Paper 1 Physical Landscapes – Natural Hazards

DEFINITIONS

A natural hazard is a _____ event, which is perceived by people as a _____ to life, the economy & _____. It may be generated from within the _____ (volcanoes & earthquakes), occur upon the _____ (flood), or happen within the atmosphere (drought, snow).

Tectonic Hazards

Atmospheric hazards

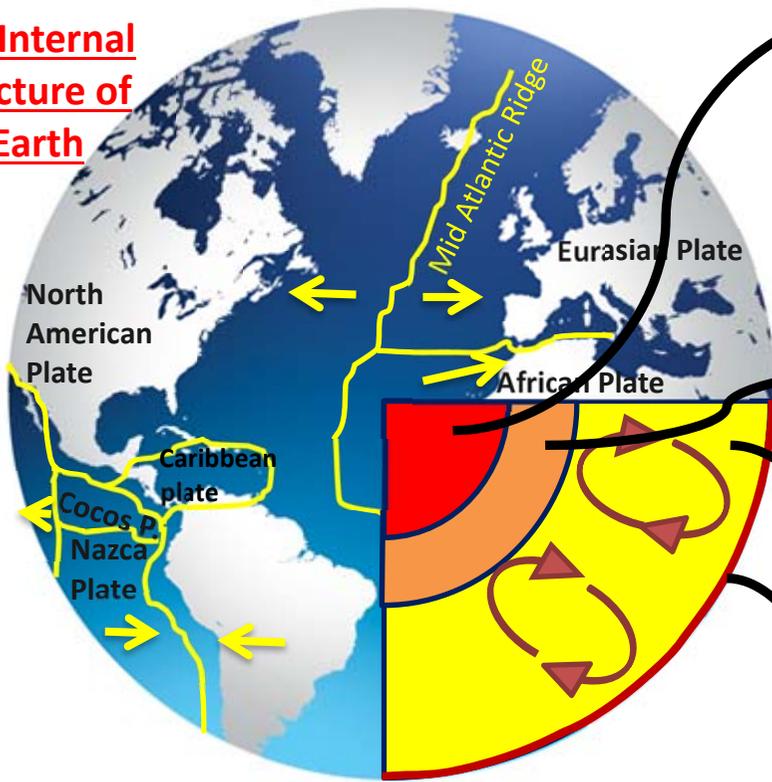Geomorphological hazards

Biological hazards
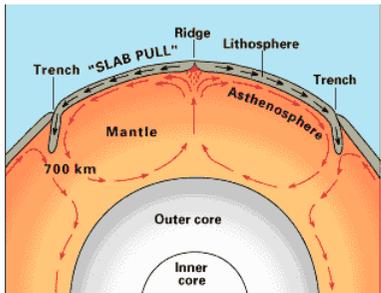
The Internal Structure of the Earth

North American Plate

Mid Atlantic Ridge

Eurasian Plate

African Plate

Caribbean plate

Cocos P.

Nazca Plate

The tectonic plates move because of convection currents these are:

Ridge

Trench "SLAB PULL"

Lithosphere

Trench

Asthenosphere

Mantle

700 km

Outer core

Inner core

A map of the World's major plate boundaries

Key:
Earthquakes
Volcanoes
Mountains
Trenches

Key
8 Rate of plate movement in cm

Plate movement
Conservative boundary
Constructive boundary
Destructive boundary
Collisional boundary

North American Plate

Eurasian Plate

Caribbean Plate

N

Pacific Plate

Cocos Plate

Indian Plate

Philippines Plate

Nazca Plate

South American Plate

African Plate

Indo-Australian Plate

Scotia Plate

Antarctic Plate
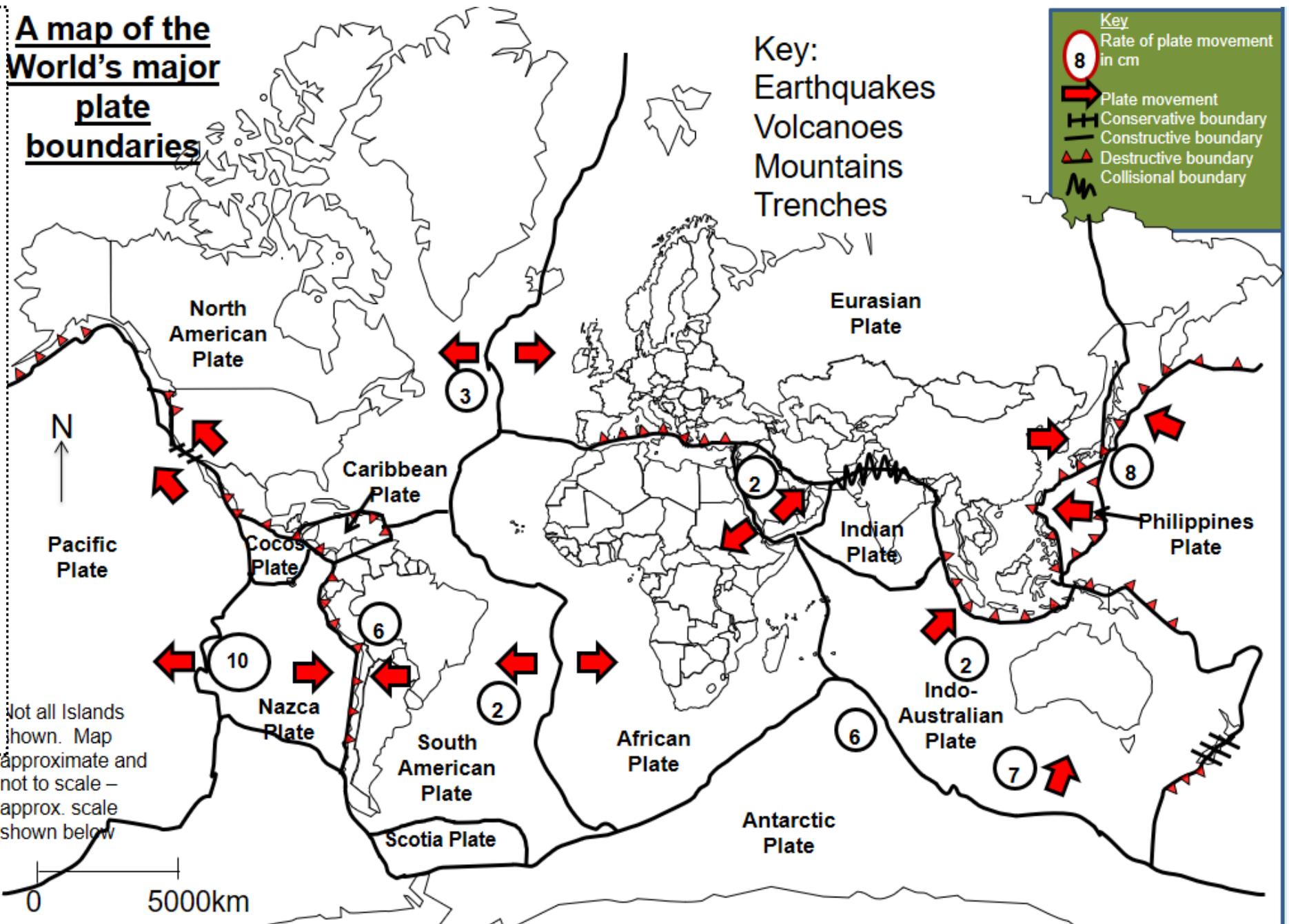
Not all Islands shown. Map approximate and not to scale – approx. scale shown below

0   5000km

3   2   8   6   2   10   6   2   7

Tectonic boundaries
In an exam you could be asked to draw a labelled diagram or write about the process.

DESTRUCTIVE

The _____ plate moves towards the _____ plate and _____ under it because it is _____ creating a _____. This causes the plate to _____, which creates _____ that rises through the weaknesses of the _____ plate and erupts as a volcano. **E.g. the Nazca plate subducts under the _____ _____ plate forming the Andes.**

CONSTRUCTIVE

Two plates move _____ from each other. By slab pull. _____ rises up and _____ and _____ to form new oceanic plate this can trigger _____ and form rift valleys (on the land), volcanoes, and _____ islands. **E.g. the North America and Eurasian plate forming Iceland.**

CONSERVATIVE

Plates move _____ or in the _____ direction. The plates _____ due to the friction which leads to _____ building. When they become unstuck, this releases the pressure triggering an _____. **E.g the North American plate and the Pacific plate – San Andreas fault**

Plate boundary	Fold mountains?	Trenches?	Volcanoes?	Earthquakes?
Constructive/ Divergent				
Destructive/ Convergent				
Conservative				
Collisional				

The 3 Ps for reducing Earthquake impact:

PREDICTION

PREPARATION

PREVENTION

The 4 Rs for human responses to a disaster

RESCUE

REPAIR

REBUILD

RECONNECT

Primary Impacts

1

2

3

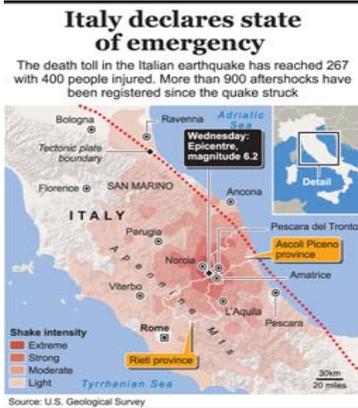Secondary Impacts

1

2

3

Short-term response

1

2

3

Long-term Impacts

1

2

3

Comparing Italy and Pakistan's Earthquakes

Italy declares state of emergency

The death toll in the Italian earthquake has reached 267 with 400 people injured. More than 900 aftershocks have been registered since the quake struck

Source: U.S. Geological Survey

Background info and Causes

Background info and Causes

Effects

_____ Primary _____ Secondary _____

Effects

_____ Primary _____ Secondary _____

Immediate (short/medium) responses

Longer-term responses

Immediate (short/medium) responses

Longer-term responses

How and why are they different?

How does the time of day and year affect both examples?

How and why does the death and homeless rate differ between the examples?

How did the response differ between the two? Who was more prepared?
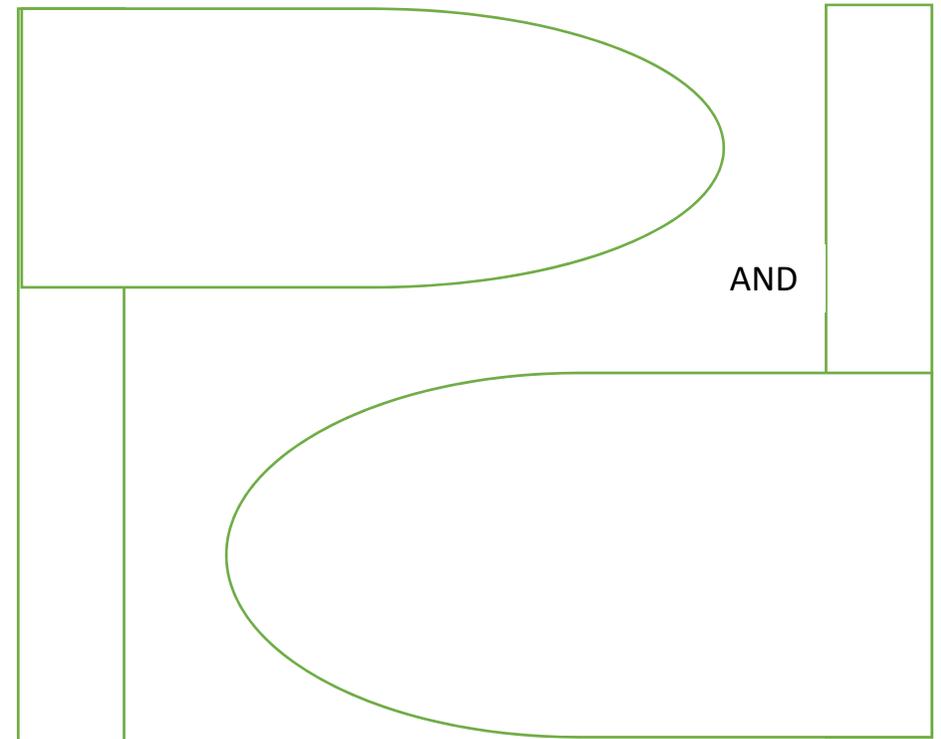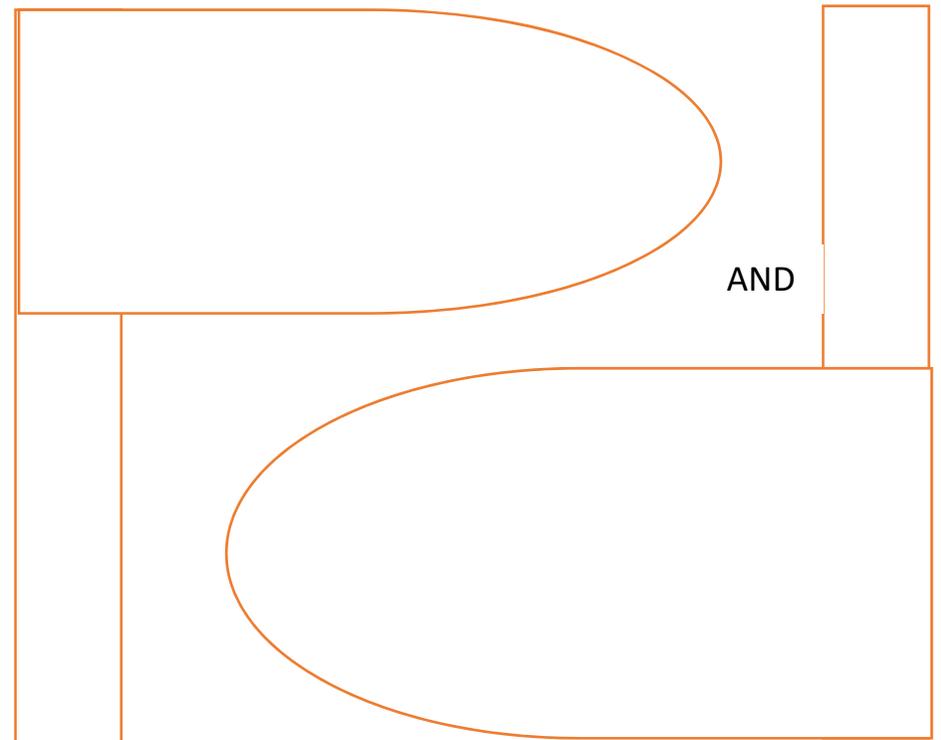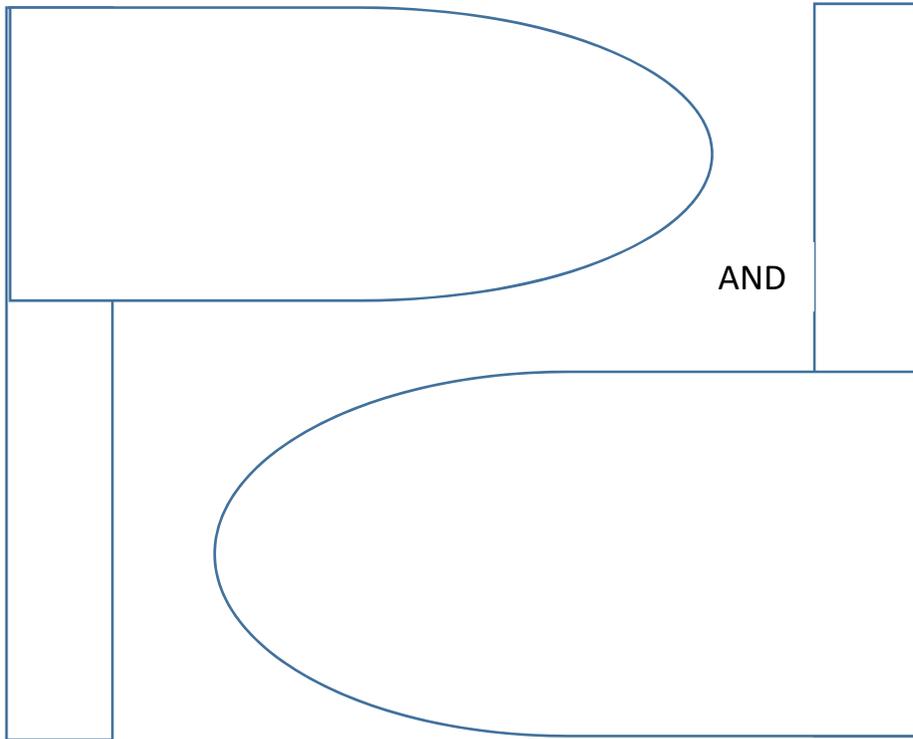
Overall how important is the countries level of development when it comes to the hazard?

IMPORTANT

In the exam, the question will say <u>tectonic hazard rather than earthquake</u> because other schools may have done volcanoes.

Why do people live in tectonically active areas?

Remember to make your POINT and then DEVELOP it by explaining

AND

AND

AND

How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.

Around the diagram – POINT and DEVELOP how we can predict earthquakes and volcanoes.

How could we PLAN and MANAGE to help reduce earthquake and volcanoes risks?
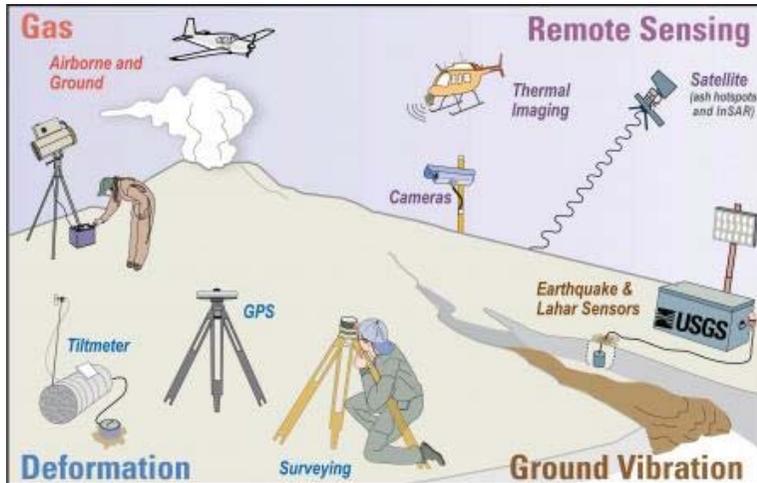
CLIMATIC HAZARDS

Global Atmospheric Circulation