Answers

The challenge of natural hazards: Tectonic hazards		
Question	**Marking guidance**	**Total marks**
1	Two points made: • earthquakes are found along plate boundaries • for example, close to the western edge of the South American plate.	2
2	One mark for a reason and the second mark for an extension. • Earthquakes happen where tectonic plates meet. • For example, a destructive plate boundary, where an oceanic plate is subducted underneath a continental plate.	2
3	**Indicative content** • The focus of the question must be on volcanoes at destructive plate margins. • A destructive plate margin is where two plates are moving towards each other. • The denser oceanic plate is subducted beneath the lighter continental plate. • As the oceanic plate moves downwards it melts due to friction and heat from the mantle. • Less dense magma is created which breaks through to the surface to form steep-sided composite volcanoes. • The volcanic eruptions are often very violent and explosive. **Level 2 (Clear) 3–4 marks:** • AO2 Shows clear geographical understanding of why volcanoes occur at destructive plate boundaries. • AO3 Demonstrates application of knowledge and understanding to make full interpretation of the processes which cause volcanoes to occur at destructive plate boundaries. **Level 1 (Basic) 1–2 marks:** • AO2 Shows limited geographical understanding of why volcanoes occur at destructive plate boundaries. • AO3 Demonstrates application of knowledge and understanding to make limited interpretations of the processes which cause volcanoes to occur at destructive plate boundaries. • 0 marks: No relevant content.	4
3	**Indicative content** • Buildings and bridges can be constructed to resist the ground shaking associated with an earthquake. • Walls can be reinforced with steel and concrete to reduce movement. • Shock absorbers can absorb ground shaking. • There are open areas where people go for easy evacuation. • Automatic shutters can come down over windows to prevent broken glass falling. • Rolling weights on a roof can counteract seismic/shock waves. **Level 2 (Clear) 3–4 marks:** • AO1 Demonstrates detailed knowledge of how people can be protected from earthquakes. • AO2 Shows clear geographical understanding of why people need to be protected from earthquakes. **Level 1 (Basic) 1–2 marks:** • AO1 Demonstrates knowledge of how people can be protected from earthquakes. • AO2 Shows some geographical understanding of why people need to be protected from earthquakes. • 0 marks: No relevant content.	4
4	**Indicative content** • Primary effects: number of people killed/injured; buildings destroyed, e.g. schools and hospitals; homelessness; electricity, water supplies, sanitation and communications affected; need for food and shelter. • Secondary effects: landslides; flooding; spread of disease, e.g. cholera; tsunami; fires. • Named example: should be both place and date specific, e.g. the L'Aquila earthquake in central Italy on 6 April 2009. **Level 3 (Detailed) 5–6 marks:** • AO3 Demonstrates thorough application of knowledge and understanding to give detailed description of earthquakes. Includes detailed place-specific information. • AO3 Shows full understanding of the interrelationships between primary and secondary effects, using evidence to support response. **Level 2 (Clear) 3–4 marks:** • AO1 Demonstrates specific and accurate knowledge of the effects of an earthquake. Includes place-specific information. • AO2 Shows clear geographical understanding of primary and secondary effects. **Level 1 (Basic) 1–2 marks:** • AO1 Demonstrates some knowledge of the effects of earthquakes. May include some place-specific information. • AO2 Shows limited geographical understanding of difference between primary and secondary effects. • 0 marks: No relevant content.	6

The challenge of natural hazards: Weather hazards		
Question	**Marking guidance**	**Total marks**
1	One mark for each correct answer: **B** Tropical storms form above warm oceans (27°C or above). **D** The conditions in the eye of the storm are calm. No credit if three or more statements are shaded.	2
2	One mark for a reason and the second mark for an extension: • a large number of people die by drowning in a storm surge • people are made homeless due to strong winds damaging homes.	2
3	**Indicative content** • Windows, doors and roofs reinforced to strengthen buildings to withstand strong winds. • Houses constructed on stilts so that a storm surge will pass beneath. • Storm shelters built. • Educating people to be prepared for tropical storms. **Level 2 (Clear) 3–4 marks:** • AO1 Demonstrates detailed knowledge of how people can prepare for tropical storms. • AO2 Shows clear geographical understanding of why people need to prepare for tropical storms. **Level 1 (Basic) 1–2 marks:** • AO1 Demonstrates knowledge of how people can prepare for tropical storms. • AO2 Shows some geographical understanding of why people need to prepare for tropical storms. • 0 marks: No relevant content.	4