

2016 specification
first exams in 2018 (2017 for AS)

Topic Tests

for AS and A Level AQA Geography

Hazards

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Test 1 – Hazards and Their Context

1. a. Using the map on handout sheet 1, mark **one** location where each of the following occurs: 4 marks
 1. Volcano
 2. Earthquake
 3. Tropical storm
 4. Wild fires

- b. Describe and explain **two** of the locations you have suggested above. 4 marks

2. Define and suggest **two** characteristics of natural hazards. 3 marks

3. Suggest how hazard perception may differ between countries of varying economic development. 6 marks

4. Explain why 'fatalism' and 'adaptation' are opposites of each other. 4 marks

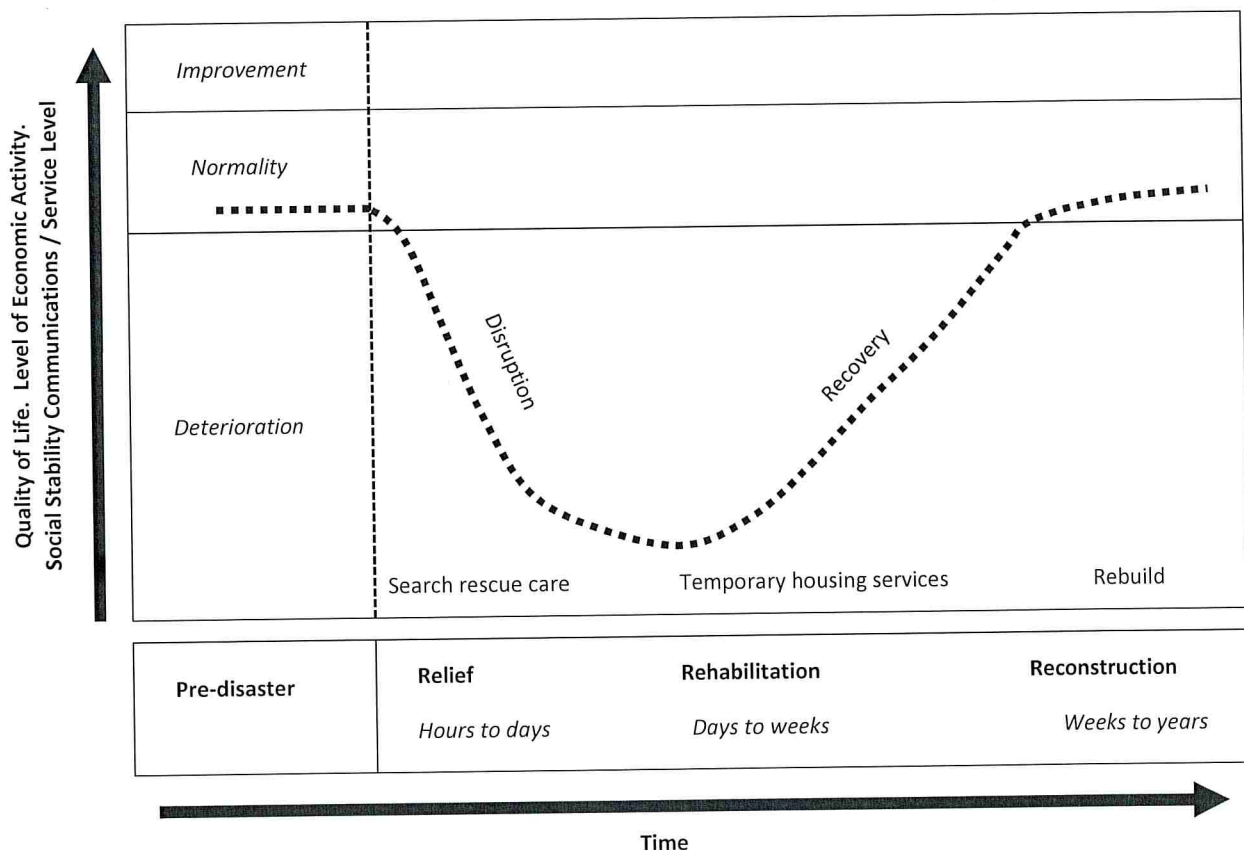
5. Give **two** examples of community preparedness. 2 marks

6. Outline how community preparedness can reduce a hazard's risk and increase resilience. 4 marks

7. Give two scales for the responses to hazards. 2 marks

8. How might preparation, prediction and warning vary throughout the world? 4 marks

9. Name and describe the model shown in the figure below. 6 marks



10. Suggest how the speed of onset of a hazard can affect the quality of life after reconstruction has taken place. 3 marks
11. The diagram on handout sheet 1 represents the disaster/risk management cycle. The clock face represents the passage of time (but note that all hazards have different timescales).
- Mark the time that the hazard occurred using a symbol such as a star (1 mark).
 - Label each box with the text below (5 marks).
 - Explain how and when media coverage of the event will likely be published and/or broadcast (2 marks).
- 8 marks*

Further development and risk assessment to prevent a future disaster	Immediate assistance, damage assessment and ongoing assessment, some infrastructure starts to be developed	Risk assessment, mitigation, prevention and preparedness	Reconstruction and recovery (social and economic)	Warning, evacuation and rescue
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Total: 50 marks

Extension Question

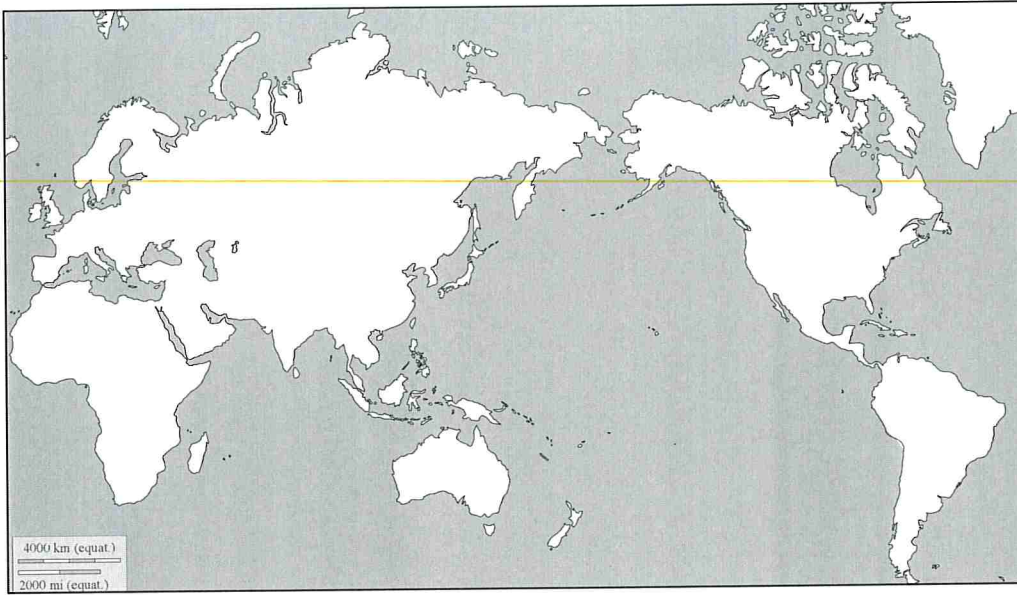
12. To what extent can hazards be predicted and prepared for? 9 marks

Extension: 9 marks

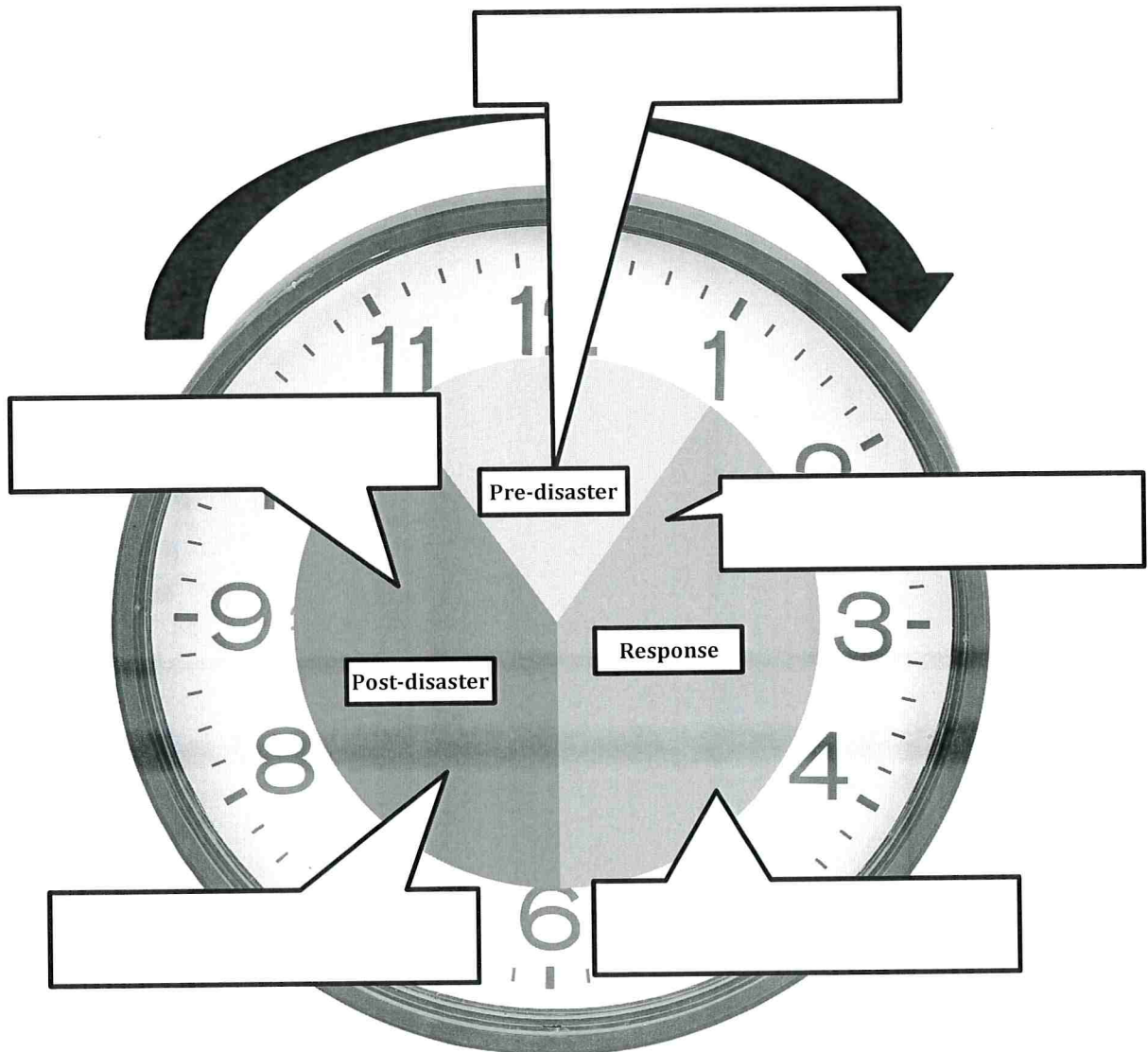
Total: 59 marks

Handout Sheet 1 – Hazards and Their Context

Q1.



Q11.



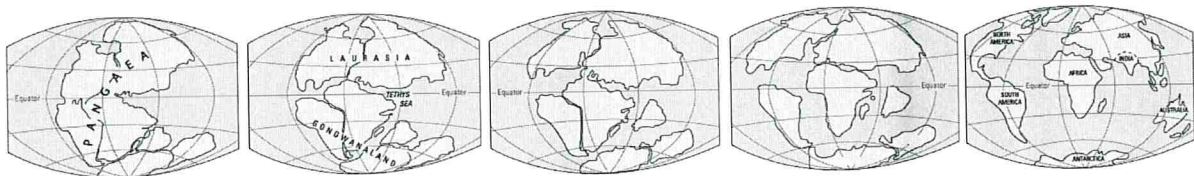
Test 2 – Plate Tectonics

1. Using the diagram on handout sheet 2, add the following labels: 2 marks
 - Lithosphere
 - Asthenosphere
 - 'Liquid' and 'solid' to describe the cores

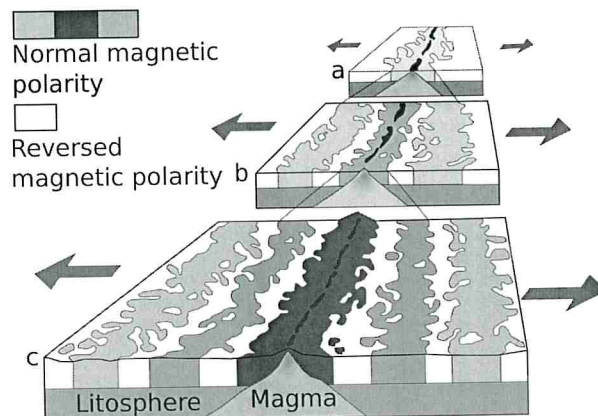
2. Give **one** fact (**not** demonstrated on the diagram above) for each of the following: 5 marks
 - Crust
 - Lithosphere
 - Asthenosphere
 - Mantle
 - Core
3. Give **two** reasons for the high temperature of the Earth's core. 2 marks
4. Label the following four tectonic plates on the map on handout sheet 2: 2 marks
 - Antarctic
 - Cocos
 - Nazca
 - Pacific
5. a. Although not the first person to see a pattern among the continents, who is usually credited with the theory of plate tectonics in 1912 (photo below)? 1 mark



- b. The diagram below shows the breakup of the supercontinent, Pangea. Outline four pieces of evidence that supported this theory in 1912. 4 marks



- c. Use the diagram below to outline evidence for sea-floor spreading following the discovery of the Mid-Atlantic Ridge. 4 marks



- d. State why the area of the Earth's crust stays the same over time. 1 mark

6. Draw three simple diagrams which show plate movement at convergent (destructive), divergent (constructive) and conservative plate boundaries. 6 marks

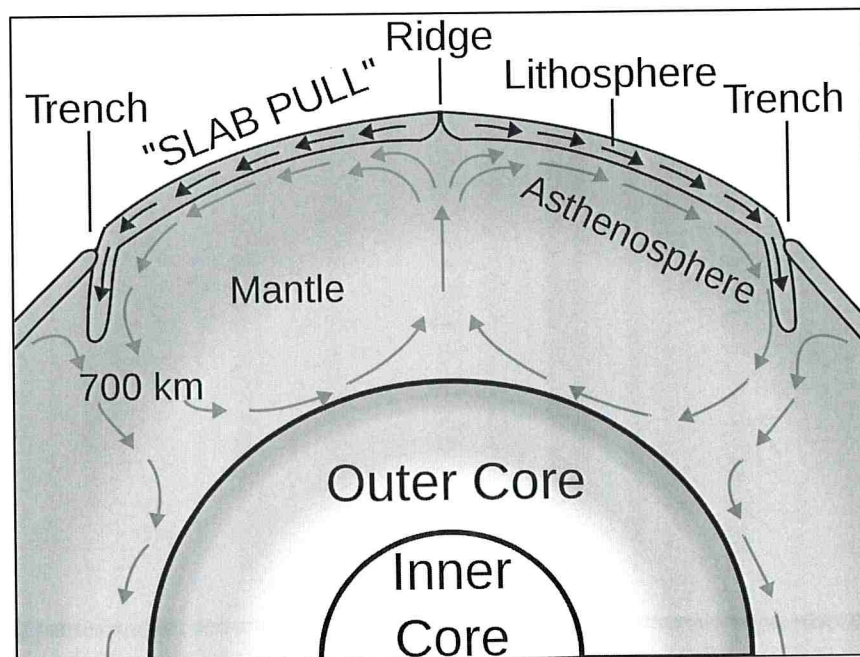
7. Copy and complete the table. For each of the following, state the type of plate boundary at which each feature is located and explain why they are found at that type of boundary. 10 marks

Feature	Boundary	Explanation
Young fold mountains		
Rift valleys		
Ocean ridges		
Deep sea trenches		
Island arcs		

8. Explain why volcanoes are found at both constructive and destructive margins, but not at conservative margins. 3 marks
Total: 40 marks

Extension Questions

9. Using the diagram below, assess the role of convection currents within the mantle as a driver of plate movement. 6 marks

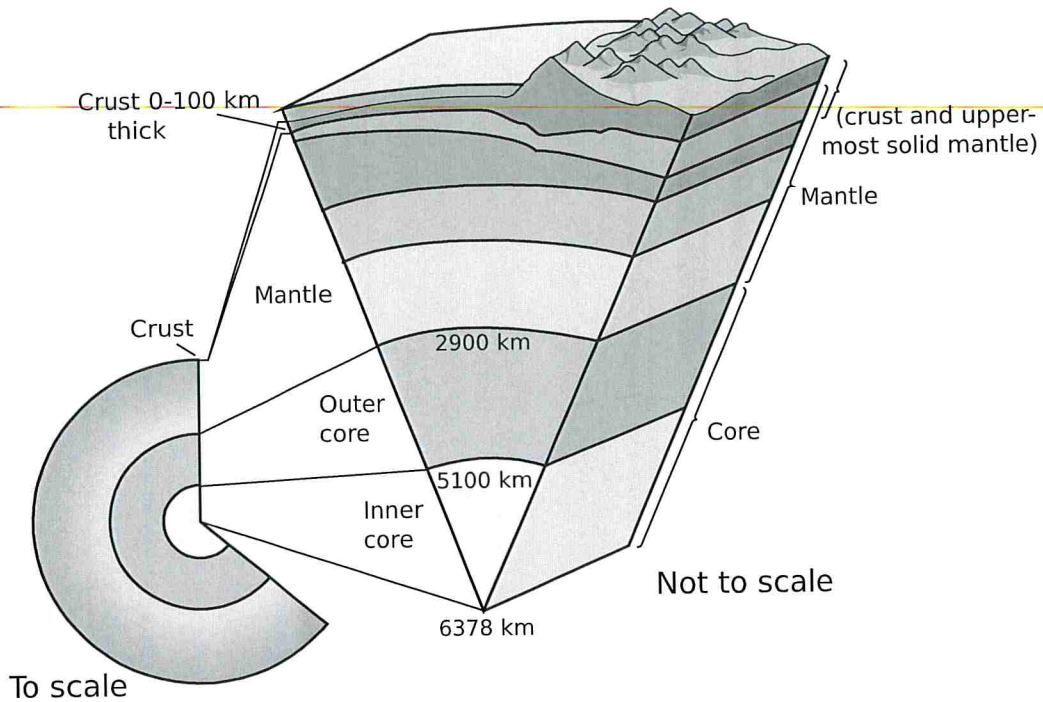


10. Suggest whether destructive or constructive plate margins are the most hazardous. 4 marks

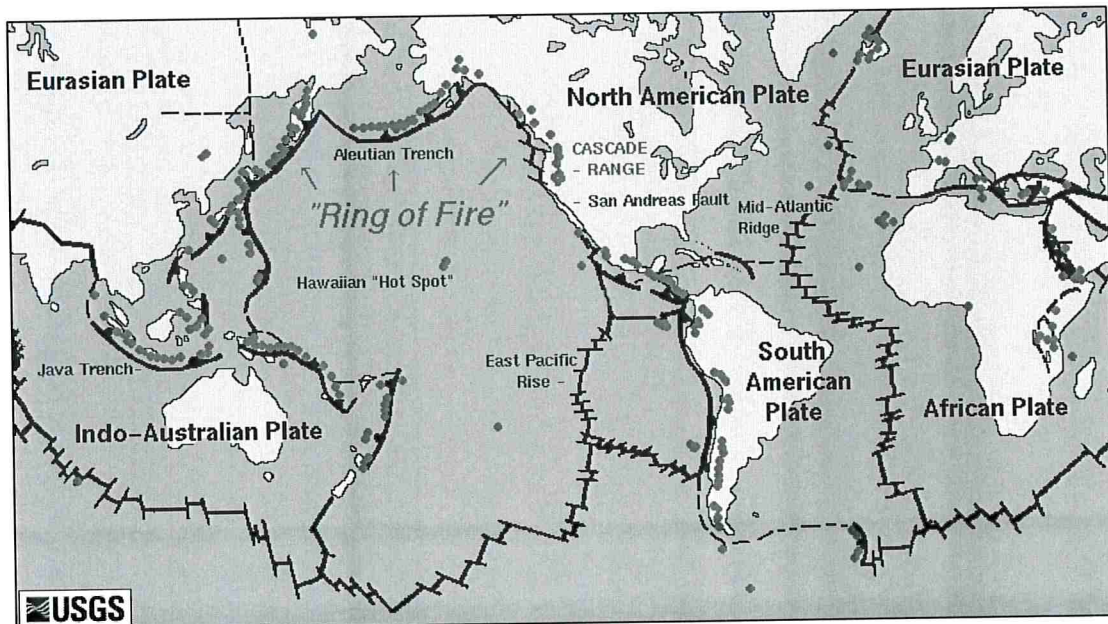
Extension: 10 marks
 Total: 50 marks

Handout Sheet 2 – Plate Tectonics

Q1.



Q4.



Test 3 – Volcanic Hazards

1. Copy and complete the following table to compare the two types of volcano shown.

12 marks



Type of plate boundary		
Eruption type		
Types of risk (two per photo)		
Eruption frequency		
More or less hazardous?		

2. Explain why eruptions at destructive margins are often explosive.

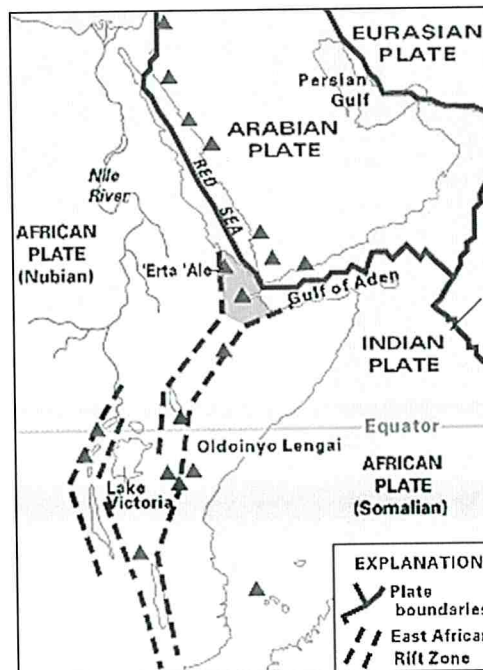
2 marks

3. Compare and contrast oceanic ridges and island arcs.

5 marks

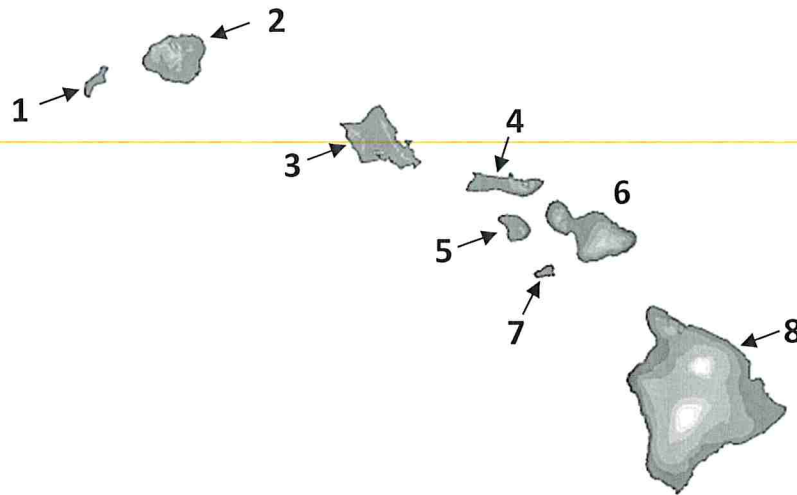
4. Using the map below, explain the reason for the volcanic activity shown (volcanoes are represented by the triangles).

4 marks



5. The map below shows the Hawaiian Islands.
- State which is the newest island.
 - Explain how the islands formed.

4 marks



6. Distinguish between a primary hazard and a secondary hazard. 2 marks
7. Which of the following is a primary hazard (state why)? 2 marks
- Pyroclastic Flows (Nuées ardentes)
 - Mudflows (lahars)
 - Flooding (jökulhlaups)
8. Suggest how tephra can be hazardous. 2 marks
9. Suggest how volcanoes can alter climate. 2 marks
10. Give an example of how volcanic hazards can be reduced. 2 marks
11. Assess how the danger of volcanic eruptions varies with the distance from the volcano, and over time. 6 marks

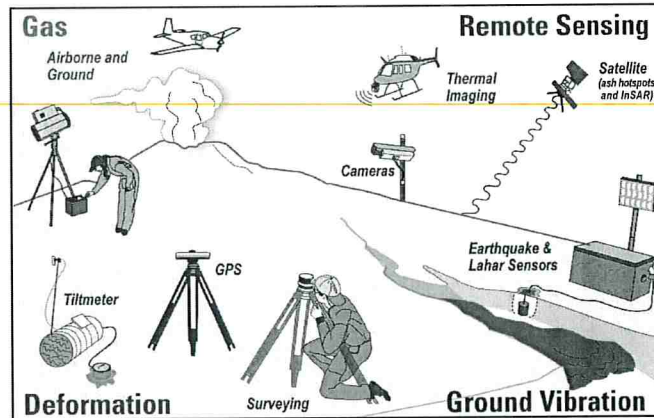
Total: 43 marks

Extension Question

12. Using the diagram below, and example(s) that you have studied:

To what extent do you agree that volcanic eruptions are predictable, and can be prepared for?

9 marks



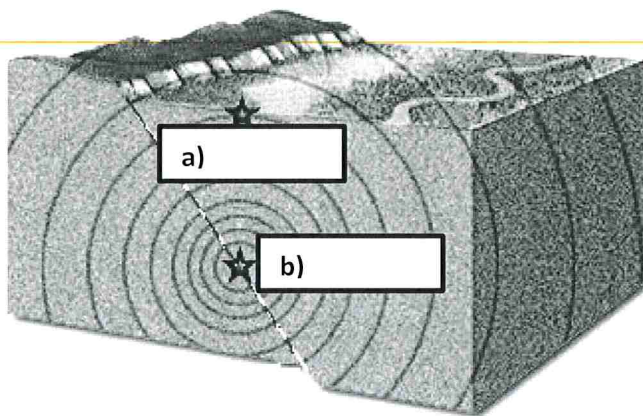
Extension: 9 marks

Total: 52 marks

Test 4 – Seismic Hazards

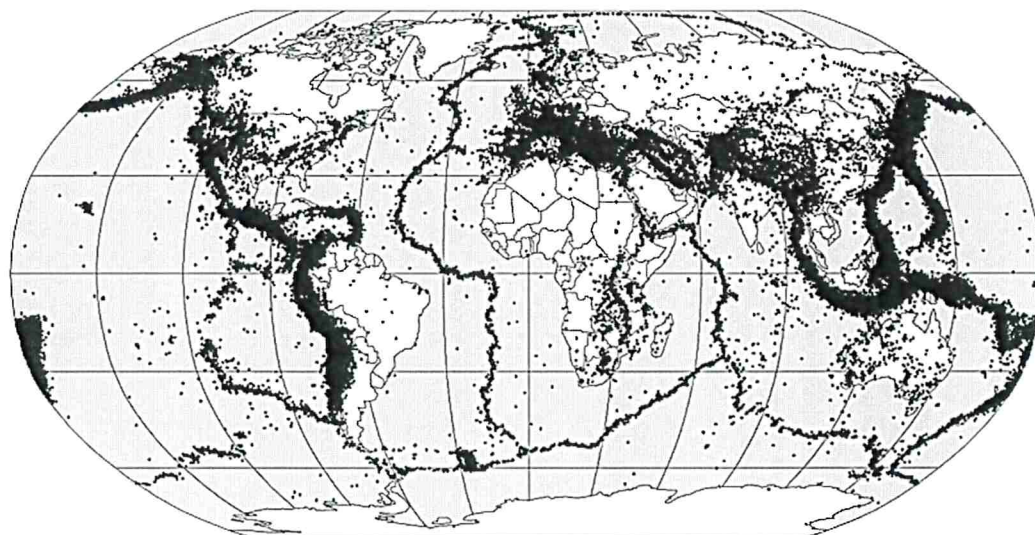
1. What is meant by the term 'earthquake'? 2 marks

2. Write the answers for label a) and b). Either the 'focus' or the 'epicentre' 2 marks



3. State how the depth of the focus affects the intensity of the earthquake. 2 marks

4. a. Study the map below which shows the distribution of earthquakes.



Discuss the relationship between earthquakes and:

- convergent (destructive) plate boundaries
- conservative plate boundaries

4 marks

b. Name the area in the Pacific where earthquakes appear to be particularly common. 1 mark

c. 'All earthquakes are in close proximity to plate margins.' Discuss. 3 marks

5. a. Earthquakes were originally recorded on the Richter Scale. This scale was replaced with which other scale? 1 mark

b. What do the Richter Scale and its replacement measure? 1 mark

c. Both of these scales are logarithmic. What does this mean? 1 mark

d. Name a commonly used scale that describes the impact of an earthquake. 1 mark

6. Using examples, what is meant by the primary and secondary effects of an earthquake? 4 marks

7. Identify the three effects shown in the photographs below, and explain how they were caused by earthquakes. 6 marks



Effect			
Caused by:			

8. Identify ways in which cities can prepare for earthquakes. 4 marks

9. Using examples, distinguish between the immediate (short-term) and long-term responses to earthquakes. 4 marks

10. Discuss how easy it is to predict and prepare for earthquakes across different parts of the world. 6 marks

Total: 42 marks

Extension Question

11. Assess how the effects of earthquakes vary across the world. 9 marks

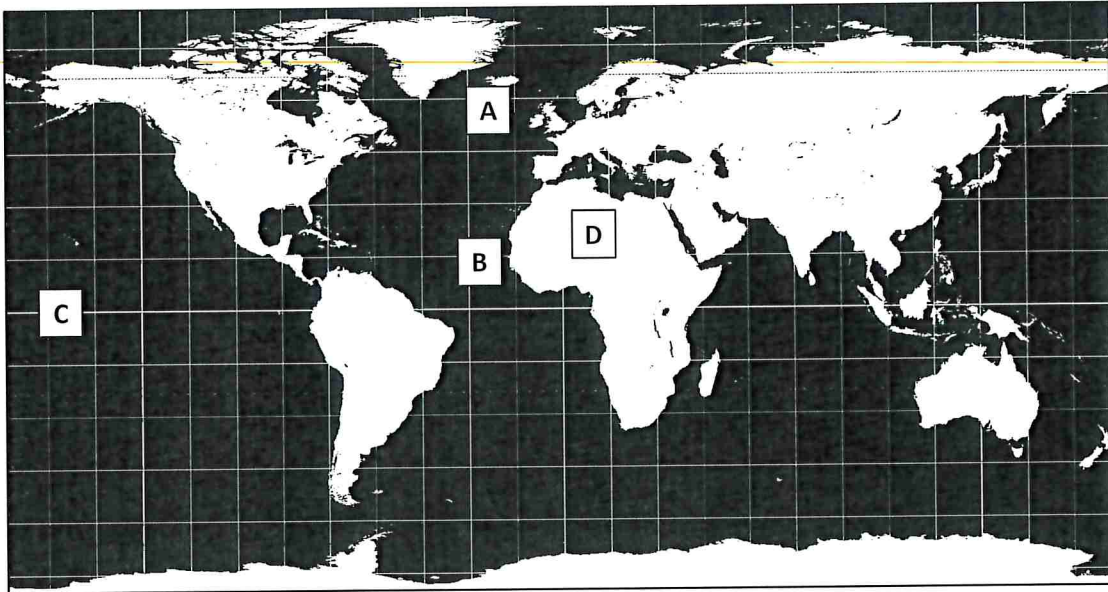
Extension: 9 marks

Total: 51 marks

Test 5 – Storm Hazards

1. The map below shows latitude at 15°. Decide which label on the map could support the development of tropical storms. Explain why you have chosen this point and why you have discounted the other points.

5 marks



2. Add the labels below to the diagram on handout sheet 3.

3 marks

Eye	Eye wall	Rain bands
Cold falling air	Warm rising air	Outflow

3. Describe the formation of tropical storms.

6 marks

4. Copy and complete the table for each of the following hazards. Outline the cause (if applicable) and its effects.

11 marks

Hazard	Cause (1 mark each)	Effects (2 marks each)
High winds		
Coastal flooding and storm surges		
River flooding		
Landslides		

5. Using the map on handout sheet 3, draw on the locations where tropical storms are found. Label the following:

- Hurricanes
- Cyclones
- Willy-willies
- Typhoons

4 marks

6. Give the measurement criteria for the Saffir–Simpson hurricane wind scale.

1 mark

7. Suggest how the frequency and magnitude of tropical storms could be affected by climate change.

2 marks

8. 'Tropical storms are unpredictable.' Discuss. *4 marks*
9. Discuss how prediction of, and preparation for, tropical storms can be achieved. Consider contrasting areas of the world within your answer. *6 marks*

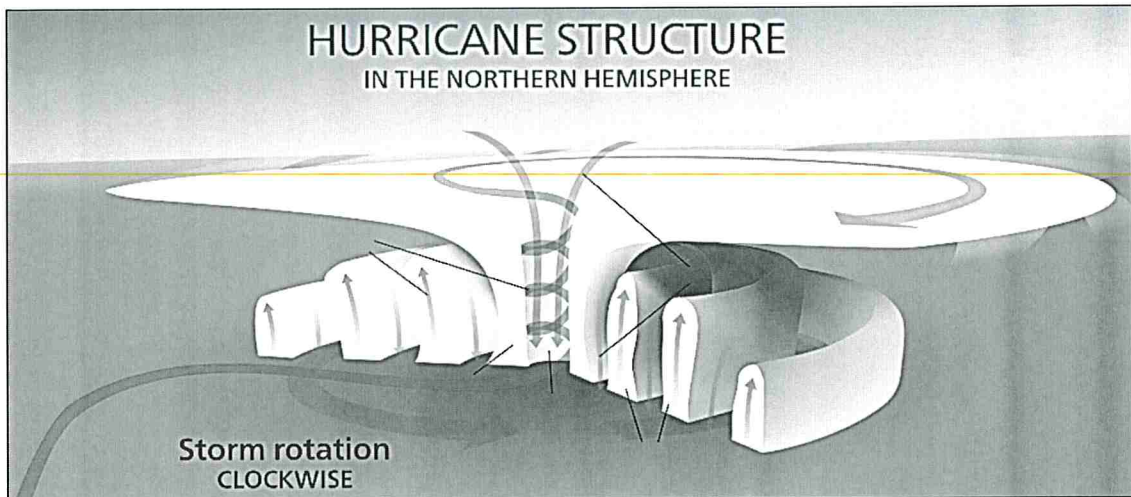
Total: 42 marks

Extension Questions

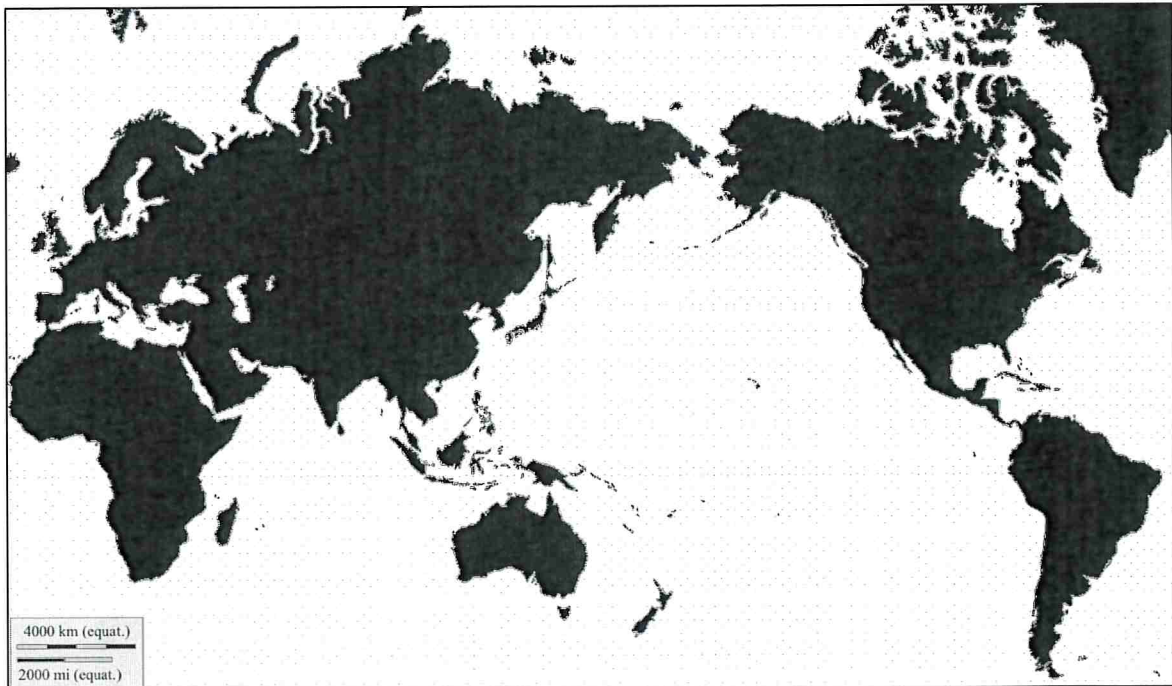
10. Assess how the damage from, and responses to, tropical storms varies across the world. *9 marks*
- Total: 51 marks*

Handout Sheet 3 – Storm Hazards

Q2.

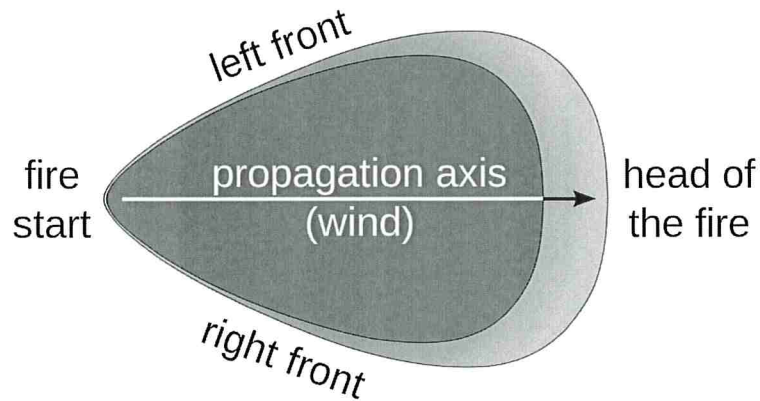


Q5.

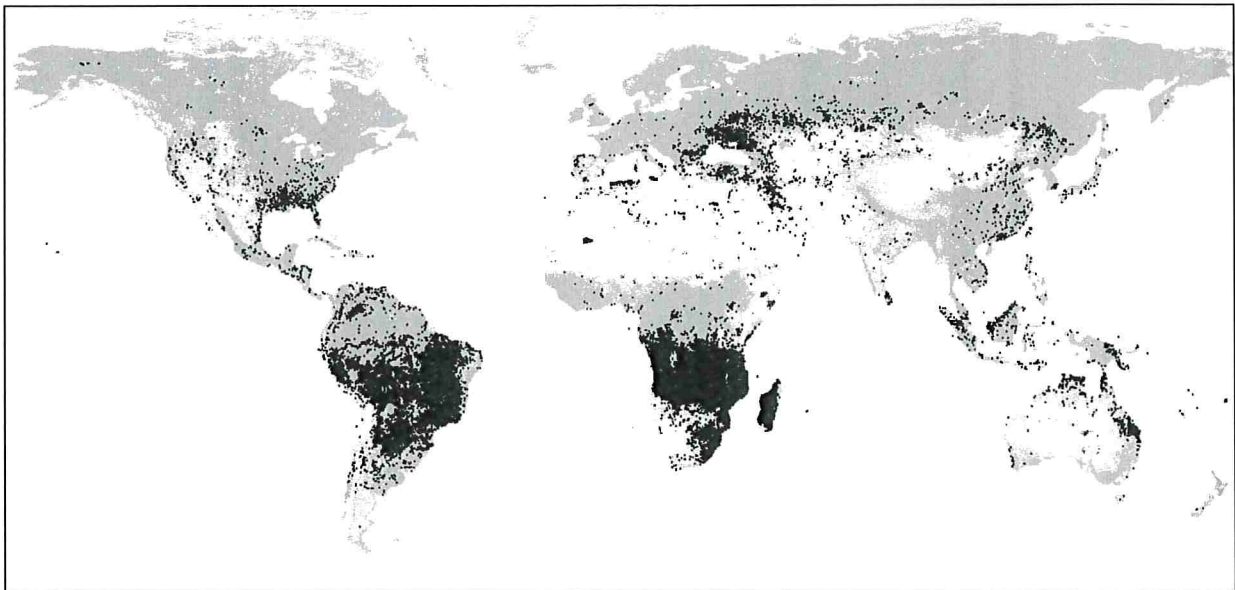


Test 6 – Fires in Nature (Wildfires)

1. Distinguish between a surface fire and a crown fire. *2 marks*
2. Discuss the conditions needed for an intense wildfire to successfully spread. *4 marks*
3. Using the diagram below, discuss the spread of a wildfire. *2 marks*



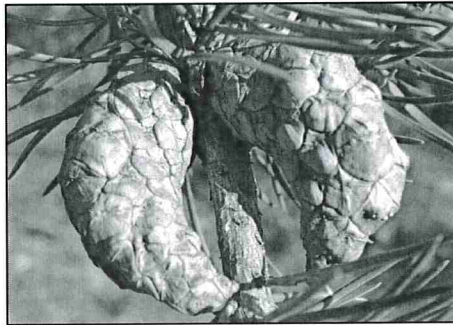
4. Study the map below. The areas shaded in black indicate the locations where wildfires sometimes start. Describe the distribution, and identify a fuel source for two locations. *4 marks*



5. Suggest how wildfires are started. *4 marks*
6. Suggest how the incidence of wildfires may increase in the future. *2 marks*

7. Using the images below as inspiration, discuss how wildfires are an important aspect of some ecosystems.

6 marks



8. Outline the environmental, social and economic effects of wildfires. Write your answers in a table. 9 marks
9. Distinguish between some of the primary and secondary effects of wildfires. 4 marks
10. Outline how the risk of wildfires can be reduced. 6 marks

Total: 43 marks

Extension Question

11. 'All wildfires are negative.' To what extent do you agree with this statement?

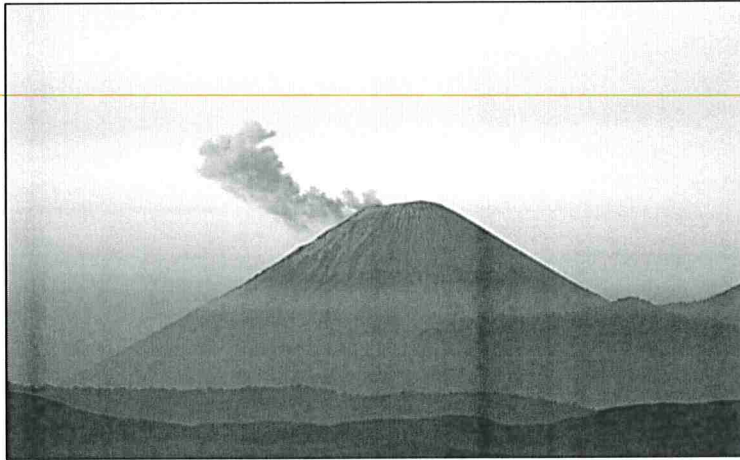
9 marks

Extension: 9 marks

Total: 52 marks

Test 7 – Hazards

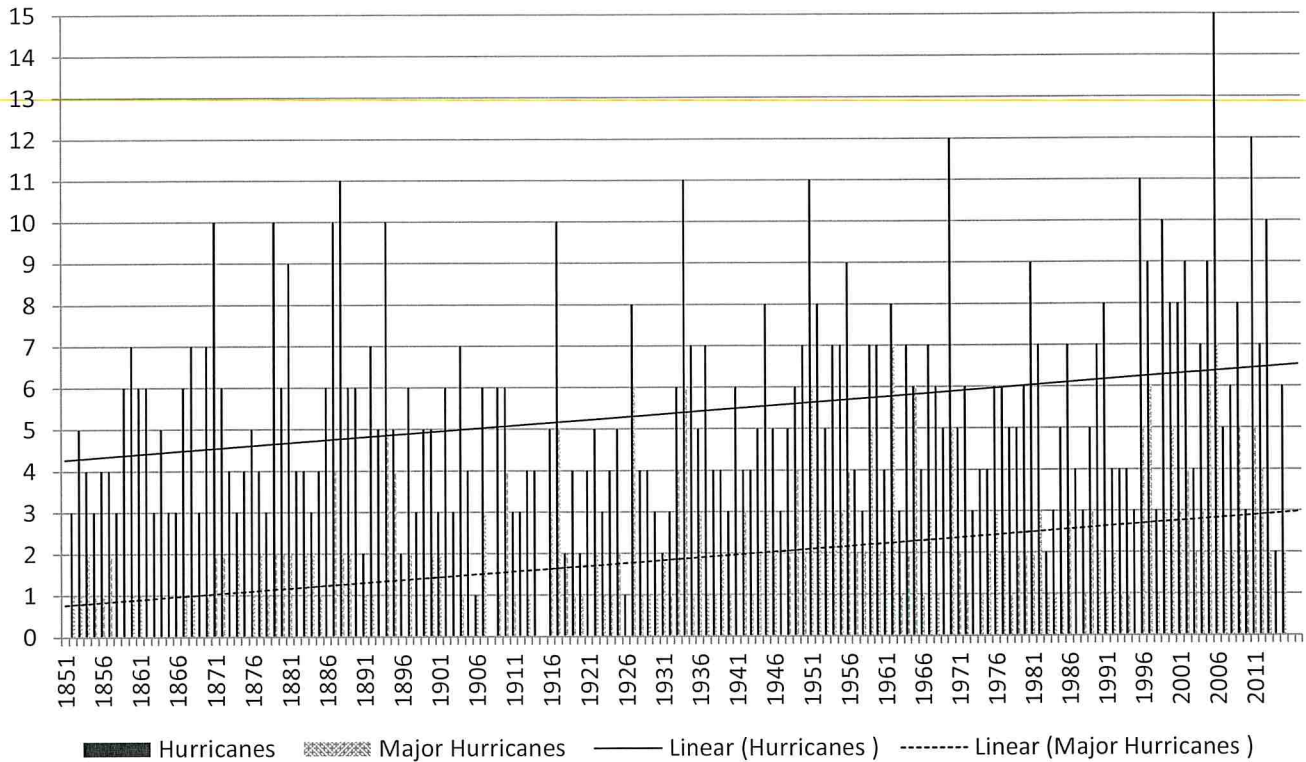
1. a. Suppose the volcano in the picture below will erupt imminently. Other than the cloud shown in the photograph, state two other ways that the volcano's activity can be monitored. *2 marks*



- b. Suggest how authorities and residents living within several kilometres of this volcano could prepare for the eruption. *6 marks*
2. Outline the development of plate tectonics theory. *4 marks*
3. Distinguish between a hazard's primary and secondary effects. *2 marks*
4. Distinguish between mitigation and adaptation. *2 marks*
5. Suggest why natural hazards are often difficult or impossible to stop. *4 marks*
6. Suggest why some hazards are more difficult to prepare for than others. *6 marks*
7. Explain the factors that increase vulnerability to tropical storms. *4 marks*

8. a. Using the graph below, suggest how tropical storms in the Atlantic basin have altered over the past 150 years, and how climate change could affect the prevalence of tropical storms. 4 marks

Number of Atlantic Basin hurricanes per year



- b. Suggest another natural hazard that could be affected by climate change. 1 mark

9. The effects and responses to hazards are often different throughout the world. Discuss why this is the case. 6 marks

Total: 41 marks

Extension Question

10. Assess why some people choose to live in multi-hazardous areas. 9 marks

Extension: 9 marks

Total: 50 marks