract above and answer each of the following questions.

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

Landform / Pattern	Letter
Trellis drainage	
Even slope	
Dendritic drainage	
Concave slope	
Drumlins	
Cut-off meander	

- (ii) Explain briefly why the long-axis trend of the majority of the drumlins is east-west, on the map extract above.

[8m]

11. Statistical Interpretation

Afforestation in Ireland in Selected Years

Year	1923	1953	1983	2013
Hectares of trees planted privately	0	153	327	6249
Hectares of trees planted by public bodies	388	4199	5698	3
Total	388	X	6025	6252

www.agriculture.gov.ie

Examine the table above showing information regarding afforestation in Ireland in selected years and answer each of the following questions.

- (i) Calculate the difference between the number of hectares of trees planted privately and the number of hectares of trees planted by public bodies in 1983.

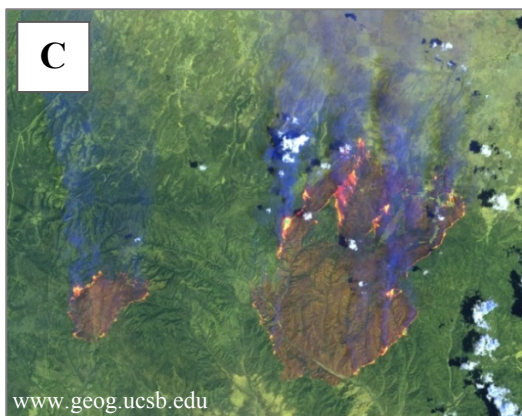
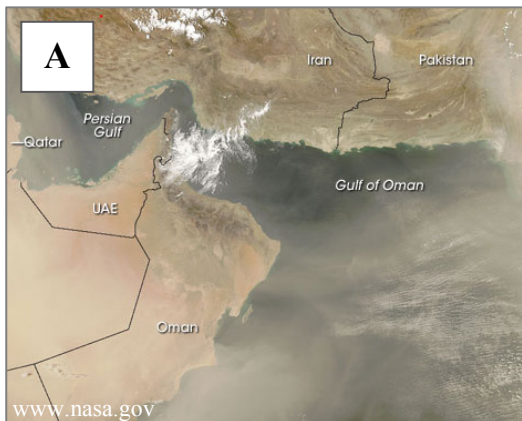
- (ii) Calculate **X**, the total afforestation in 1953.

- (iii) What was the trend in private planting between 1923 and 2013?

- (iv) Explain briefly **one** reason for this trend in private planting.

[8m]

12. Satellite Interpretation



Examine the satellite images above.

Match each of the letters **A**, **B**, **C** and **D** with the description that best matches it in the table below.

Description	Letter
Delta	
Open-cast mining	
Dust storm	
Forest fire	

[8m]

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
AND
 - **One** question from Questions 4, 5 and 6
- **ONE** question from **Section 2 – Electives**
- **ONE** question from **Section 3 – Options**

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**

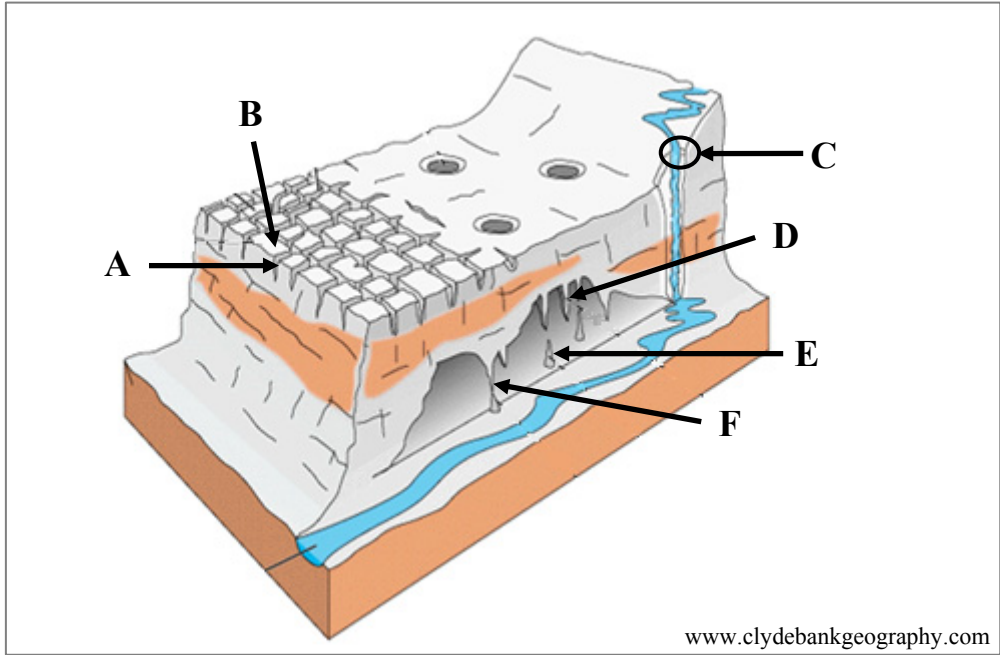
PATTERNS AND PROCESSES IN THE PHYSICAL ENVIRONMENT

Questions 1 to 3

Attempt **ONE** question

Question 1

A. Karst Landscapes



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

- (i) Name each of the landforms **A, B, C, D, E** and **F**.
- (ii) Name any **two** processes of chemical weathering.
- (iii) State what is meant by the term *permeable rock* and name an example of a permeable rock.

[20m]

B. Surface Processes

Answer (i) or (ii).

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

or

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

[30m]

C. Tectonic Activity – Irish Landscape Development

Examine the influence of tectonic activity on the development of the Irish landscape.

[30m]

Question 2

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:

- The entire route of the waymarked walk called the *Béara Way* shown on the map
- The entire area of coniferous plantation at V 85 72
- The entire area of land above 300 metres at *Letter South*
- The entire area of the *Kenmare River* shown on the map.

[20m]

B. Sedimentary Rocks

Explain the formation of sedimentary rocks, with reference to Irish examples.

[30m]

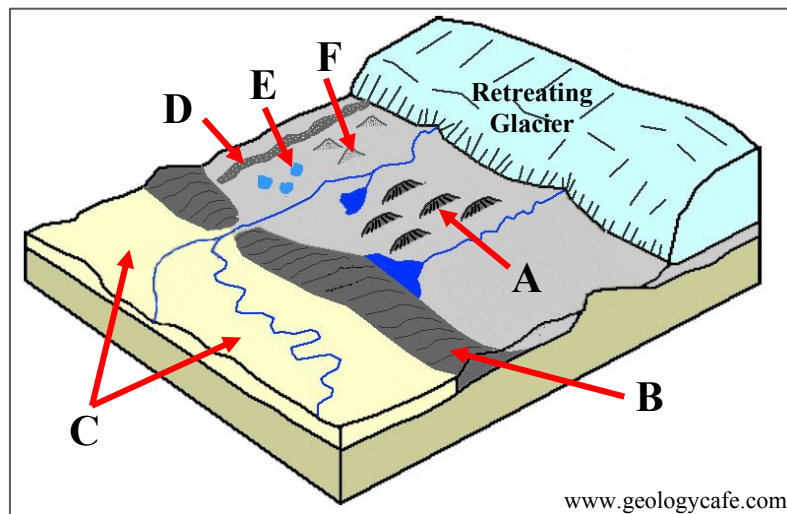
C. Isostasy

Examine how isostasy has impacted on the Irish landscape.

[30m]

Question 3

A. Glaciation



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

- (i) Name each of the landforms A, B, C, D, E and F.
- (ii) Explain briefly what is meant by a *fluvioglacial process*.
- (iii) Name any **two** fluvioglacial landforms.

[20m]

B. Landform Development

Explain how **one** of the following influences the development of landforms:

- Folding
- Faulting.

[30m]

C. Human Interaction with the Rock Cycle

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

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

[30m]

REGIONAL GEOGRAPHY

Questions 4 to 6

Attempt **ONE** question

Question 4

A. Map Skills

Draw an outline map of a **European** region (not in Ireland) that you have studied.

On it, show and name each of the following:

- A named feature of relief
- A named urban centre
- A named road or rail link
- A named river.

[20m]

B. Industrial Decline

Examine the causes and impacts of industrial decline with reference to any region(s) that you have studied.

[30m]

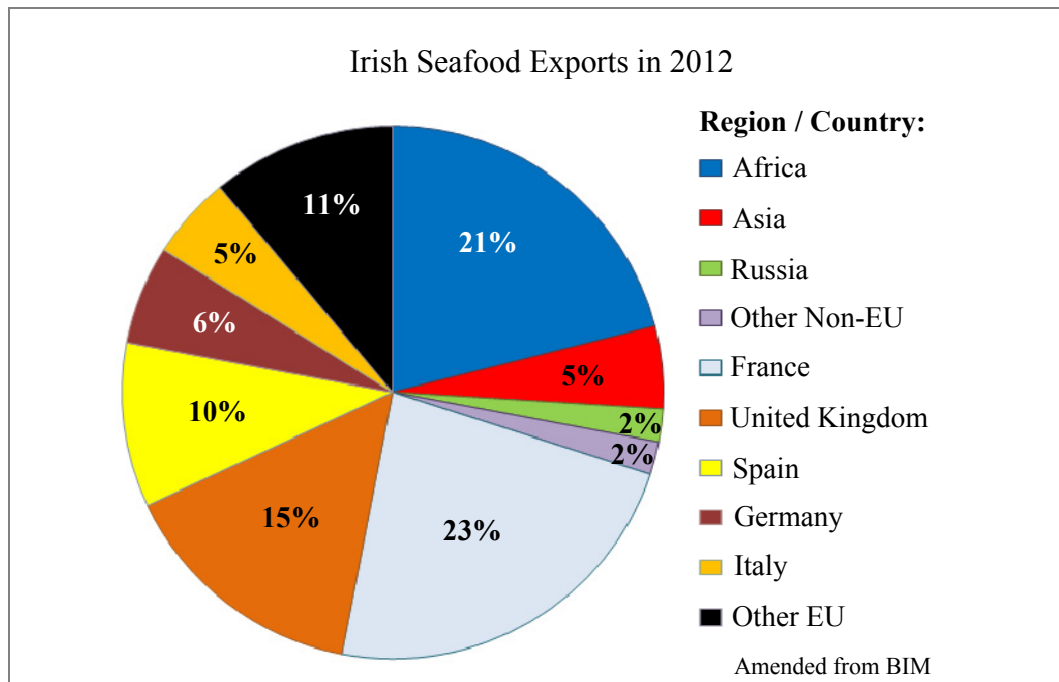
C. Tertiary Activity in Ireland

Account for the development of transport **or** tourism in an **Irish** region that you have studied.

[30m]

Question 5

A. Irish Seafood Exports



Using the information in the pie chart above, answer each of the following questions.

- (i) Name the **two** European Union (EU) member states to which Ireland exported the most seafood in 2012.
- (ii) Name the **two** regions/countries to which Ireland exported the least seafood in 2012.
- (iii) Calculate the **total** percentage of seafood exports to non-EU regions/countries in 2012.
- (iv) Explain briefly **two** challenges facing the Irish fishing industry.

[20m]

B. Manufacturing in a European Region

Account for the development of manufacturing in a **European** region (not in Ireland) that you have studied.

[30m]

C. The Dynamics of Regions – Human Processes

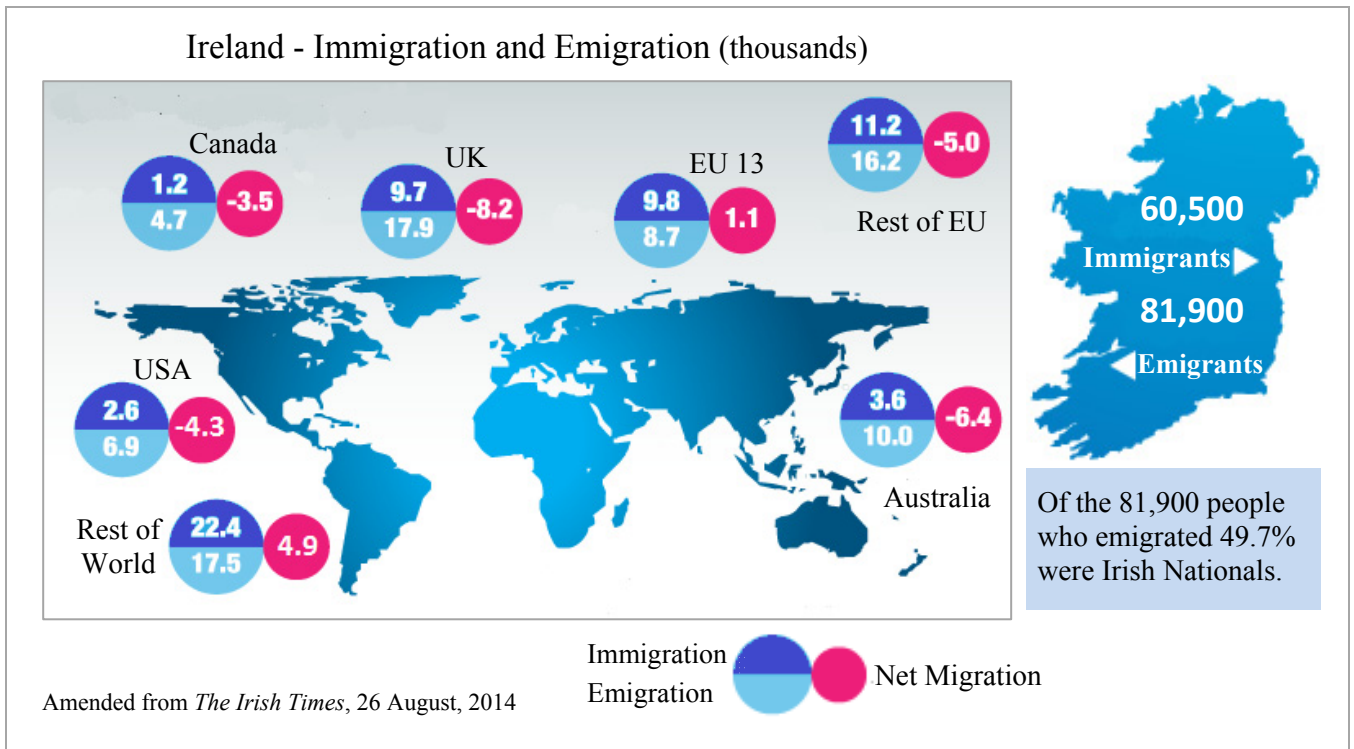
Population dynamics	Language	Religion
Urban development	Rural development	

Examine the influence of any **two** of the human processes in the table above, on the development of a **Continental / Sub-Continental** region (not in Europe) that you have studied.

[30m]

Question 6

A. Ireland - Population Dynamics



Examine the information above regarding immigration to Ireland and emigration from Ireland, in thousands, in the 12 months to April 2014, and answer each of the following questions.

- (i) How many people immigrated to Ireland from Canada and how many people emigrated to Canada from Ireland?
- (ii) How many immigrants came from the 'Rest of the World'? Name **one** example of a country from within this area.
- (iii) What percentage of the 81,900 people that emigrated from Ireland were not Irish Nationals? State **one** reason why they emigrated from Ireland.
- (iv) Explain briefly **two** positive impacts of immigration on Ireland.

[20m]

B. Primary Economic Activity – Continental / Sub-Continental Region

Examine the factors that influence the development of **one** primary economic activity in a **Continental / Sub-Continental** region (not in Europe) that you have studied.

[30m]

C. Dynamics of Regions – Climate

Describe and explain the challenges facing any region that you have studied, as a result of its climate.

[30m]

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. Future Development of Economic Activities

Social Media and e-Commerce – Irish Enterprises, 2014

In 2014, 61% of Irish enterprises used some type of social media, such as Facebook, Twitter and YouTube, compared with an EU-28 average of 36% (Eurostat). In terms of enterprises using social media, Ireland ranked second in the EU-28 compared with third in 2013. Malta had the largest percentage of enterprises in the EU-28 using social media at 66%.

The primary method of using social media was the use of social networks; for example 58% of Irish enterprises stated they used social networks such as Facebook. This compares with 46% of Irish enterprises using social networks in 2013.

49% of large enterprises had e-commerce sales and 69% of large enterprises made e-commerce purchases.

Amended from *Information Society Statistics*, CSO, 2014

Read the extract above and answer each of the following questions.

- (i) Name **two** types of social media mentioned in the extract above.
- (ii) By what percentage were Irish enterprises ahead of the EU-28 average in the use of social media?
- (iii) Where was Ireland ranked in the EU-28 in the use of social media in 2014 and what EU-28 country was ranked above Ireland in the use of social media?
- (iv) Explain briefly what is meant by the term *e-commerce*.
- (v) State **two** advantages of developments such as social media and e-commerce for economic activity.

[20m]

B. Environmental Impact

Examine the environmental impact of economic activities at a local scale and on a global scale.

[30m]

C. Colonialism

Examine the impact of colonialism on an economy in the developing world that you have studied.

[30m]

Question 8

A. Aerial Photograph

Examine the aerial photograph 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:

- A car park
- The triangular street network in the middleground of the aerial photograph
- A large commercial/industrial building in the foreground of the aerial photograph
- An area of waste ground suitable for development.

[20m]

B. Mobility of Economic Activities

Examine the mobility of modern economic activities with reference to **one** multinational company that you have studied.

[30m]

C. Sustainable Development

Examine the role of sustainable development in controlling the environmental impact of economic activities.

[30m]

Question 9

A. The Environment

Total Waste Generated by Households and Businesses in Selected EU Countries in 2004 and 2012 (million tonnes)

Year	2004	2012
Ireland	24.5	20.0
Denmark	12.5	16.0
Czech Republic	29.0	23.0

Amended from Eurostat

Examine the data above showing the total waste generated by households and businesses in selected EU countries in 2004 and 2012.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) Explain briefly **one** reason why a charge is usually applied for the disposal of waste.

[20m]

B. Location of Economic Activity

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

Explain **three** reasons why it may be difficult to attract large foreign companies to the area on the Ordnance Survey map.

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

[30m]

C. European Union Policy

Examine the impact of European Union policy on the development of primary economic activity in Ireland.

[30m]

PATTERNS AND PROCESSES IN THE HUMAN ENVIRONMENT

Questions 10 to 12

Question 10

A. Aerial Photograph

Examine the aerial photograph 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 triangular street network in the middleground of the aerial photograph
- **Three different** methods for managing traffic evident on the aerial photograph.

[20m]

B. Urban Problems

Discuss how the growth of urban centres can lead to any **two** of the following problems, with reference to example(s) that you have studied:

- Traffic congestion
- Urban decay
- Urban sprawl.

[30m]

C. Overpopulation

Describe and explain the causes and effects of overpopulation, with reference to examples that you have studied.

[30m]

Question 11

A. Population Dynamics

Irish Birth and Death Rates per 1000 of Population

Year	Birth Rate	Death Rate
1950	21.5	13.0
1990	15.0	9.0
2013	15.0	6.5

Amended from CSO

Examine the data above showing Irish birth and death rates in 1950, 1990 and 2013.

- (i) Using graph paper, draw a suitable graph to illustrate this data.
- (ii) Explain briefly **one** reason for the decline in Irish birth rates between 1950 and 2013.

[20m]

B. Urban Settlement

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

‘Transport and routeways have played a role in the growth and development of the town of Kenmare historically and to the present day.’

Discuss this statement, using evidence from the Ordnance Survey map to support your answer.

[30m]

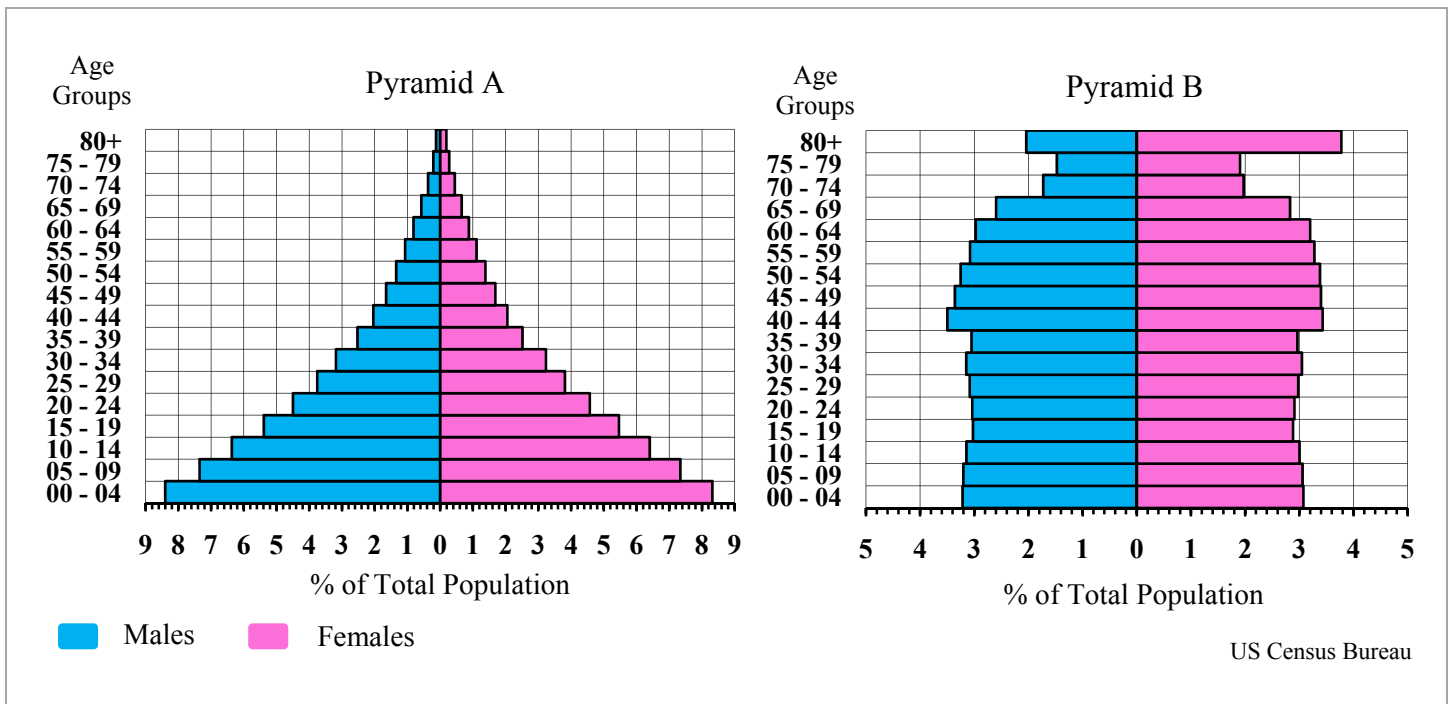
C. Migration

Examine the impact of migration on a city in the developing world that you have studied.

[30m]

Question 12

A. Population



Examine the population pyramids above and answer each of the following questions.

- (i) What percentage of males in Pyramid A are in the 40-44 year age group and what percentage of females in Pyramid B are in the 25-29 year age group?
- (ii) Are more people living longer in the area represented by Pyramid A or Pyramid B? With reference to the structure of the pyramid, give **one** piece of evidence to support your answer.
- (iii) Which of the pyramids, A or B, represents a developing economy? Name an example of a developing economy.
- (iv) Explain briefly **two** challenges facing an economy with a population pyramid similar to Pyramid B.

[20m]

B. Urban Planning

Examine the impact of urban planning strategies with reference to example(s) that you have studied.

[30m]

C. Phases of Historical Settlement

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

- (i) Name **three different** phases of historical settlement evident on the Ordnance Survey map.
- (ii) Name and locate, using six-figure grid references, examples of each of the **three** phases of historical settlement named above.
- (iii) Explain briefly each of the **three** phases of historical settlement named above.

[30m]

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.

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. 'We live in an interdependent global economy. Actions or decisions taken in one area have an impact on other areas.'

Examine this statement with reference to each of the following:

- Economic and political refugees
- Migration patterns
- Human rights issues.

[80m]

14. 'Empowering people is a way of linking economic growth with human development.'
Discuss this statement with reference to aid programmes.

[80m]

15. Discuss the potential impact of Fair Trade on human and economic development.

[80m]

Geocology

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 influence of mineral matter, air, water and organic matter on soil development.

[80m]

17. Discuss the impact of human activity on soil.

[80m]

18. Examine, with reference to **one** biome that you have studied, how plants and animals have adapted to **specific** climatic and soil conditions.

[80m]

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 impact of colonialism and migration on ethnic/racial patterns. [80m]
20. 'Identity as a concept entails a variety of cultural factors including nationality, language and religion.'
Discuss. [80m]
21. Examine the effects of political and/or physical boundaries on cultural groups. [80m]

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. Account for the distinctive nature of **one** global climate type that you have studied. [80m]
23. Examine how solar energy is transformed and redistributed through circulation patterns in the atmosphere and oceans. [80m]
24. Examine the formation of mid-latitude depressions and anticyclones, and the weather patterns associated with them. [80m]

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