a-level exam questions & answers:

hazards (section c) >

9 mark question #1 (seismic & volcanic events)

References:

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Access The Mark Schemes Directly Here!

This document is available both as a pdf and editable word document – from the hazards topic page - which can be printed.

In an exam, you should spend around 12 minutes (15 if extra time) on this question!

1) To what extent do you agree that seismic events will always generate more widespread and severe impacts than volcanic events?

Hazards >> 3.1.5.3 >> Volcanic Hazards
Hazards >> 3.1.5.4 >> Seismic Hazards

I'm an A-Level past paper question! AQA

[9 marks]

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writing tips & tricks:

This question is a little theoretical, hence a holistic* view must be taken.

Don't forget to follow the PEEL Structure.

1. You don't need this necessarily, but most of the best answers have a super short intro (1-2 lines max!) explaining the problem or question and stating your opinion. You must have an opinion or be capped to limited marks.

2. Follow up with opening paragraph on one side of the argument – make a point, explain, give brief evident through the use of a named example, then don't forget to link back to the topic.

3. Vice versa for 2nd paragraph – arguing alternate point. They don't have to have equal weight if you agree one side of the argument strongly, but it is useful to show a broad understanding of others' viewpoints.

4. It is also crucial to be concise yet use a variety of relevant terminology.

5. Much more important than the quick intro is a conclusion of a few lines which draws in your argument, links to different points and provides a final statement – maybe you could add some hypothesis for the future or pose another question?!

*Showing a broader understanding that the question cannot *simply be answered with a 'yes' or 'no', as is phrased in* the question. Also, you must be able to break down the key terms 'widespread' and 'severe' – consider questioning the question – *what does 'devasting' really look like? Can it really be tangibly classified?* If yes is there a significant contrast between countries or other maybe more relevant reasons behind the trends you have observed, such as location / accessibility / human development of a country / access to healthcare etc…

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mark scheme | 9-mark question #1

Q.:	Sp. Ref.:	Information For Markers:	B'down:	Marks:
5)	3.1.5.6	**To what extent do you agree that seismic events will always generate more widespread and severe impacts than volcanic events?** AO1 – Knowledge and understanding of a range of impacts of volcanic and seismic hazards. AO2 – Application of knowledge and understanding to bring specification areas together and to analyse and evaluate, based upon evidence about which types of hazard are more severe and/or widespread. There should be some explicit assessment regarding the extent. **Mark scheme** *Level 3 (7–9 marks)* AO1 – Demonstrates detailed knowledge and understanding of concepts, processes, interactions and change. These underpin the response throughout. AO2 – Applies knowledge and understanding appropriately with detail. Connections and relationships between different aspects of study are fully developed with complete relevance. Analysis and evaluation is detailed and well supported with appropriate evidence. A well balanced and coherent argument is presented. *Level 2 (4–6 marks)* AO1 – Demonstrates clear knowledge and understanding of concepts, processes, interactions and change. These are mostly relevant though there may be some minor inaccuracy. AO2 – Applies clear knowledge and understanding appropriately. Connections and relationships between different aspects of study are evident with some relevance. Analysis and evaluation evident and supported with clear and appropriate evidence. A clear but partial argument is presented. *Level 1 (1–3 marks)* AO1 – Demonstrates basic knowledge and understanding of concepts, processes, interactions and change. This offers limited relevance with inaccuracy. AO2 – Applies limited knowledge and understanding. Connections and relationships between different aspects of study are basic with limited relevance. Analysis and evaluation basic and supported with limited appropriate evidence. A basic argument is presented. **Notes for answers** The direction of the response largely depends upon the argument that the student wishes to put forward.	AO1=4 AO2=5	9

		AO1 • When considering volcanic hazards expect to see reference to pyroclastic flows, lava flows, volcanic bombs, ash clouds and seismic activity (at the volcano). Some may bring case study material to the response and consider the impacts of these events and particularly violent events. • Some may go further and contrast impacts in different places around the world such as Chaiten in Chile (2008) with Mt Etna in Italy (ongoing eruptions). • For seismic events – hazards will mainly relate to the violent shaking and the associated damage to the built environments, to include and wider infrastructural damage. • Some may consider tsunamis as a hazard created by seismic events. • Case studies are likely to include Japan 2011 or the Indian Ocean Tsunami in 2004. These may be contrasted with major events such as Haiti in 2010 or Sichuan in 2008. AO2 • Evaluation – Overall it is extremely difficult to generalise as each is event is unique. However seismic events on land tend to generate extremely severe impacts particularly where the earthquake epicentre strikes a large urban area. Seismic events are also generally associated with more deaths than volcanic events. Management is also a factor in the sense that many countries have mechanisms in place to mitigate against the impact of such hazards, thus reducing the impact and severity. The ash cloud associated with volcanic eruptions can cause very widespread impacts, more widespread than seismic events which tend to cause more localised and severe damage. • Evaluation – An exception to this is a supervolcanic eruption. Whilst there are no recorded incidents of such eruptions, the geological record and structure of places such as Yellowstone, USA tells us that a caldera exists and a supervolcanic eruption could occur. Modelling of a potential eruption suggests the potential for enormous devastation with average global temperature reduction of up 20 °C, due to the generation of a vast ash cloud. More locally, millions of Americans would be killed and up to two thirds of the USA would become uninhabitable. • Analysis and evaluation – For the 'widespread' element of the question, it is reasonable to consider events such as the Icelandic volcano (2010) and suggest that the potential impact upon aviation and therefore the regional economy is much more severe than any seismic event. Specific case study knowledge may be applied to support this position. • Analysis and evaluation – Others may contrast based upon income levels of countries, asserting that impacts tend to be managed more effectively in higher income countries, ie it is not seismic or volcanic nature which determines the scale of impact, but it is the location.		