



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle Final Examination Sample Paper

Geography

Common Level

2 hours

360 marks

Examination Number

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Day and Month of Birth

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For example, 3rd February
is entered as 0302

Centre Stamp

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Instructions

There are **ten** questions in this paper.

Answer all questions.

The questions do not all carry equal marks.

Write your answers in blue or black pen. You may use pencil and colouring pencils for sketches, graphs and diagrams only.

Write your answers in the spaces provided in this booklet. There is space for extra work at the end of the booklet. Label any such extra work clearly with the question number and part.

This examination booklet will be scanned and your work will be presented to an examiner on screen. Anything that you write outside of the answer areas may not be seen by the examiner.

The 1:10 000 Ordnance Survey map and legend supplied separately to this paper are for use in questions 2 and 10.

The legend for the 1:50 000 Ordnance Survey map extracts in questions 3 and 6 is on page 30.

Question 1

- (a) Read the article below and answer each of the following questions.

Landslide in Indian village of Malin leaves 17 dead and 200 missing



At least 17 people were killed and 200 people were trapped as 44 houses in Malin village were flattened by a landslide that hit after heavy rain.

Environmentalists said large-scale deforestation had made the place vulnerable. An expert on landslides said “the cause of the landslide appears to be the clearing of land on the hill for farming and the removal of trees”.

- (i) In what country did this landslide take place?

- (ii) Name **one** effect of the landslide mentioned in the article.

- (iii) The article states that one cause of this landslide was the “removal of trees”. Briefly explain how the removal of trees can lead to a landslide.

- (iv)** If this land was reforested (replanted with trees) it would help protect against future landslides. Describe another benefit of planting trees.

- (b)** Natural disasters require immediate responses in the short-term but can also lead to longer-term responses.

(i) Other than the natural disaster named in part **(a)**, name an example of a natural disaster you have studied **and** state where it happened.

(ii) Explain examples of the long-term response to the natural disaster that you studied.

Question 2

Examine the 1:10 000 Ordnance Survey map and legend supplied separately with this paper and answer each of the following questions.

- (a) The table below lists evidence of four functions in the town of Lusk. Use the Ordnance Survey map of Lusk to complete the table by answering each of the following:
- (i) Name the function most associated with each piece of evidence.
 - (ii) State the grid square where each piece of evidence can be found on the map.
- One has been completed for you.

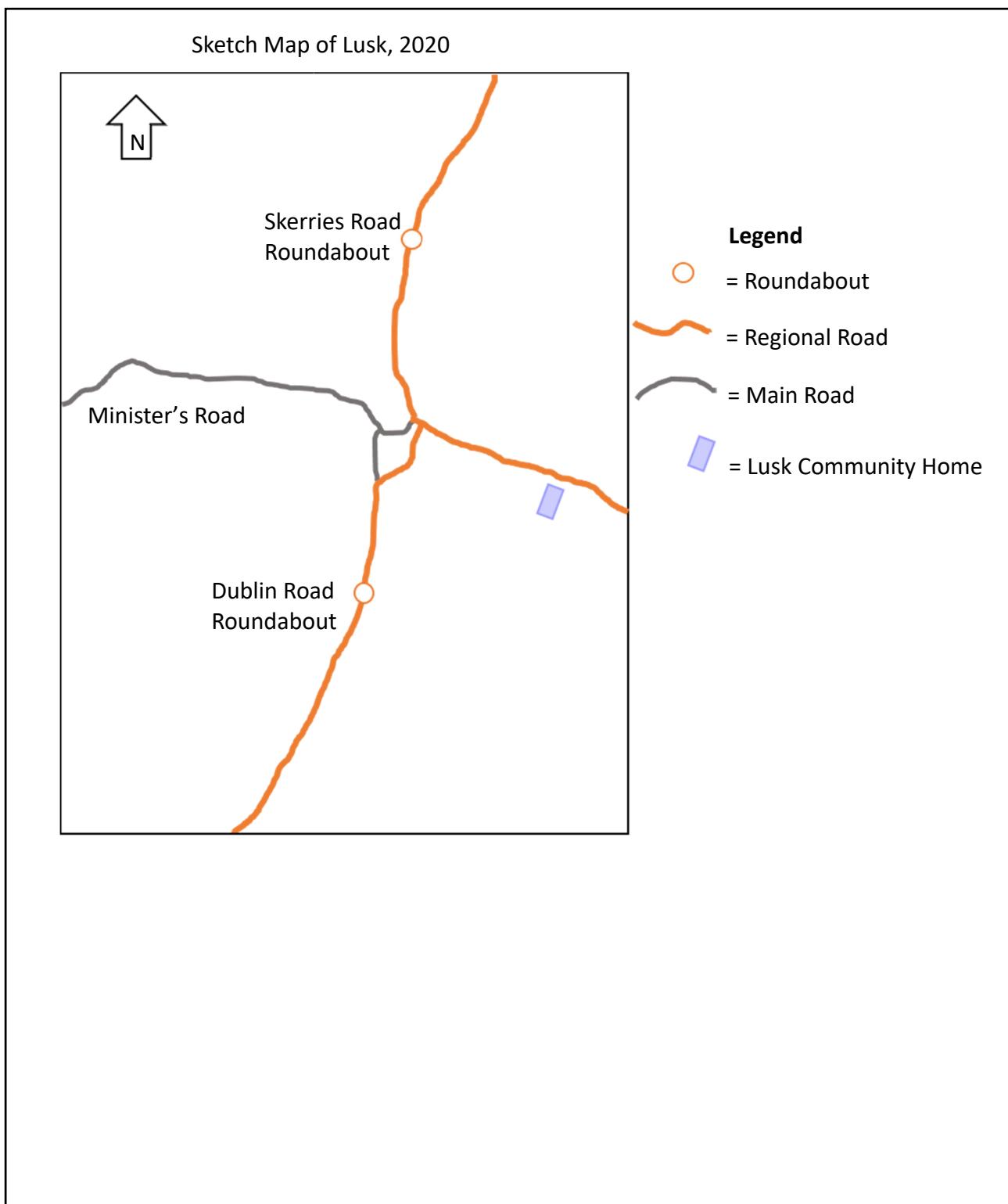
(i) Function	Evidence of function	(ii) Grid square on map
Residential	<i>The Forge</i> housing estate	B 3
	Lusk Community College	
	St Macullins Church	
	Lusk Town Centre	

- (b) Measure the length of Rathmore Road, in kilometres, from the Raheny Roundabout to the Dublin Road Roundabout.

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(c) Complete the sketch map of Lusk below by showing and naming each of the following:

- The full route of Rathmore Road
- A post office
- Lusk Heritage Centre
- One named recreational area.



Question 3

- (a)** Examine the 1:50 000 Ordnance Survey map extract below of Slea Head in Co. Kerry and the accompanying legend which is available on page 30. The road shown on the extract is a popular tourist route.



- (i) Which of the following coastal processes had the most impact on shaping the land on the map extract above? Tick (✓) the correct box.

Coastal deposition

Coastal erosion

- (ii) What type of road is the R559?

For more information, contact the Office of the Vice President for Research and Economic Development at 515-294-6450 or research@iastate.edu.

- (iii) Name **two** different pieces of evidence from the map extract above that show how this area has developed to support tourism **and** state how each can be used by tourists.

Evidence 1:
How it can be used by tourists:
Evidence 2:
How it can be used by tourists:

- (b) The photograph below shows an area at risk of damage due to coastal erosion.



You are concerned about the future of this area and that there may be a collapse. On the next page write a letter to your local councillor suggesting how the coast could be protected from further erosion. Your letter must include each of the following:

- (i) An example of a coastal defence measure that would be suitable to protect the area from future erosion.
- (ii) An explanation of how the coastal defence measure you named will protect the area from the processes of coastal erosion.

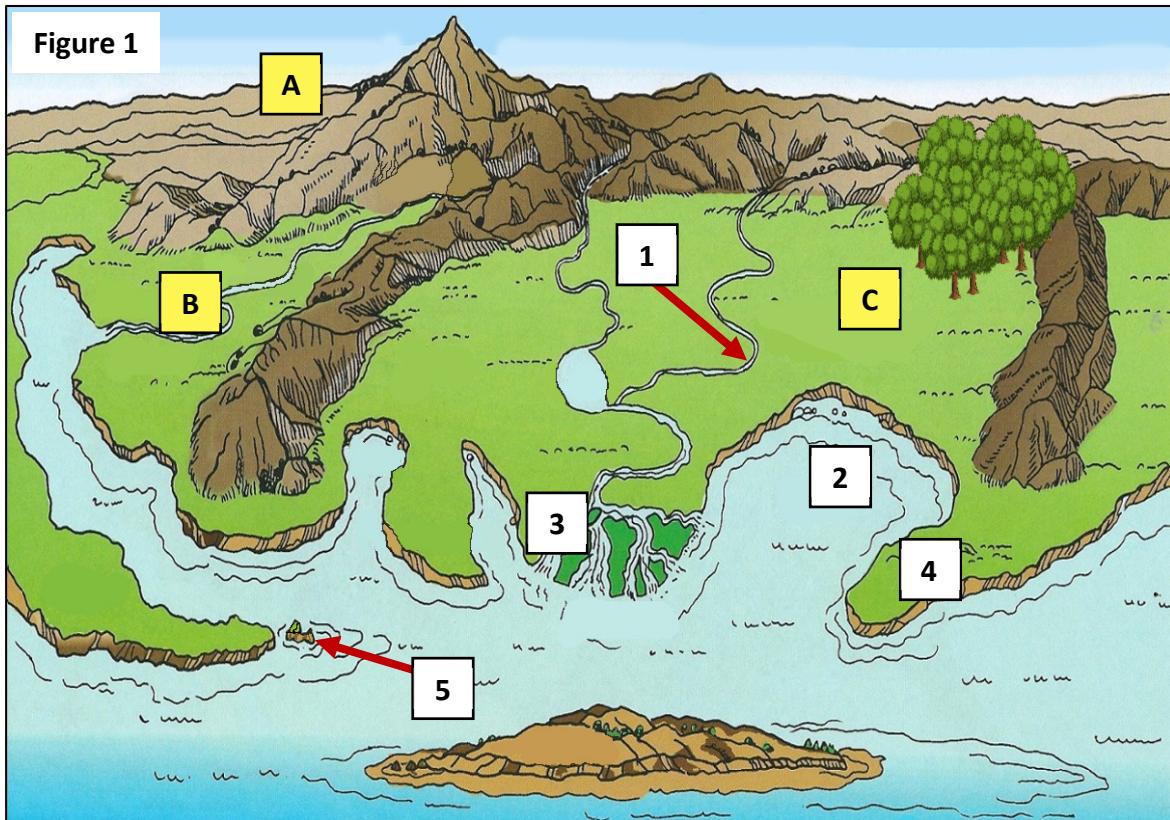
You may also draw diagrams if you wish.

Dear Councillor,

Space for diagrams

Question 4

Examine **Figure 1** which shows a landscape that has been shaped by different physical processes including erosion, transportation and deposition by rivers and the sea. Answer each of the following questions.



- (a) In the table below, match each of the features labelled 1 to 5 on **Figure 1** with the correct term from the box. One has been completed for you.

Bay	Meander	Source
Headland	Delta	Sea stack

Number	Feature
1	
2	
3	
4	Headland
5	

- (b) **Figure 1** shows an area along the coast similar to the area that Ireland's first settlers arrived at long ago. If you were one of the first settlers in the area shown in **Figure 1**, would you choose to settle at site **A** or **B** or **C**?

Explain in detail why you would choose to settle at this site.

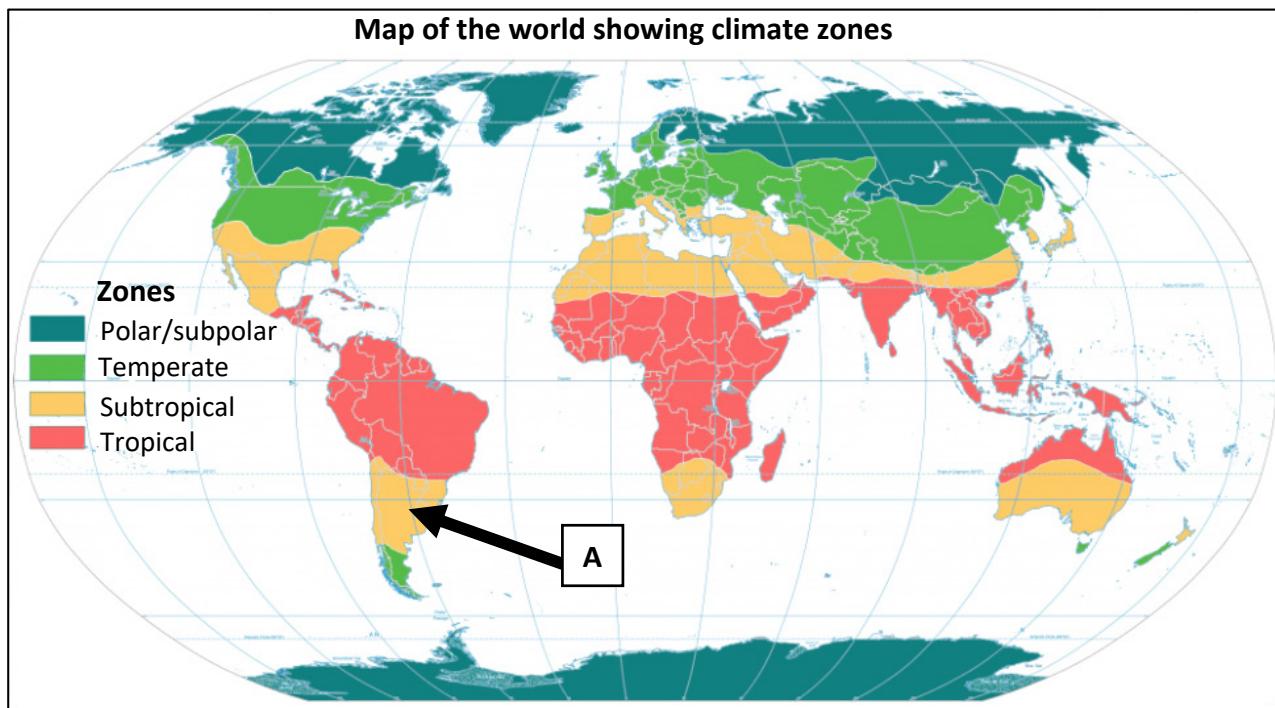
Chosen site:

Explanation:

Question 5

Each of the questions below relate to climates and how climate can affect people's lives.

- (a) Study the climate zones shown on the map below and answer each of the following questions.



- (i) What is the climate zone for the area labelled A?

Tick (✓) the correct box.

Polar/subpolar

Temperate

Subtropical

Tropical

- (ii) What climate zone is Ireland in?

Tick (✓) the correct box.

Polar/subpolar

Temperate

Subtropical

Tropical

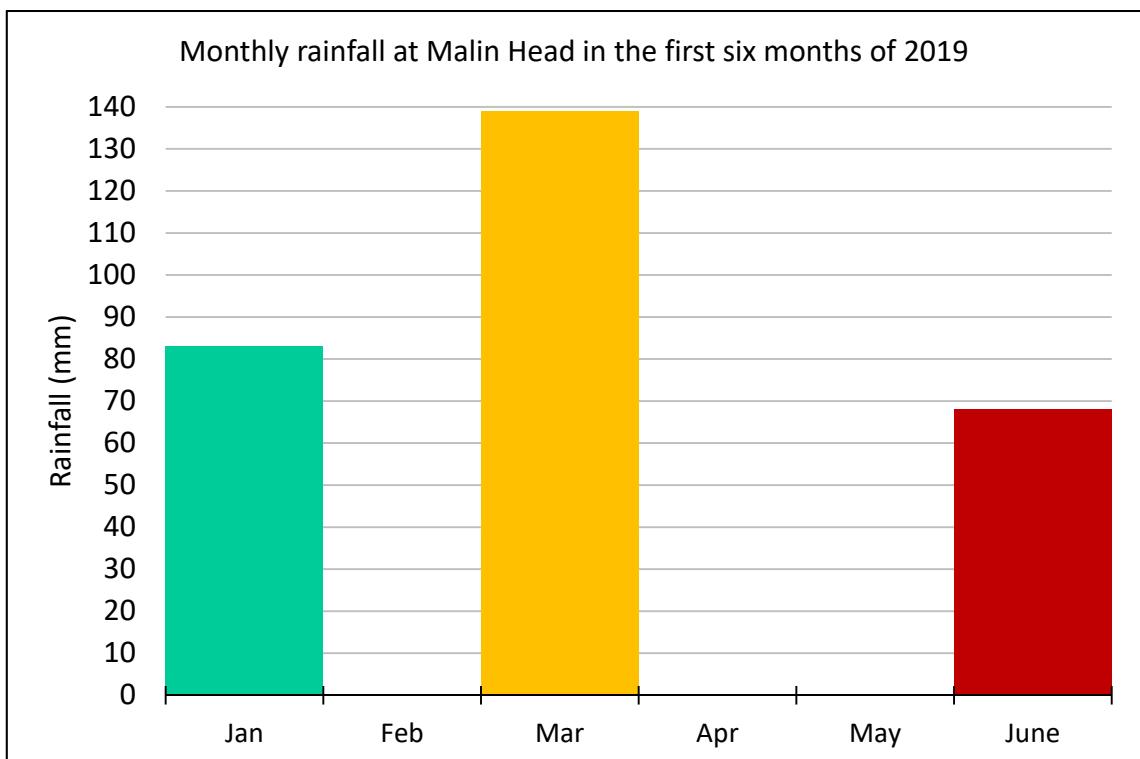
- (iii) Name **one** example of a climate that can be found in the Polar/subpolar zone.

- (b) Examine the table below showing monthly rainfall at Malin Head in the first six months of 2019 and answer each of the following questions.

Monthly rainfall at Malin Head in the first six months of 2019

	Jan	Feb	Mar	Apr	May	June
Rainfall (mm)	83	60	139	50	80	68

- (i) Complete the bar chart below using the information from the table for February, April and May.



- (ii) How much rain fell in March 2019 at Malin Head? Use the correct unit in your answer.

- (iii) In which month did the lowest amount of rain fall at Malin Head?

- (iv) Calculate the mean monthly rainfall at Malin Head for the first six months of 2019. Use the correct unit in your answer.

Optional rough work:

Answer:

- (c) Read the article below and answer each of the following questions.

Humanitarian Crisis in Somalia Driven by Climate Change

Somalia has a hot desert climate with high temperatures and little rainfall. This makes any rain that falls very important. Climate change is leading to less rainfall in certain parts of the world, including Somalia. Between 2016 and 2018 Somalia experienced below average rainfall. This led to many problems for farmers including crop failure, widespread livestock deaths and loss of assets.



As well as farmers, the wider population of Somalia was affected as there was large scale population displacement, hunger and malnutrition. By 2018 the number of people in need of urgent humanitarian assistance was estimated at 4.2 million.

- (i) Between what years did Somalia experience below average rainfall?

- (ii) Name **two** effects of this below average rainfall on Somalia.

1:

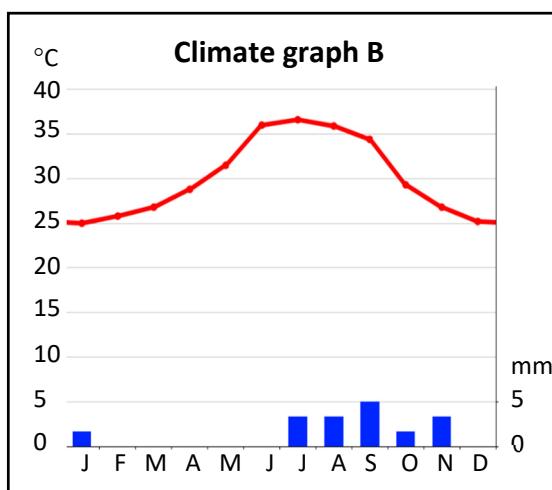
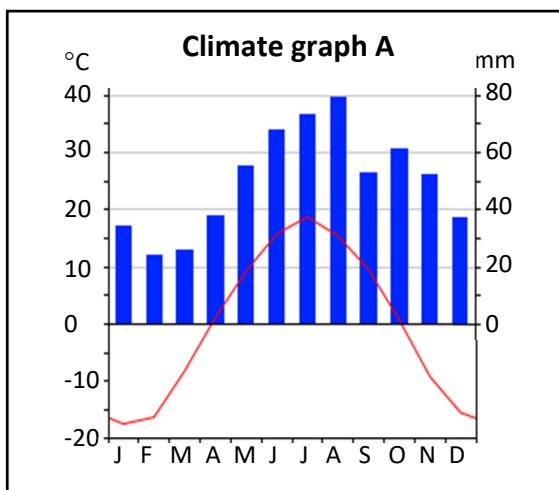
2:

- (iii) Study the two climate graphs below which show the monthly precipitation and average monthly temperature for two different locations.

Which climate graph shows the monthly precipitation and average monthly temperature for Somalia? Tick (✓) the correct box.

Climate graph A

Climate graph B



= Temperature

= Precipitation

- (iv) The article states that 4.2 million people are in need of urgent humanitarian assistance.

Which type of assistance do you think is most appropriate to help the people of Somalia? Tick (✓) the box beside your choice.

Tied aid

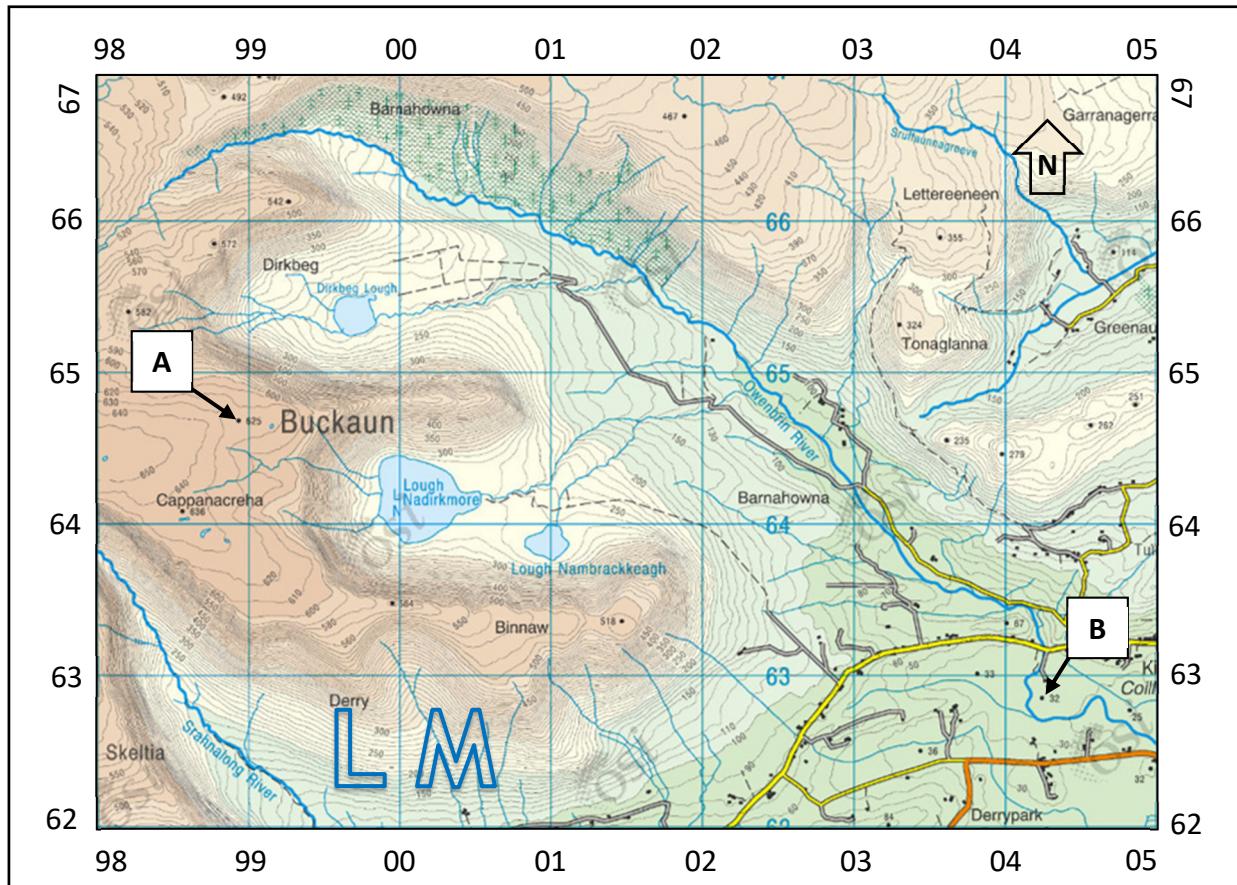
Emergency aid

Development aid

Justify your choice in space below.

Question 6

Examine the 1:50 000 Ordnance Survey map extract below and the accompanying legend which is available on page 30 and answer each of the following questions. The landscape shown on this map extract has been shaped by different physical processes including river erosion, glacial erosion and weathering.



- (a) (i) At which site on the map extract above, A or B, is freeze thaw action most likely to occur? Tick (✓) the correct box.

A

B

- (ii) State **one** reason why freeze thaw action is most likely to occur at the site you chose.

- (b) Circle the **two** processes of glacial erosion listed in the box below.

Plucking

Solution

Longshore drift

Saltation

Abrasion

Compression

- (c) On a hike through the area shown on the map extract above your friend asks you how this landscape was formed. Write the answer you would give to explain how the processes of glacial erosion **or** the processes of river erosion shaped the landscape shown on the map extract. Refer to the map extract in your answer.

Chosen processes:

Explanation:

Question 7

- (a) Name **one** example of a significant weather event that you have studied.

For more information, contact the Office of the Vice President for Research and the Office of the Vice President for Student Affairs.

- (b)** When did this weather event happen?

1. **What is the primary purpose of the study?**

- (c) Name a location that was affected by this weather event.

1. **What is the primary purpose of the proposed legislation?**

- (d) Name a weather instrument that was used to gather data during this weather event **and** say what it measures.

Weather instrument:

What it measures:

- (e) Explain how the weather event you named in part (a) was formed. Use at least one diagram in your answer. There is space for diagrams on the next page.

Space for diagram(s)

(f) Why do you consider this to be a significant weather event?

Question 8

(a) (i) Use the space below to draw a diagram of an active volcano.

Show and label each of the following on your diagram:

- Magma chamber
- Cone
- Vent
- Crater
- Ash cloud.

Labelled diagram

(ii) Name **one** example of a rock that forms when molten rock cools.

(iii) Indicate whether the following statement is true or false by ticking (✓) the correct box.

Metamorphic rocks were once igneous or sedimentary rocks that were changed by heat and/or pressure.

True

False

- (b)** Imagine you are a journalist sent to the site of a recent volcanic eruption.



Write a report describing some of the negative impacts of the volcanic eruption.

Question 9

Globalisation is a process that is leading to the world becoming more connected due to the exchange of goods, people, ideas and information. Read the article below about a rural Irish town becoming more connected to the rest of the world and answer each of the following questions.

High-speed internet puts Skibbereen at the centre of the world for connectivity

In 2016 Skibbereen became Ireland's first one gigabit town. Before this, Skibbereen was like many rural towns, with very low levels of broadband internet. The access to high speed broadband has attracted businesses to the town who can now have a global presence.

Fifteen families have moved or relocated to Skibbereen since May 2018, attracted by the high-quality jobs as well as the quality of life.

They tell of escaping the daily commuting nightmare, lower housing costs and lower childcare costs.

High-speed broadband is clearly having a positive effect on economic development in the town and is contributing to a sustainable future for Skibbereen.



(a) How many families have moved or relocated to Skibbereen since May 2018?

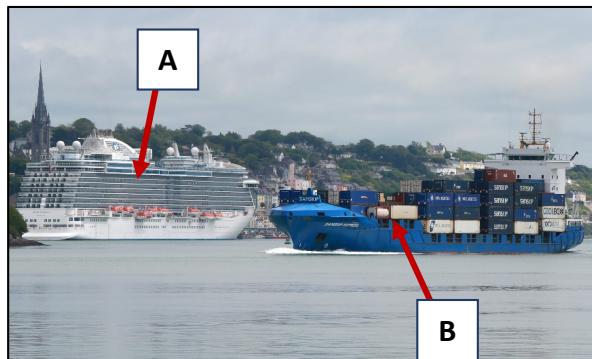
(b) Name **two** pull factors mentioned in the article that attract families to live in the area.

1:
2:

(c) Imagine you are a setting up a business in Skibbereen. How will having access to high-speed broadband be of benefit to your business?

- (d) Ships, like those in **Figure 2** below, transport goods, people and information all over the world.

Figure 2



- (i) Which ship in **Figure 2** is used by tourists to travel around the world?
Tick (✓) the correct box.

A

B

- (ii) The number of ships like the one labelled **B** in **Figure 2** entering Irish ports has increased.

Explain how globalisation has contributed to this increase in ships entering Irish ports.

- (iii) Other than shipping, name **one** form of transport that connects Ireland with the rest of the world.

For more information, contact the Office of the Vice President for Research and Economic Development at 515-294-6450 or research@iastate.edu.

Question 10

Between 1996 and 2016 Ireland's population increased by more than one million people. The questions below relate to this population growth and how it affected Ireland.

- (a) The table below shows the population of Ireland in 1996 and in 2016. Study the table and answer each of the following questions.

Year	Population
1996	3,626,000
2016	4,762,000

- (i) Calculate the change in population between 1996 and 2016.

Optional rough work:

Answer:

- (ii) One reason for the population growth in Ireland between 1996 and 2016 was a natural increase.

Explain what is meant by a natural increase in population.

- (iii) The number of people aged 65 or older is expected to increase in the future.

Name **two** services that the government must invest in.

1:
2:

(b) Lusk is one town in Ireland where the population increased between 1996 and 2016. Study each of the following:

- The aerial photograph below showing Lusk in 2000
- The 1:10 000 Ordnance Survey map supplied separately with this paper showing Lusk in 2019.

Lusk, 2000



(i) What was the area labelled A on the photograph being used for in 2000?

Tick (✓) the correct box.

Industry

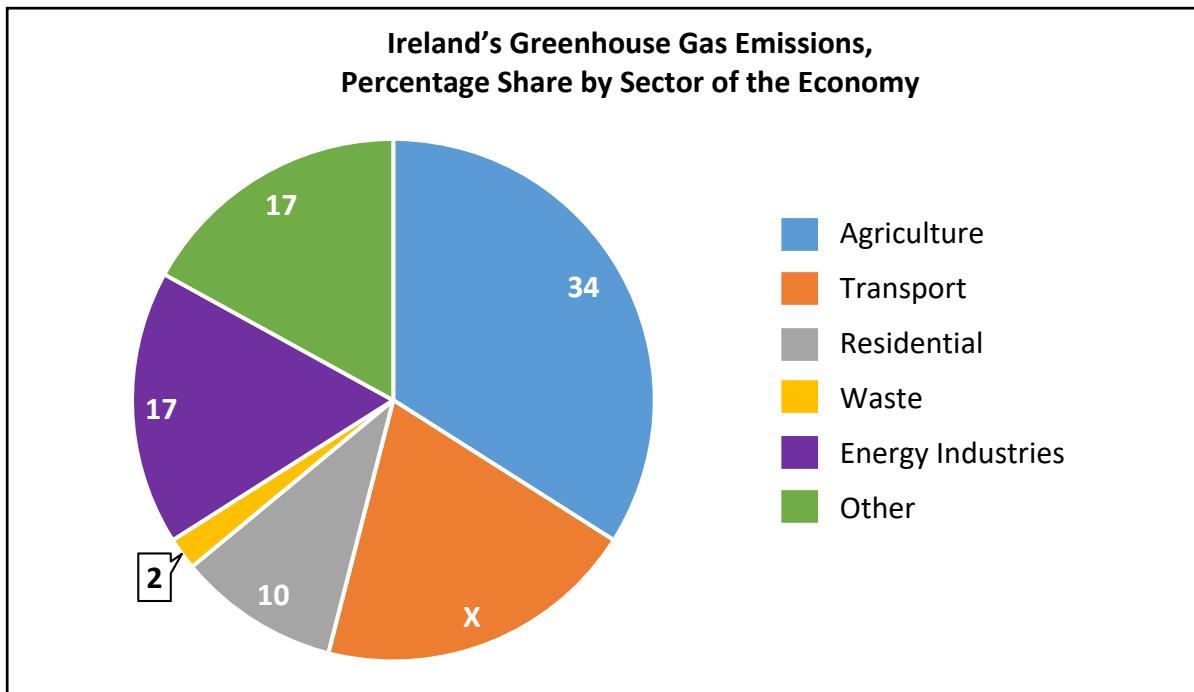
Agriculture

Quarrying

- (ii) The area labelled **A** on the photograph is now being used for housing estates, as can be seen on the Ordnance Survey map of Lusk from 2019 supplied with this paper. Explain why this area was a good location to build housing estates. Use evidence from the aerial photograph **or** the Ordnance Survey map to support your answer.

- (iii) Examine the aerial photograph from 2000 above and the Ordnance Survey map from 2019 accompanying this paper. Other than housing, describe **one** change in land-use between 2000 and 2019.

- (c) In the years that Ireland's population has been increasing, Ireland's greenhouse gas emissions have also increased. Study the pie chart below showing the percentage of Ireland's greenhouse gas emissions generated by different sectors of the economy and answer each of the following questions.



- (i) Calculate **X**, the percentage share of Ireland's greenhouse gas emissions that was generated by transport.

Optional rough work:

Answer:

- (ii) Which sector of the economy had the greatest share of greenhouse gas emissions?

- (iii) Indicate whether methane is an example of a greenhouse gas by ticking (✓) the correct box.

True

False

- (iv)** Indicate whether each of the following energy sources are renewable or non-renewable by ticking (✓) the correct box.
One has been completed for you.

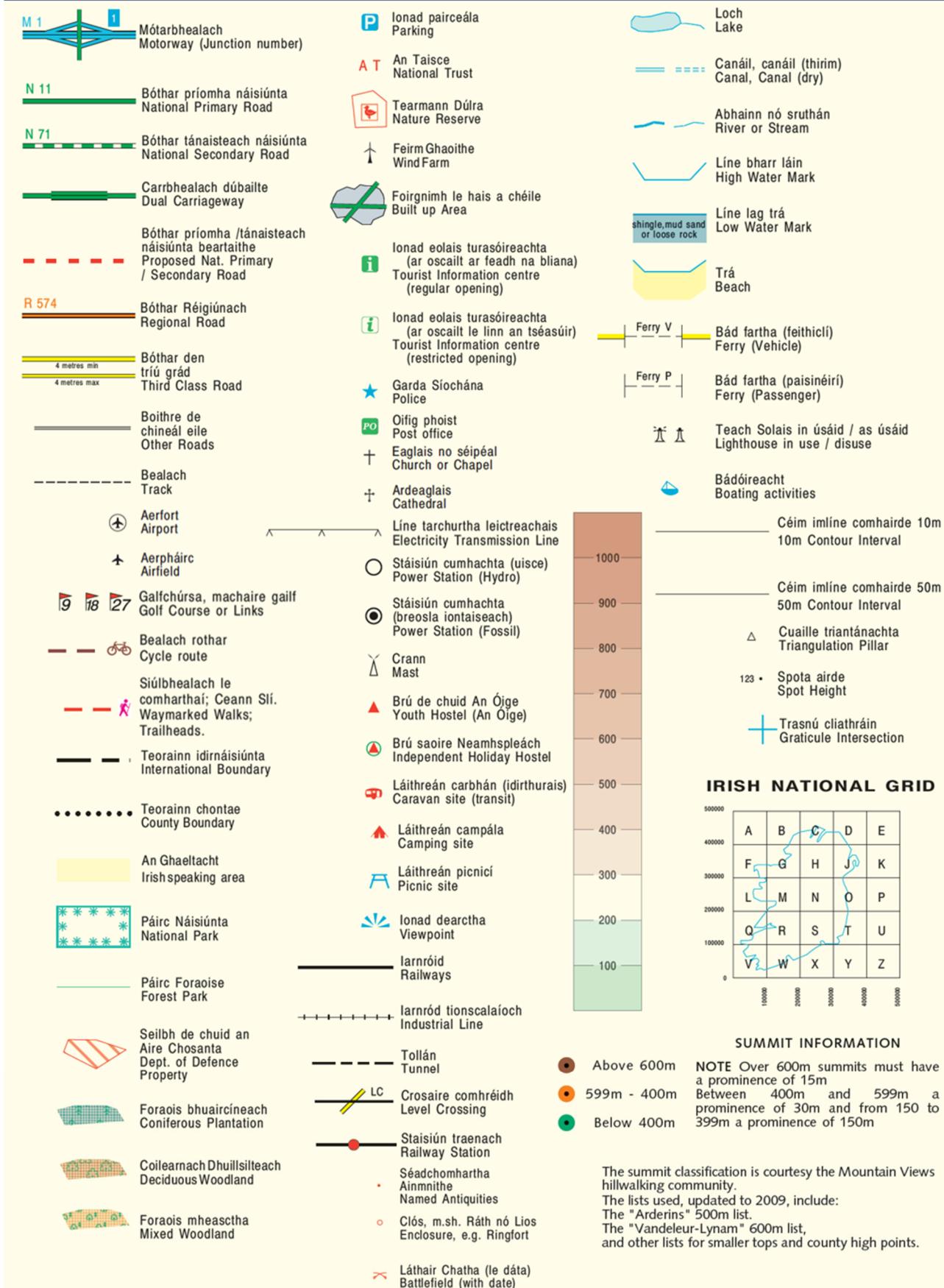
Energy Source	Renewable	Non-renewable
Oil		✓
Tidal		
Peat		
Biomass		

- (v) The Irish government has said that 550,000 new houses are needed by 2040. Builders are considering different ways to ensure that energy use in these houses is sustainable so that greenhouse gas emissions are as low as possible.

Name and describe **one** way to reduce greenhouse gas emissions from new houses.

Additional answer space.
Label all work clearly with the question number and part.

Space for diagram(s)



Acknowledgements

Images

Image on page 3: <https://timesofindia.indiatimes.com/india/8-dead-over-150-feared-trapped-after-landslide-near-Pune/articleshow/39294619.cms> (Accessed: 24/08/2020)

Image on page 7: <https://maps.scoilnet.ie/OSiMaps/EsriVer17/index.html> (Accessed: 24/08/2020)

Image on page 8: <https://www.odt.co.nz/regions/north-otago/north-otago-erosion-could-cost-millions> (Accessed: 24/08/2020)

Images on page 10: <https://www.thinklink.com/scene/969025048201396227>; <https://pluspng.com/png-77190.html> (Both accessed: 24/08/2020)

Image on page 12: <https://content.meteoblue.com/nl/meteoscool/general-climate-zones> (Accessed: 24/08/2020)

Images on page 14: <https://www.concern.net/where-we-work/somalia> (Accessed: 24/08/2020); <https://en.climate-data.org> (Accessed: 14/05/2020)

Image on page 16: <https://maps.scoilnet.ie/OSiMaps/EsriVer17/index.html> (Accessed: 24/08/2020)

Image on page 21: <https://www.theguardian.com/us-news/2018/jun/20/hawaii-volcano-eruption-kilauea-natural-wonders-destroyed-kapoho-bay> (Accessed: 24/08/2020)

Image on page 22: <https://cjdigitalmarketing.com/the-ultimate-basics-of-online-business-promotion> (Accessed: 26/08/2020)

Image on page 23: <https://www.linkedin.com/company/port-of-cork-company> (Accessed: 24/08/2020)

Image on page 25: <http://map.geohive.ie/> (Accessed: 19/06/2020)

Image on page 27: Data in pie chart <http://www.epa.ie/ghg/currentsituation/> (Accessed: 24/08/2020)

Image on page 30: Ordnance Survey Ireland

Texts

Article on page 3: *Times of India*, <https://timesofindia.indiatimes.com/india/Landslide-in-Maharashtra-kills-17-200-feared-trapped/articleshow/39317452.cms> (Accessed: 24/08/2020)

Data on page 13: Met Éireann, <https://www.met.ie/climate/available-data/monthly-data> (Accessed: 24/08/2020)

Article on page 14: Concern, <https://www.concern.net/where-we-work/somalia> (Accessed: 24/08/2020)

Article on page 22: *The Irish Examiner*, <https://www.irishexaminer.com/business/arid-30962947.html> (Accessed: 24/08/2020)

Data on page 24: Central Statistics Office, https://www.cso.ie/en/media/csoie/releasespublications/documents/population/2017/Chapter_1_Population_change_and_historical_perspective.pdf (Accessed: 14/07/2020)

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Junior Cycle Final Examination Sample Paper – Common Level

Geography

2 hours