

1st Year Geography Summer Exam.

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Class: Armstrong

1. OS Maps:

Examine the OS map of Mullingar supplied separately with this paper.

(i) Give a four figure grid reference for the following locations:

a. A Viewpoint

N 41 58 / 3

b. A Post Office

N 43 52 / 3

c. Coniferous Forest

N 41 50 / 3

d. A car park

N 41 56 / 3

(ii) What direction would you be travelling in:

e. From Lough Owel towards Lough Drin:

East / 3

f. From the Police Station towards the Train Station:

South-west / 3

g. From Lough Sheever to Lough Drin.

North / 3

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Q2. Mass Movement

(a) Name one type of fast mass movement and one type of slow mass movement.

1. Soil creep ✓ 3
2. Landslide ✓ 3

(b) Explain how one type of those mass movement occurs.

Soil creep:
When soil is loose and moist, it very slowly moves downhill because of gravity. Steeper slopes cause soil to move faster. Effects of soil creep include tilting poles, terraces and cracked roads. ✓ 2

3. Rock groups:

Igneous, sedimentary and metamorphic are the main rock groups.

Complete each of the following sentences by inserting the correct rock group.

- (i) Rocks formed as a result of great heat or pressure are known as

metamorphic ✓ 3

- (ii) Rocks formed from cooled molten volcanic material are known as igneous ✓ 3

- (iii) Rocks formed from the compressed remains of animals, plants or other rock materials are known as sedimentary ✓ 3

4. Rocks

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

Basalt

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

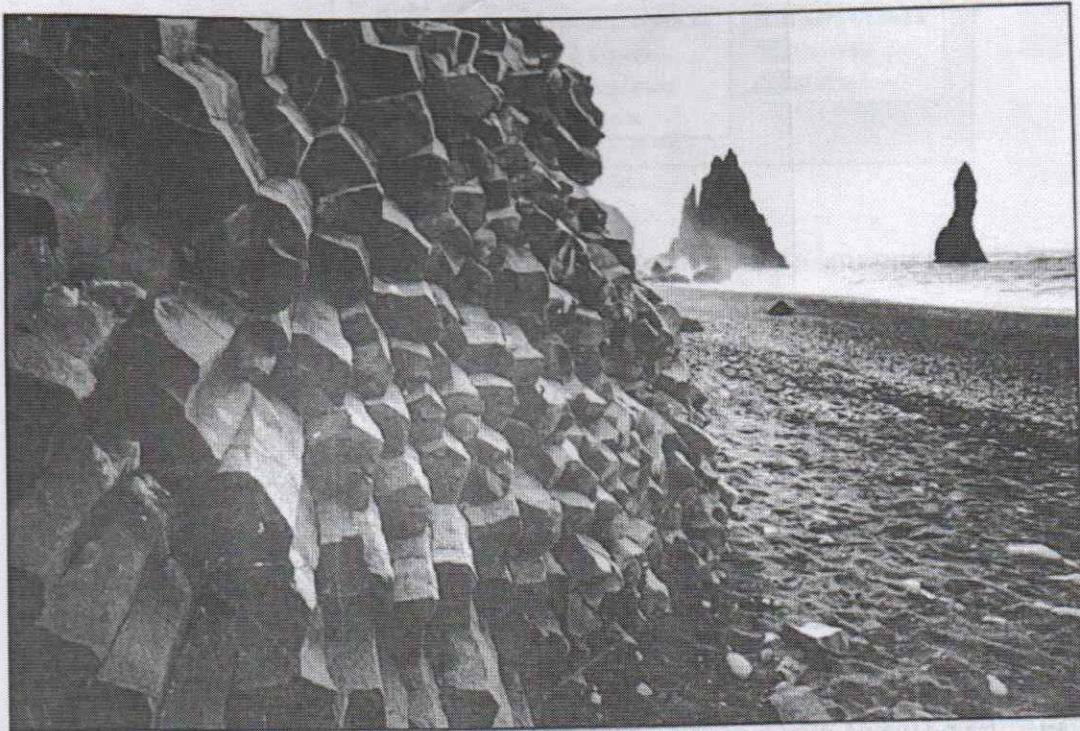
Metamorphic rocks were once igneous or sedimentary rocks that were changed by heat and/or pressure.

True ☒

False ☐

(b)

Examine this photograph of a basalt area in Iceland and answer the questions that follow.



- (i) Is basalt an igneous, sedimentary or metamorphic rock?

Igneous

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(ii) Read the statements below and circle as true or false.

- Basalt rock is formed by the cooling of lava on the Earth's surface. True/False
- Basalt is an example of a soft rock. True/False

(iii) Name one use of rocks.

Tiles

(iv) Describe the formation of either basalt or granite.

Basalt: When ~~lava~~⁺² lava erupts out of a volcano, it flows down the side of the cone shape, and eventually stops. Since outside the volcano is much cooler than inside, it cools quickly to become basalt.

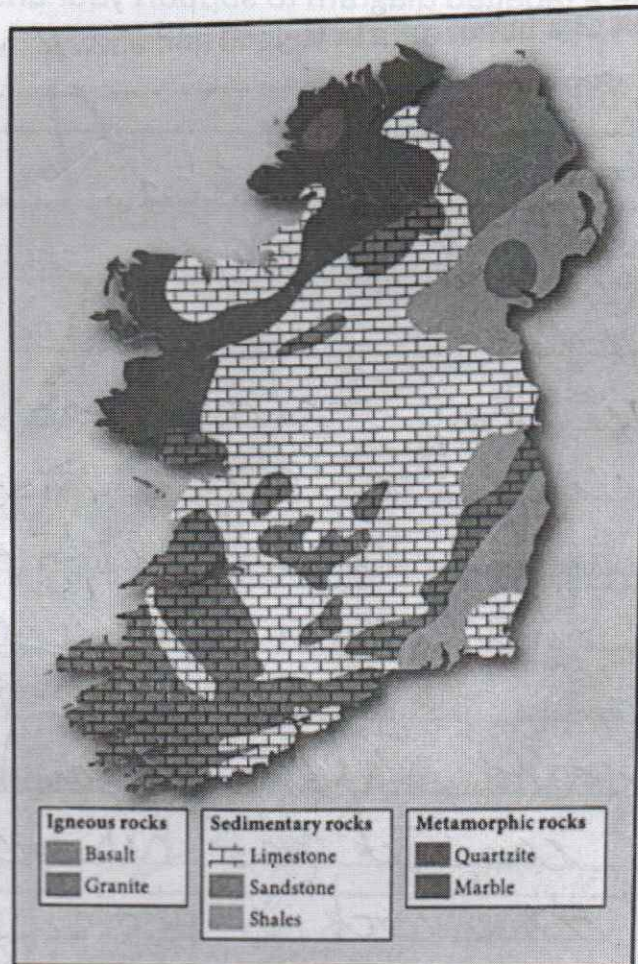
Small crystals, dark grey.
Giant's Causeway

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5. Rocks:

Look at this geological map of Ireland. Answer the questions that follow.



- (i) Name the unusual rock feature that was formed by an igneous rock in Northern Ireland.

Giant's Causeway

- (ii) Name the most common rock in Ireland.

~~Sandstone~~ Limestone

- (iii) Quartzite is an example of a metamorphic rock. What sedimentary rock was it before it was changed under heat and/or pressure?

Limestone

~~Sandstone~~

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6. Weathering:

Name AND explain one process of mechanical weathering you have studied. Use a labelled diagram to support your answer.

Name of process: Freeze - thaw action

Explanation: When water from rain or a river/stream gets into a crack in rock, freeze-thaw action can occur. This is because when temperatures drop below zero degrees celsius (usually at night), the water freezes and expands slightly. When temperatures rise, the water melts, but since the crack is larger than before, more water can get in. This process repeats until some rock is broken off and carried

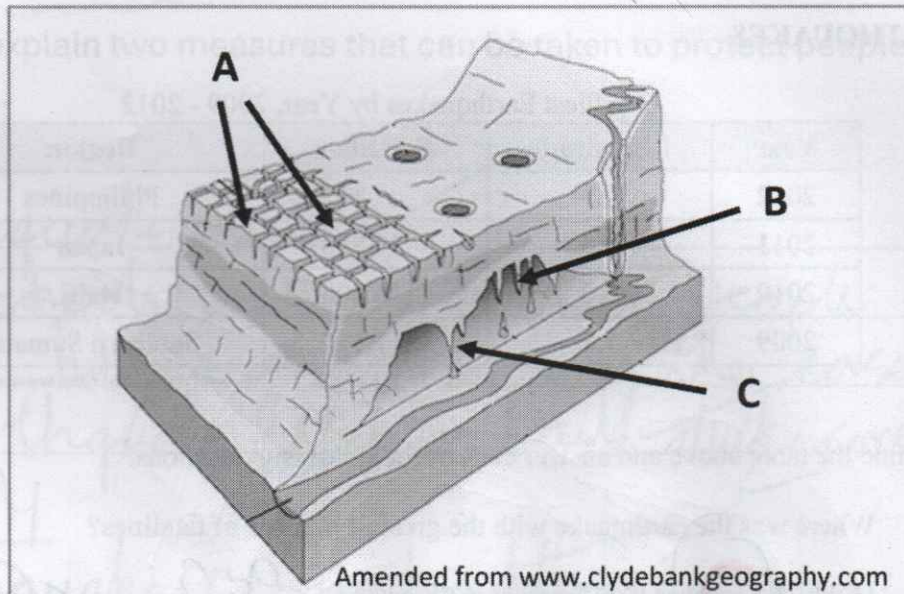
Labelled diagram(s):

Temperatures above 0°C Sub-zero temperatures Eventually

Water in crack
Rain
Small crack
Ice
New cracks
cliff
scree

downhill by gravity. This rock is called scree. In conclusion, water, rock, warm and cold temperatures are needed for freeze thaw action.

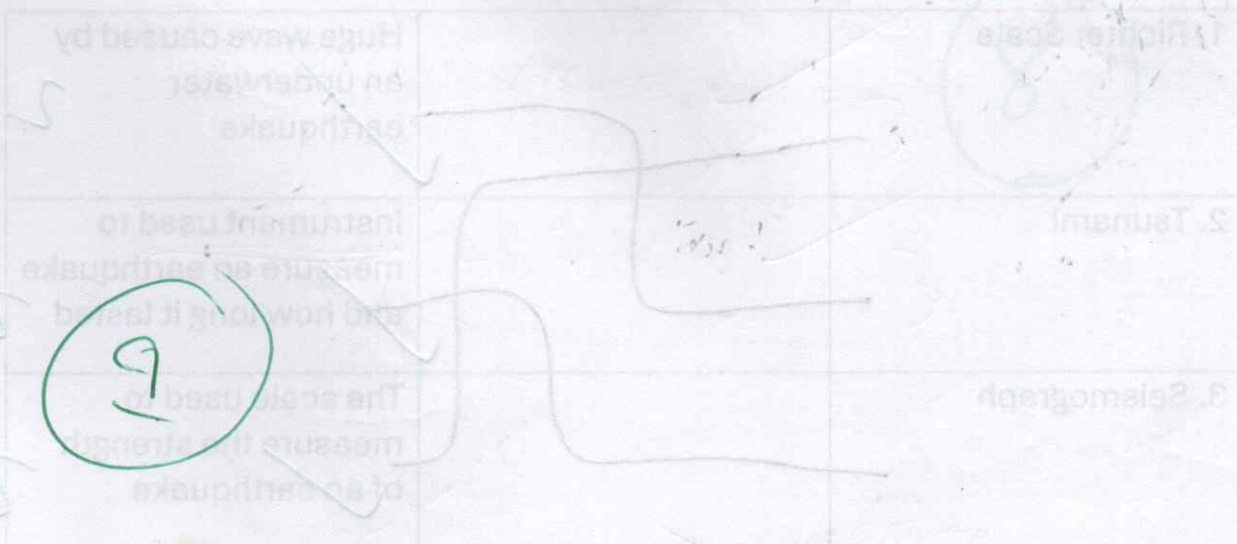
7 KARST LANDSCAPES



The diagram above shows features in a karst region.

Name each of the limestone features labelled A, B and C.

- A. Clints ✓ 3
- B. Stalactite ✓ 3
- C. Pillar ✓ 3



8 EARTHQUAKES

Deadliest Earthquakes by Year, 2009 - 2012

Year	Magnitude	Fatalities	Region
2012	6.7	113	Philippines
2011	9.0	20,896	Japan
2010	7.0	316,000	Haiti
2009	7.5	1,117	Southern Sumatra

Amended from www.usgs.gov

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

- (i) Where was the earthquake with the greatest number of fatalities? Haiti
- (ii) In which year was the strongest earthquake? 9.0 2011
- (iii) Name the scale used to measure the force/magnitude of an earthquake.

Richter scale

9 Earthquakes

Match the correct words with their correct description:

1. Richter Scale		Huge wave caused by an underwater earthquake <u>2</u>
2. Tsunami		Instrument used to measure an earthquake and how long it lasted <u>2</u>
3. Seismograph		The scale used to measure the strength of an earthquake <u>2</u>

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10 Impacts of earthquakes

Name AND explain two measures that can be taken to protect people from earthquakes.

1.

Earthquake drills:

In schools and workplaces, people should be taught that in the case of an earthquake they should duck, cover and hold

2.

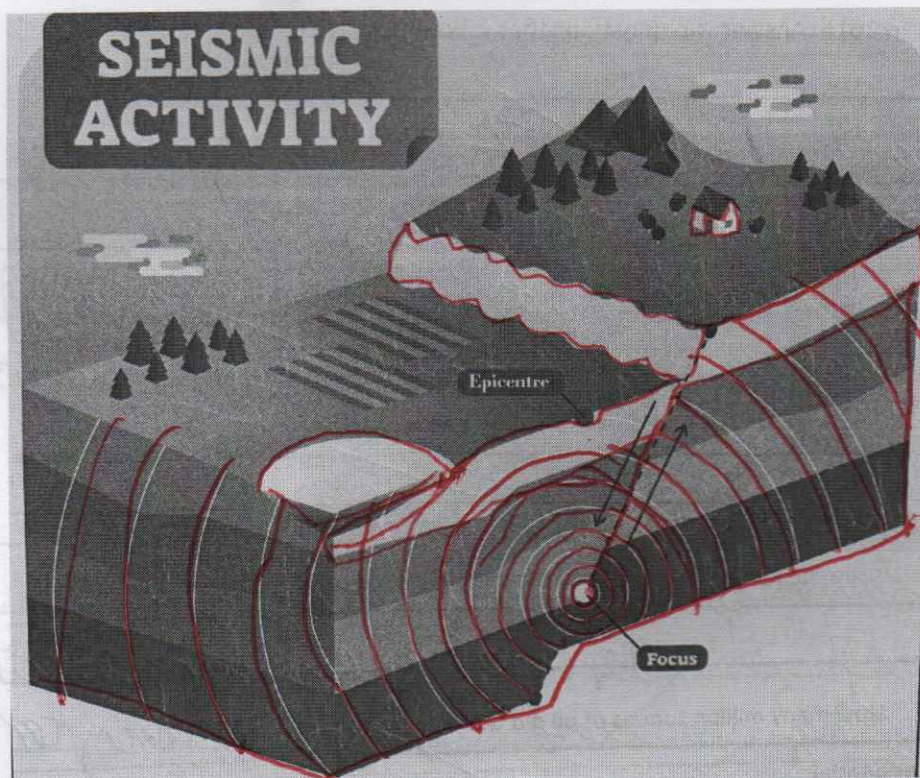
Earthquake-proof buildings:

Buildings should be built with strong supports and shatterproof glass for protection against earthquakes and numbered helicopter pads for identification

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11 Earthquakes:

Examine the diagram and answer the question below:



What is the difference between the focus and the epicentre of an earthquake?

The focus of an earthquake is underneath the surface and is where the earthquake originates. The epicentre is the place on the surface directly above the focus.

$$\frac{113}{122} = 93\%$$

$$\frac{115}{122} = 94\%$$

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