# Lurgan College Geography Department

# Y11 Mock Exam January 2011

# Model Answers

Lurgan College Mock Examinations 2011

## Geography

Unit 1: Understanding our Natural World

Year 11 Mock Exam

January 2011

Answer **all** questions

Your Name:_____

Teacher: Mr Hamill / Mr Ross / Mr Uprichard

Time: 60 minutes

Total marks: 60

Write all your answers in the spaces provided in the question paper.

| Q1 | Q2 | %age | Grade |
|---|---|---|---|
| | | | |
| Comment | | Your key actions to take in response to this exam | |

0

Use these answers to help you to learn from this exam and to identify how you might improve towards your next mock in May. The answers are taken from a range of pupils and each one earned full marks for the question. What this is then is a 100% exam paper! It can be done! Note also the comments added to help you understand **why** these answers are so good. Read it all carefully to learn how you might do better next time.

(b) Study **Fig. 5** which shows the different air masses that affect the British Isles. Answer the questions which follow.



Polar Maritime

N

Tropical maritime

Polar continental

Tropical continental
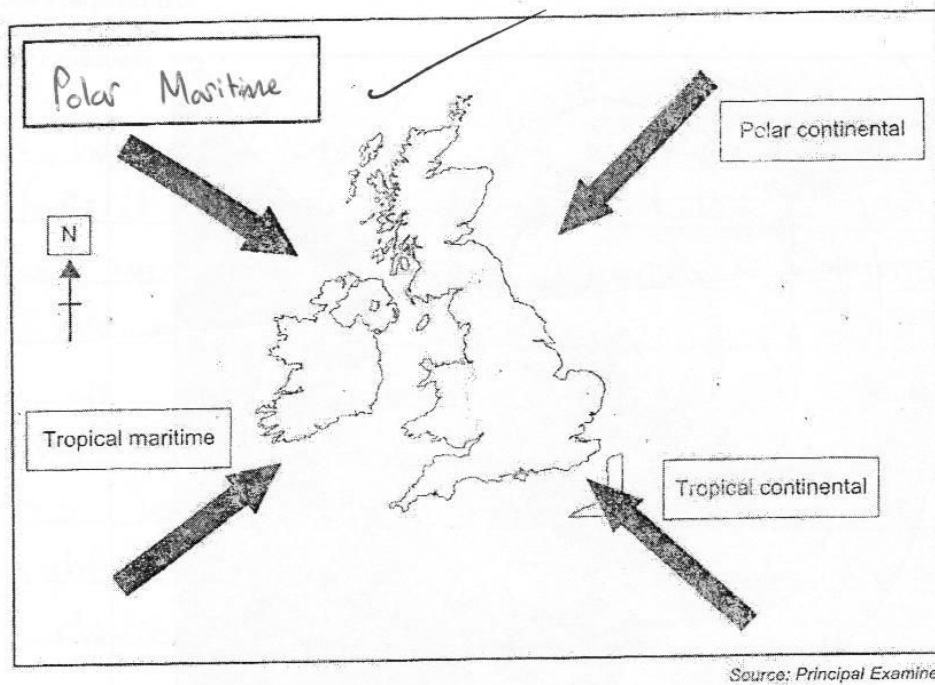
Source: Principal Examiner

Fig. 5

(i) Complete **Fig. 5** by inserting the name of the correct air mass. [1]

(ii) Describe and explain the temperature and moisture characteristics of a Tropical continental air mass.

It has mild and dry conditions in Winter and hot, dry conditions in Summer. It is like this because it is coming over a continent and cant pick up much moisture. High temperatures due to it coming from SE, from the equator over continents. [4]

ase note: if you are wondering where figures 1 to 4 are, they are from a different question

- **Question says 'describe and explain' i.e. what and why?**
- **This answer deals with both these aspects, so picks up full marks.**
- **Remember to read the question carefully!!**

p 2

(ii) Choose **two** of the elements of the weather below and explain why these conditions were experienced in the British Isles on Wednesday 16 December 2009.

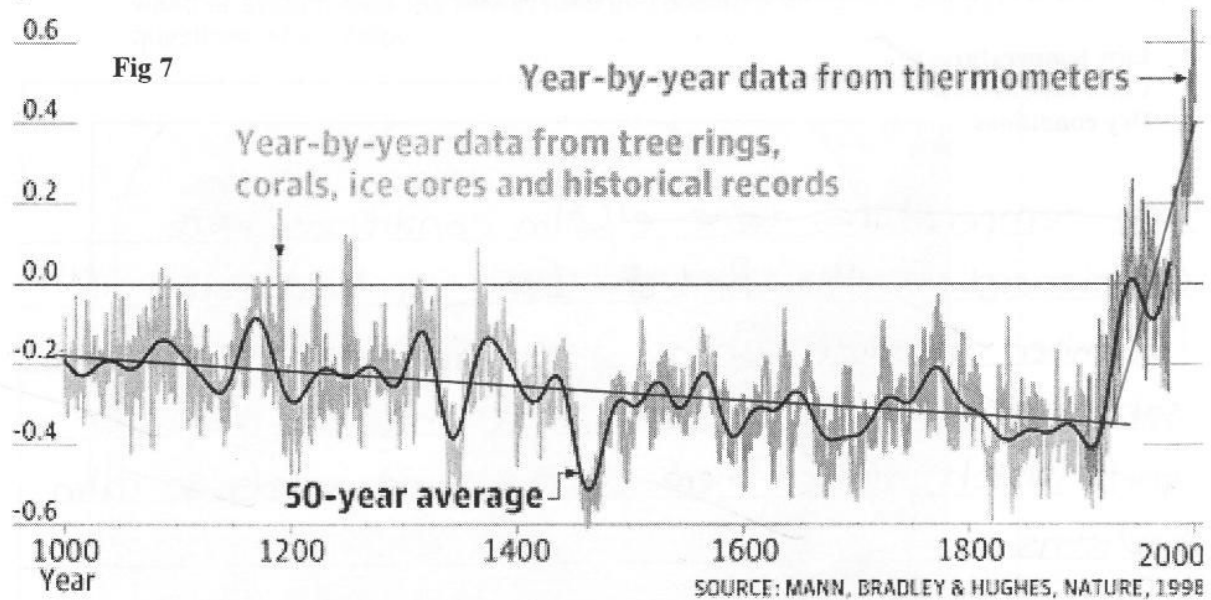- **Low temperatures**
- **Calm conditions**
- **Dry conditions**

Low temperatures were experienced in the British Isles on Wednesday 16th December as an anti-cyclone was over the British Isles. So, during the winter anti-cyclone there is little or no cloud cover. That means that more radiation and heat is loss during the night. Clam conditions were experienced in the British Isles, as the isobars are far apart. So, that tells us that there was low wind speeds experienced. That means that there was little or no wind.

(6)

excellent answer
- detailed & v. well
structured!

6

- **Very good SCE x2 used here.**
- **This means that each sentence adds detail of understanding to the answer.**
- **This develops the answer, giving a full and detailed explanation.**

p 4

(d) Study figure 7 which shows the world's temperatures over the past 1000 years. Answer the question which follows.

**Fig 7**

Year-by-year data from thermometers →

Year-by-year data from tree rings, corals, ice cores and historical records

50-year average

1000 Year    1200    1400    1600    1800    2000

SOURCE: MANN, BRADLEY & HUGHES, NATURE, 1998

(i) Describe the temperature changes as shown in **fig 7**.

At the start of the past 1000 years the weather was quite cool. At the start it started to decline gradually. It declined to about -0.2 or -0.1. When the data reached the 20th century the temperatures have seemed to incline rapidly. At th It looks like it has reached it's peak temperature at about 0.6°C.

Very good

(5)

5

- **This answer uses the resource very well.**
- **It uses a verb and adverb to describe the different sections of the graph.**
- **It also quotes figures**
- **These are the things you should do when presented with a resource like this.**

(ii) Explain **one** natural cause of climate change.

one natural cause of climate change is the earths elliptical orbit around the sun may vary. Depending on how the earth orbits it could increase or decrease the worlds temperatures.

2

(2)

(iii) With reference to a place you have studied, outline the impacts of climate change on the environment, society and economy.

Kiribati, Pacific Ocean - The effects of Climate change on a LEDC

Environment - As the highest point in Kiribati is only 20m above sea level this acts as a major problem. The IPCC has predicted an 80cm rise in sea level by 2100 this will be a major issue for such a low lying country. Water storage is becoming a major issue as it has become contaminated by the sea water seeping through the ground. Sea water has also damaged the roads infrastructure this is a major problem as the narrowest part with a road is only 20m. connecting the main part of the island with the coral part.

Society - many inhabitants living here are becoming worried and moving out of the country. The current net movement is -2.87 Per thousand. This will become a major problem, as it will be a whole nation looking for somewhere to live which will be a hard problem to overcome. More People moving out than coming in.

Economy - As Kiribati is so small and its remoteness it is a very Poor country. This will have a major effect as if they are poor they will have to rely on aid from other countries, to help them if they are going to be affected. The Australian government has already given the worlds bank, Kiribati's climate change adaption Project 3 million Us dollars and 1 million dollars to help water storage.

(6)

## Unit 1 - Theme C: The Restless Earth

2 (a) Study **Fig. 8** which shows the structure of the Earth. Answer the questions which follow.



Fig. 8
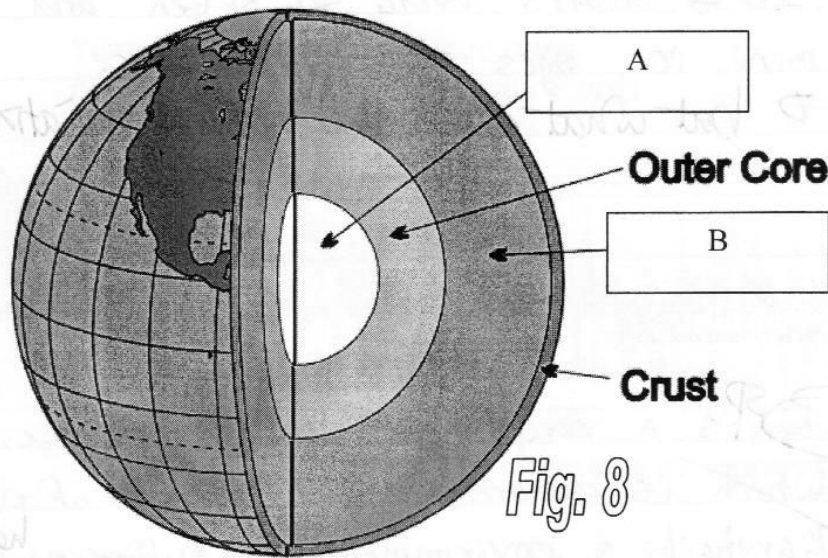
(i) Write the labels for A and B in the lines below.

A _inner core_ ✓ (1 mark)

B _mantle_ ✓ (1 mark)

2

(ii) Explain why plates move.

Plates move by convection currents. The convection currents cause friction between the convection current and the bottom of the plate. As the ~~plat~~ colder more dense plate subducts the rest of the plate is pulled along as ~~wt~~ well (slab pull). Magma also pushes up through cracks in the crust (3 marks) and pushes the plate (ridge push). ✓

3

- **Very good detail of understanding communicated here.**
- **Geographical terms are also used to good effect.**

Excellent ...

(b) Study **Fig. 9** which shows the edge of the Antrim Plateau, a lava plateau made of basalt which stretches to the north coast of Northern Ireland. Answer the questions which follow.


Fig. 9
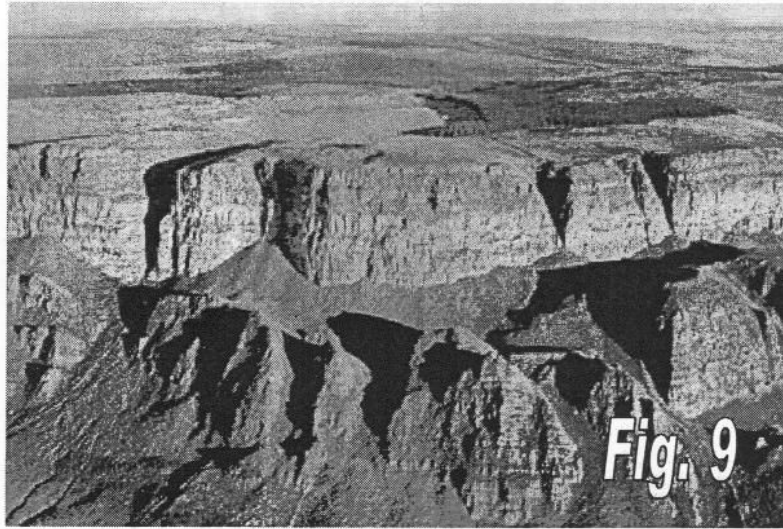
(i) State the rock type to which basalt belongs.

_igneous._ _____ (1 mark)

(ii) Explain the formation of a lava plateau (you can use an example to help).

A lava plateau is formed when ~~a~~ lava rises up a fissure and spreads out sideways. As the lava spreads and cools it creates a large area of flat ~~topp layers.~~ topped layers. These layers will eventually form ~~mount~~ a flat topped ~~layer~~ mountains, ~~#~~ for example like the Antrim Plateau.

_____ (4 marks)

_detailed &_
_well presented_

4

(c)  Study **Table 1** which shows some differences between earthquakes in different places. Answer the question which follows.

**Table 1**

| Year | Area | Country | MEDC or LEDC | Magnitude Richter Scale | Number of people killed |
|------|------|---------|--------------|-------------------------|-------------------------|
| 1964 | Anchorage | USA | MEDC | 8.6 | 130 |
| 1985 | Mexico City | Mexico | LEDC | 7.8 | 4,600 |
| 1995 | Kobe | Japan | MEDC | 7.2 | 5,500 |
| 2004 | Sumatra | Indonesia | LEDC | 9.0 | 250,000 |

© CCEA

Using **Table 1**, state fully **two** reasons why more people are killed in some earthquakes than others.

Anchorage had less deaths than Mexico City because Mexico city is an LEDC. So Mexico city would not of been built up as well for earthquakes. This would of caused more buildings to of collapsed killing more people.

Sumatra had a larger death total than Kobe because Sumatra had a larger earthquake. Sumatra had an earthquake of 9.0 and Kobe had a 7.2 on the richter scale, Sumatra's earthquake was 100 times bigger. This would of killed more people.

(5 marks)
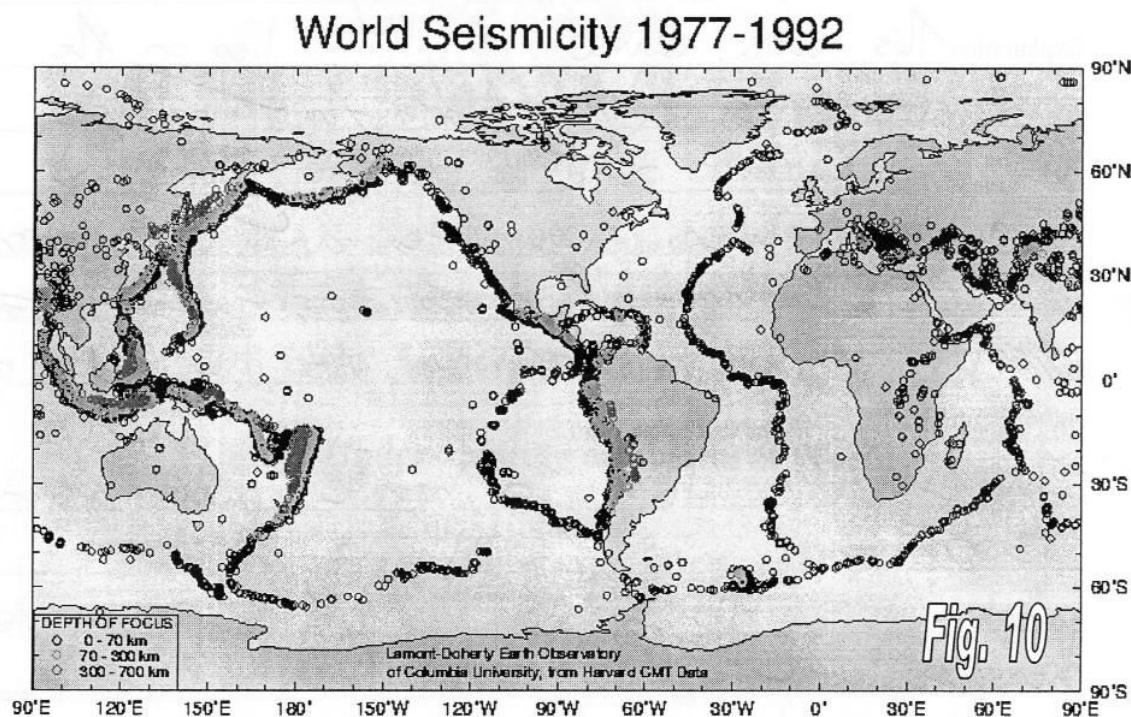
9

excellent! 5

(d) Study **Fig. 10** which shows the global distribution of earthquakes (greater than magnitude 5) in 2003. Each dot is the epicentre of an earthquake. Answer the questions which follow.

## World Seismicity 1977-1992



Fig. 10

DEPTH OF FOCUS
0 - 70 km
70 - 300 km
300 - 700 km

Lamont-Doherty Earth Observatory
of Columbia University, from Harvard CMT Data

(i) State the meaning of the term **epicentre**.

Epicentre is the point directly above the
on the earths crust
focus ~~~~~~ so this is where the shockwaves
from the impact are sent. (2 marks)

(ii) Describe the global distribution of earthquakes shown in **Fig. 10**.

The vast majority of these Earthquakes
are on plate boundaries. The smaller earthquakes
seem to not sit on plate boundaries but
the bigger, more damaging earthquakes are.
The pattern of them is basicly following the
way the crust is broken up into plates

V - good use of resarce. (4 marks)

10

(e) (i) Explain the cause of an earthquake you have studied in an **LEDC**.

Location and date of earthquake _Haiti 2010_ ✓

Explanation _Two plates were trying to slip past each other. The were moving at about 2cm per year. When the pressure got too great, the plates suddenly slipped past eachother resulting in an earthquake. Along 65 km of the fault, the ground moved_ ✓

3

(ii) Describe **three** impacts the earthquake had. _questions carefully!_

_Short term impacts on people were 230,000 deaths, 300,000 injures and hospitals destroyed_

_Long term impacts on people were 1,000,000 people homeless and a disease called cholera broke out killing 337 people and causing 4764 confirmed cases. The disease would break out quickly by drinking dirty water and living close together in camps._

_Short term impacts on economy were 30,000 commercial buildings destroyed and a jail collapsed letting out 4,000 inmates._

(6 marks)