## a-level exam questions & answers:

## hazards (section c) >

#### 9 mark question #3 (hdi & seismic 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.

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#### writing tips & tricks:

This question requires a good knowledge and application of case studies. I would recommend achieving maximum marks [level 3] by focusing on two contrasting seismic case studies – one for and one against; and make an overall judgement as to the relative importance of exogenous or endogenous factors in the conclusion.

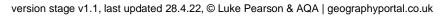
Don't forget to follow the PEEL Structure.

- I.E. A very short intro **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 2<sup>nd</sup> 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 and have a few lines concluding your answer.

# a-level exam questions & answers:

## hazards (section c) >

#### mark scheme | 9-mark q3 (hdi & seismic events)





Q.:	Sp. Ref.:	Information For Markers:	B'down:	Marks:
3)	3.1.5.4		AO1=4	9
		"To what extent do you agree with the statement "the human	AO2=5	
		development index [HDI] of the affected area gives us the		
		best indication of how severe the impacts of a seismic event		
		will be."		
		AO1 – Knowledge and understanding of cause, impact and management of seismic events in the context of physical vs.		
		human factors.		
		AO2 – Application of knowledge and understanding to assess the		
		scale of these factors including an appropriate analysis into which		
		are more or less relevant, and an ultimate judgement appertaining		
		to whether the Human Development Index is the most accurate		
		representor.		
		Mark scheme		
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		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. Evaluation is		
		detailed and well supported with appropriate evidence.		
		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. Evaluation is evident and		
		supported with clear and appropriate evidence.		
		Lovol 1 /1_3 marks)		
		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. Evaluation is basic and supported with limited		
		appropriate evidence.		
		Notes for answers		
		AO1		
		Candidates should consider the causes, impacts and		
		different levels of response to seismic (or earthquake)		

- events. These can be both primary and secondary in nature.
- Knowledge and understanding of different physical and human (anthropogenic) factors working to create a hazard event which poses risk to human life. Mentioned factors can include physical geography such as location (proximity to fault line) and type of fault line, topography/ landscape, presence of rivers or lakes etc... as well as human factors such as land use, wealth & human development (as measured and insinuated by question as most important factor), population density, preparedness etc...
- Reference made to top 10 most hazard vulnerable countries being all low-income, less developed (LIC) nations, and inferred meaning behind this suggesting that statistically this statement has merit.
- Some countries are multi-hazard environments, such as Haiti and Indonesia. This means that they are vulnerable to different forms of hazard event and are often the most impacted. This may be considered either as a pro or con argument depending on how it is approached. Some students may think that having two or more hazards inherently is the reason for the hazard impacts to be greater (less ability to prepare or knowledge etc...) whilst others may point to development as the reason behind this.

#### AO2

- Analysis through the medium of AT LEAST ONE NAMED CASE STUDY 'AFFECTED AREA' in order to illustrate argument through evidence. This may include death/casualty/damage statistics, recovery signs or reference to hazard modelling such as the Park Model or Hazard Management Cycle (HMC.)
- In many countries which are most vulnerable to natural hazard events, particularly seismic/multi-hazard, there is a vicious cycle taking place. Take Nepal as an example. In April 2015, the devastating Gorkha Earthquake hit, causing up to \$10Bn in damages. A country like Nepal (the least developed in Asia with a GDP per capita of less than \$1000) is unable to escape this situation because of the ongoing seismic events which hamper the economy and any further growth or recovery. It is unable to afford earthquake proofing means like wealthy, similarly seismically active countries like Japan or the USA (with a GDP per capita over 20x higher.)
- Appreciation that there are different case studies where this may not be the case. Reference may often be made to the devastating 2011 Tohoku Earthquake and subsequent tsunami (which IS a seismic event.). Students could evaluate that although Japan is a very highly developed nation with a HDI above 0.9 and well-regarded earthquake-proofing, the location of the event at sea and subsequent 50ft wave destroyed any preventative infrastructure and there was little that would be done to mitigate the impacts of this event.

Credit any other valid assessment