

Revision outline

Physical geography: Hazards

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| **Specification content** | **Possible exam/revision questions** | **Self assessment** |
| **The concept of hazard in a geographical context**   * Nature, forms and potential impacts of natural hazards (geophysical, atmospheric and hydrological). Hazard perception and its economic and cultural determinants. * Characteristic human responses – fatalism, prediction, adjustment/adaptation, mitigation, management, risk sharing – and their relationship to hazard incidence, intensity, magnitude, distribution and level of development. * The Park model of human response to hazards. The Hazard Management Cycle. | ***Assess the relative usefulness of the Park Model and the Hazard Management Cycle in understanding the impact of seismic events. (20 marks) AQA A Level Paper 1 June 2019***  ***‘The Disaster Response Curve (The Park Model) has contributed to improved understanding and therefore management of the impact of tropical storms.’ To what extent do you agree with this view? (20 marks) Sample assessment materials – Paper 1 AQA A level***  ***Outline the concept of the Hazard Management Cycle. (4 marks) AQA A Level November 2021***  ***Assess the extent to which the Park model of human responses applies to TWO or more recent hazard events you have studied. (20 marks) Hodder workbook***  In the context of natural hazards, what is meant by the term ‘perception’ (Cambridge)  Explain what is meant by fatalism. (Oxford)  Discuss the reasons why some people think it is best to do nothing and let nature takes its course. (Oxford)  To what extent does your chance of surviving a natural hazard event depend upon your level of wealth. (Oxford)  Explain why urban areas, particularly large ones, considered to be very vulnerable to natural hazard events. (Oxford)  Explain how economic and cultural geography may influence hazard perception. (6) |  |
| **Plate tectonics**   * Earth structure and internal energy sources. Plate tectonic theory of crustal evolution: tectonic plates; plate movement; gravitational sliding; ridge push, slab pull; convection currents and seafloor spreading. * Destructive, constructive and conservative plate margins. Characteristic processes: seismicity and vulcanicity. Associated landforms: young fold mountains, rift valleys, ocean ridges, deep sea trenches and island arcs, volcanoes. * Magma plumes and their relationship to plate movement. | ***Outline the process of slab pull in relation to plate movement. (3 marks) AQA AS A Level Paper 1 June 2018***  ***Summarise the formation of rift valleys. (3 marks) AQA AS Paper 1 June 2022***  ***Outline the theory of plate tectonics and assess the extent to which the position of young fold mountains, rift valleys, ocean ridges, volcanoes, deep sea trenches and island arcs support that theory. (9 marks) Hodder workbook***  ***To what extent does plate tectonic theory help in understanding the development of landforms associated with plate movement? (20 marks) AQA A Level November 2021*** |  |
| **Volcanic hazards**   * The nature of vulcanicity and its relation to plate tectonics: forms of volcanic hazard: nuées ardentes, lava flows, mudflows, pyroclastic and ash fallout, gases/acid rain, tephra. Spatial distribution, magnitude, frequency, regularity and predictability of hazard events. * Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation. * Impacts and human responses as evidenced by a recent volcanic event. | ***Outline the characteristics of one hazard associated with volcanic eruptions. [3 marks] Paper 1 - Sample assessment material AQA AS level***  ***Outline factors which lead to the formation of mudflows, a volcanic hazard. (4 marks) AQA A Level Paper June 2022***  ***With reference to a place which has experienced a recent volcanic event, assess the importance of exogenous factors (links with other places) in responding to the event. (9 marks) AQA AS Level Paper 1 June 2019***  ***Assess the extent to which the frequency and magnitude of volcanic activity is more predictable at some plate margins than others. (9 marks) AQA AS Paper 1 June 2022***  ***‘The severity of the impacts of the volcanic hazards experienced in a place is affected more by the nature of plate boundaries than the level of development of the place.’ To what extent do you agree with this view? (20 marks) AQA AS Paper 2 June 2018***  ***Figures 9a-9d show information about volcanic eruptions. Assess the usefulness of Figures 9a-9d in presenting information on volcanic eruptions. (6 marks) AQA A Level November 2021***  ***Analyse the extent to which the impacts of volcanic hazards depend on the nature of the volcanicity (9 marks) Hodder workbook***  ***To what extent do you agree that risk management has had an effect on the impacts of a recent volcanic event that you have studied. (9 marks) Hodder workbook***  Explain the global distribution of volcanoes. (6 marks) Your answer should refer to characteristic processes of volcanicity (Oxford) |  |
| **Seismic hazards**   * The nature of seismicity and its relation to plate tectonics: forms of seismic hazard: earthquakes, shockwaves, tsunamis, liquefaction, landslides. Spatial distribution, randomness, magnitude, frequency, regularity, predictability of hazard events. * Impacts: primary/secondary; environmental, social, economic, political. Short and long-term responses; risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation. * Impacts and human responses as evidenced by a recent seismic event. | ***Outline the characteristics of liquefaction as a seismic hazard. (3 marks) AQA AS Level Paper 1 June 2019***  ***Outline the process of liquefaction. (4 marks) AQA A Level Paper 1 2020***  ***Figure 9 shows responses by some companies and individuals to the Haiti earthquake, 2010. Analyse the data shown in Figure 9. (6 marks) AQA A Level Paper June 2022***  ***To what extent do you agree that seismic events will always generate more widespread and severe impacts than volcanic events? (9 marks) Sample assessment materials – Paper 1 AQA A level***  ***Assess the importance of factors in globalisation in supporting the response to major seismic hazards. (9 marks) Sample assessment materials – Paper 1 AQA A level***  ***With reference to one or more seismic event(s) that you have studied, assess the importance of past and present processes of development in understanding the impact of the associated hazards. [9 marks] June 2017 AS Paper 1***  ***‘Seismic activity offshore will always present a greater threat to people than seismic activity on land.’ To what extent do you agree with this view? (9 marks) AQA A Level Paper 1 2020***  ***Figure 10 shows information about the 2010 earthquake in Haiti. Using Figure 10 and your own knowledge, assess the challenges in managing an event such as this. (9 marks) AQA A Level November 2021***  ***‘The impact of seismic hazards is influenced by the level of development of the place affected.’ To what extent do you agree with this view? [20 marks] Sample assessment materials – Paper 1 AQA AS level***  ***‘Seismic hazards will always be harder to manage than volcanic hazards due to their unpredictability and scale.’ To what extent do you agree with this view? (20 marks) AQA A Level Paper June 2022***  ***‘Earthquakes have a greater impact on the human characteristics of place than the physical characteristics of place.’ With reference to a seismic event you have studied, how far do you agree with the statement above? (20 marks) AQA AS Paper 1 June 2022***  To what extent is Park’s Model of human response applicable to understanding responses to seismic events that you have studied? (9) (Oxford)  How far is it possible to mitigate against the hazards associated with earthquakes? (Oxford) |  |
| **Storm hazards**   * The nature of tropical storms and their underlying causes. Forms of storm hazard: high winds, storm surges, coastal flooding, river flooding and landslides. Spatial distribution, magnitude, frequency, regularity, predictability of hazard events. * Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses: risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation. * Impacts and human responses as evidenced by two recent tropical storms in contrasting areas of the world. | ***Outline causes of a storm surge. (3 marks) June 2017 AS Paper 1***  ***Volcanic hazards will always have a greater impact than storm hazards. To what extent do you agree with this view? (20 marks) June 2017 AS Paper 1***  ***To what extent do you agree that the impact of volcanic activity can be mitigated against more effectively than tropical storms? (9 marks) AQA A Level Paper 1 June 2019***  ***Using Figures 10a, 10b, 10c and your own knowledge, assess the potential issues associated with managing this event. (9 marks) AQA A Level Paper 1 2020***  ***Using Figures 10a, 10b, 10c and your own knowledge, assess the challenges in managing flood risk associated with tropical storms in Louisiana. (9 marks) AQA A Level Paper June 2022***  ***Evaluate the impact that a tropical storm has had on the character of a place that you have studied and how the storm has affected people’s lived experience of this place after the storm. [9 marks] Sample assessment materials – Paper 1 AQA AS level***  The secondary impacts of tropical storms have a greater impact on people’s lives than the primary impacts. To what extent do you agree with this statement. (Oxford) |  |
| **Fires in nature**   * Nature of wildfires. Conditions favouring intense wild fires: vegetation type, fuel characteristics, climate and recent weather and fire behaviour. Causes of fires: natural and human agency. * Impacts: primary/secondary, environmental, social, economic, political. Short and long-term responses; risk management designed to reduce the impacts of the hazard through preparedness, mitigation, prevention and adaptation. * Impact and human responses as evidenced by a recent wild fire event. | ***Assess the impacts of a recent wildfire event upon people’s lived experience of the place. (9 marks) AQA AS Level Paper 1 June 2018***  ***Using Figure 10 and your own knowledge, assess the potential issues associated with managing an event such as this. (9 marks) AQA A Level Paper 1 June 2019***  ***How far do you agree that global governance is crucial in meeting the challenge of reducing incidence of wildfires? (9 marks) AQA A Level November 2021***  ***How far do you agree that storms and wildfires are increasing in frequency and intensity, presenting an increasing threat to people? (20 marks) AQA A Level Paper 1 2020***  ***Assess the usefulness of prediction in the management of wildfire. (9 marks) AQA A Level paper June 2022***  ***Outline how risk management can reduce the impacts of wildfires (3 marks) Hodder Workbook***  Assess the importance of fuel (vegetation), climate and topography in the behaviour of wildfires. (Oxford)  What is meant by defensible space and how effective do you think it is likely to be in reducing the fire hazard? (Oxford)  Should wildfires only be extinguished if people or human activities are at risk?  (Oxford) |  |
| **Case study 1**  Case studyof a multi-hazardous environment beyond the UK to illustrate and analyse the nature of the hazards and the social, economic and environmental risks presented, and how human qualities and responses such as resilience, adaptation, mitigation and management contribute to its continuing human occupation.  **Case study 2**  Case studyat a local scale of a specified place in a hazardous setting to illustrate the physical nature of the hazard and analyse how the economic, social and political character of its community reflects the presence and impacts of the hazard and the community’s response to the risk. | ***‘The impacts experienced in multi-hazardous environments make them uninhabitable.’ With reference to a multi-hazardous environment beyond the UK that you have studied to what extent do you agree with this view? (20 marks) AQA AS Paper 1 June 2019***  ***Using an example of a multi-hazardous environment beyond the UK, illustrate and analyse the nature of the hazards of that environment and the social, economic and environmental risks presented. To what extent do human qualities and responses contribute to its continuing human occupation. (20 marks) Hodder workbook***  For a multi-hazardous environment you have studied beyond the UK, explain the nature of the hazards faced. (9) (Oxford) |  |