Oxford Revise | Geography | Answers

Chapter 2

All exemplar answers given are worth full marks.

1.1 Any from: buildings/homes destroyed; buildings damaged; infrastructure damaged; roads blocked; cars damaged; power supply wires damaged.

Accept other suitable answers that refer to Figure 1.

1.2 Any from: people made homeless; cost of repairing buildings; people left without essential services like water and electricity; people forced to move; emotional trauma.

Accept other suitable answers that refer to Figure 1.

1.3 This question is level-marked:

Level	Marks	Description
2 (clear)	3–4	• Sound, organised and relevant throughout, using supporting evidence and examples • Communicates good knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives) • Uses geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Explanations are partial • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *Figure 1 shows the primary effect of buildings being destroyed. This would result in secondary effects of economic loss for the businesses that use these buildings. In addition, people would be unable to buy goods from shops that have been destroyed. In the Christchurch earthquake in 2011, many schools were damaged and needed to be assessed for safety. This meant that 163 schools were closed for two weeks and children missed out on their education.*

1.4 This question is level-marked:

Level	Marks	Description
3 (detailed)	5–6	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary

Level	Marks	Description
2 (clear)	3–4	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *Tectonic hazards like earthquakes have primary effects such as those in Figure 1, where buildings and homes are destroyed. In the Nepal earthquake in 2015, for example, 600 000 buildings were damaged with tens of thousands of these dangerous and unusable. This primary effect, therefore, resulted in secondary effects. When homes are destroyed, people become homeless because they have no house to live in. In Nepal, 3 million people were homeless after the earthquake with half of these still living in temporary shelters two years after the earthquake. The primary effect of houses destroyed, therefore, caused longer-term secondary effects of homelessness. Figure 1 also shows the primary effect of infrastructure being destroyed. This leads to many secondary effects such as the cost of repairing all the buildings and infrastructure and the disruption this would cause for businesses. After the Christchurch earthquake in 2011, it cost the New Zealand government $40 bn to repair the buildings and infrastructure, again showing how primary effects led to longer-term secondary effects.*

1.5 This question is level-marked:

Level	Marks	Description
3 (detailed)	5–6	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary
2 (clear)	3–4	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *I think that the primary effects of tectonic hazards are worse than the secondary effects. This is because all secondary effects are caused by primary effects. The 600 000 homeless people in Nepal 2014, for example, are only homeless because of the primary effect of their houses being destroyed, such as shown in Figure 1. Similarly the secondary effect of having to pay for $5 billion of damage is only because of the primary effect that saw infrastructure damaged and destroyed. Primary effects are also worse because primary effects include death which is much more serious than things like the cost of repairs or homelessness. In Nepal in 2014, for example, 9 million people died in the earthquake. While the 600 000 made homeless were seriously inconvenienced by their situation, this is preferable to death, suggesting that the primary effects are worse than the secondary effects.*

1.6 This question is level-marked:

Level	Marks	Description
2 (clear)	3–4	• Sound, organised and relevant throughout, using supporting evidence and examples • Communicates good knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives) • Uses geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Explanations are partial • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *The earthquakes affecting Christchurch in 2011 and Nepal in 2014 (primarily Kathmandu) had similar primary effects because in both earthquakes people died and were injured, and buildings and infrastructure were damaged. However, while the types of effects were similar, the scale of these effects were very different between the two countries. Christchurch suffered 185 deaths compared to 9000 in Nepal and 100 000 buildings were damaged in Christchurch compared to 600 000 in Nepal. Overall, the effects of the earthquake were much worse in Nepal.*

2.1 An immediate response would be calling out emergency services to try and rescue people trapped under the rubble in Figure 1.

2.2 A long-term response would be making the destroyed building in Figure 1 safe and restoring electricity supplies.

2.3 This question is level-marked:

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2 (clear)	3–4	• Sound, organised and relevant throughout, using supporting evidence and examples • Communicates good knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives) • Uses geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Explanations are partial • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *In Figure 1, buildings have been destroyed, potentially trapping people. This would require the immediate response of rescuing people but in the long-term, other responses are needed such as making that building safe are restoring power supplies for life to return to normal. In the Nepal earthquake in 2014, an immediate response was to establish tent cities for the homeless. However, it was important that long-term responses of building new earthquake-proof buildings also took place to rehouse people and make it safer for the future.*

2.4 This question is level-marked:

Level	Marks	Description
3 (detailed)	5–6	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary
2 (clear)	3–4	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *The responses to the 2011 earthquake in Christchurch, New Zealand were very effective. This is because New Zealand was well prepared for the earthquake and was able to respond quickly and effectively. As soon as the earthquake struck, well-trained rescue teams and emergency services assessed damage and searched for survivors. They put in place pre-existing plans and zoned different parts of the city*

according to safety to ensure members of the public remained safe. Chemical toilets were installed to reduce the potential spread of disease.

As a result of swift efforts, only 185 people died. The long-term rebuilding of Christchurch took longer, and businesses faced weeks of disruption. Nevertheless, when houses were rebuilt, it was to a tougher safety standard and 10 000 homes were affordable. Overall, therefore, both the short-term and long-term responses were effective.

Answers will vary depending on tectonic hazards studied.

3.1 This question is level-marked:

Level	Marks	Description
3 (detailed)	5–6	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary
2 (clear)	3–4	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *The 2014 earthquake in Nepal had terrible effects, with 9 000 people dying, 600 000 buildings destroyed, and 3 million people being made homeless. There were many factors that led to such devastation. One was that the earthquake was a high magnitude (7.8 on the Richter scale) and had a shallow focus. This meant that the damage was severe and widespread over a large area. In addition, Kathmandu had a high population density of 20 200 people per square km. This meant that many people were impacted and helps explain the high numbers of death and injuries.*

However, Nepal is also very poor country with a GNI per capita of only $2 500. This meant that people were living in poorly built houses that collapsed easily, causing much more damage and devastation. If Nepal had been a HIC then more buildings might have been earthquake-proof and there may have been fewer deaths. Overall, while the earthquake strength and high population density contributed to the high death toll, the most significant factor was the fact that Nepal was an unprepared LIC.

Answers will vary depending on tectonic hazards studied.

3.2 This question is level-marked:

Level	Marks	Description
3 (detailed)	7–9	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary
2 (clear)	4–6	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary
1 (basic)	1–3	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

3-marks: SPaG (spelling, punctuation, grammar, and specialist terminology)

Marks	Description
3	• Accurate spelling and punctuation • Rules of grammar followed • Effective control of meaning • Uses wide range of specialist terms
2	• Generally accurate spelling and punctuation • Most rules of grammar followed • General control of meaning • Uses good range of specialist terms
1	• Reasonably accurate spelling and punctuation • Some rules of grammar followed – errors do not hinder meaning • Some control of meaning • Limited use of specialist terms
0	• Writes nothing • Does not relate to question • Basic grasp of spelling, punctuation, and grammar prevents clear meaning

Example answer: *The earthquakes in Christchurch, New Zealand in 2011 and Kathmandu, Nepal in 2014 had different impacts. Social impacts in New Zealand included 185 deaths and 10 000 people made homeless compared to 9000 deaths and 3 million homeless in Nepal. Economically, the cost of damage was significantly higher in Christchurch. The differences in impacts could be explained by several factors.*

Firstly, the Nepal earthquake was stronger at 7.8 magnitude (compared to 6.3 in New Zealand). However, the New Zealand earthquake was much shallower, so the earthquake strength alone does not explain the differences.

Secondly, the population size and density in Christchurch was much lower than Kathmandu. This is significant because it meant fewer people were at risk in Christchurch. However, New Zealand is much wealthier and could afford earthquake-proof buildings. Even if population density was higher, it would not have led to more deaths because fewer buildings collapsed. New Zealand also did not rely on aid to respond to the earthquake. Emergency serves were better trained and equipped and responded more effectively.

The higher cost of damage in Christchurch can also be explained by wealth. Christchurch had more expensive buildings and infrastructure so therefore it cost more when this was damaged. Overall, wealth explains the different impacts better than other possible explanations.

Answers will vary depending on tectonic hazards studied.

4.1 This question is level-marked:

Level	Marks	Description
2 (clear)	3–4	• Sound, organised and relevant throughout, using supporting evidence and examples • Communicates good knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives) • Uses geographical terms and vocabulary
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Explanations are partial • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *Risks are reduced because people are calm and know what to do. Therefore they act in a way that ensures their safety. For example, Figure 2 shows children taking cover under a table in an earthquake drill. Knowing to do this would mean they would be protected from falling items and building collapse that may happen in an actual earthquake. This would ensure they are safer, and risks posed by the earthquake are reduced.*

4.2 This question is level-marked:

Level	Marks	Description
3 (detailed)	5–6	• Thorough, detailed, organised, and relevant throughout with supporting evidence and examples • Communicates detailed, clear knowledge and understanding • Communicates using developed statements and ideas (e.g. uses connectives to fully explore ideas) • Good use of geographical terms and vocabulary
2 (clear)	3–4	• Sound throughout with some supporting evidence and examples • Communicates some knowledge and understanding • Communicates using linked statements and ideas (e.g. uses connectives, but needs further development) • Some use of geographical terms and vocabulary

Level	Marks	Description
1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Communicates using simple statements that are not developed • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *Planning for a tectonic hazard like a volcano can reduce its risks. For example, evacuation can take place when the threat of eruption is high, thus ensuring people are safe and not at risk. Similarly, exclusion zones can be established to ensure people do not put themselves at risk. For earthquakes, planning can involve conducting earthquake drills like the one in Figure 2, which mean that when an earthquake hits, people are calm and know what to do to keep themselves as safe as possible.*

Planning also involves the preparation of emergency services, who can be trained in rapid response and store equipment in secure locations. For both volcanoes and earthquakes, this ensures that people injured or trapped receive help quickly, reducing risks associated with the hazard. Planning also involves building earthquake-proof buildings with shock absorbers in their foundations. These buildings do not collapse in earthquakes which reduces the number of deaths and therefore the risks from the hazard.

4.3 This question is level-marked:

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Example answer: *People might continue to live in hazard-prone areas because they believe that the risks have been successfully managed and mitigated. For example, because of things like earthquake drills (Figure 2), earthquake-proof buildings or monitoring of volcanic activity, people might not perceive themselves being at risk. This means they are more likely to stay living in these areas.*

There are also economic reasons for living in hazard prone areas. In the case of volcanoes, the soils are very fertile, so farming communities will continue living there, or there may be a large tourist industry with the

natural scenery or volcanic springs providing well paid employment. Economic incentives when coupled with feeling safer help explain people remaining in these areas.

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	0	No relevant content

Example answer: *Scientists can use remote sensing, satellites, and lasers to monitor changes in the volcano's shape. Before a large eruption, volcanoes often start to bulge as pressure builds in the magma chamber. Changes in shape can therefore indicate a risk of a dangerous eruption. Seismographs can also be used to monitor earthquake activity, as there is normally an increase in nearby seismic activity just prior to a volcanic eruption.*

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	0	No relevant content

Example answer: *The soil around volcanoes is very fertile and excellent for farming. It is fertile because of the volcanic ash that is deposited on the land, which contains many minerals like potassium. People live near volcanoes therefore because it is ideal for growing crops and agricultural production. Volcanoes also provide spectacular scenery and attractions like thermal baths. People live near them to work in the tourist industry as well as enjoying the spectacular landscapes themselves.*

4.6 This question is level-marked:

Level	Marks	Description
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Example answer: *Monitoring and prediction is one of the least effective ways of reducing risks from earthquakes. This is because monitoring can only give a general pattern of past earthquakes and accurate predictions of earthquakes are impossible.*

Protection through building earthquake-proof buildings is very effective. Installing shock absorbers to allow the building to sway with the earthquake prevents building collapse and can save many lives. However, earthquake-proof buildings are very expensive, and it is difficult to make buildings earthquake-proof after they have been built. This means that protection must be used alongside other methods to reduce risk.

Preparation through education, earthquake drills and training for emergency services is cheap and effective. This makes it suitable for LICs as well as HICs. Education means people can have earthquake kits with emergency supplies and ensures they react calmly to a tectonic event, potentially saving lives. Training emergency services and stockpiling emergency resources ensures quick and effective response times with essential medical supplies on hand significantly reducing the impact of a hazard. Overall, protection through earthquake-proof buildings is the most effective method reducing risk but because it is not always suitable, planning and education is the most effective for most societies.

5.1 This question is level-marked:

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1 (basic)	1–2	• Basic throughout with limited supporting evidence and/or examples • Communicates limited knowledge and understanding • Explanations are partial • Little or no use of geographical terms and vocabulary
	0	No relevant content

Example answer: *At destructive plate boundaries, a denser oceanic plate moves toward a less dense continental plate. Because it is heavier, the oceanic plate is subducted beneath the continental crust. The two plates continue to move toward each other but get caught on each due to friction. Pressure builds up as the plates continue to move and eventually the plates jolt free. When this happens, energy is released as an earthquake.*

5.2 Constructive and destructive margins