

Geography Edexcel B

Paper 1. Topic 1 – Hazardous Earth

Climate Change Exam Booklet

Enquiry question: How does the world's climate system function, why does it change and how can this be hazardous for people?

Key idea	Detailed content
1.1 The atmosphere operates as a global system which transfers heat around the Earth	a. The global atmospheric circulation and how circulation cells and ocean currents transfer and redistribute heat energy around the Earth.
	b. How global atmospheric circulation determines the location of arid (high pressure) and high rainfall (low pressure) areas. (1)
1.2 Climate has changed in the past through natural causes on timescales ranging from hundreds to millions of years	a. The natural causes of climate change and how they explain past climate change events: asteroid collisions, orbital changes, volcanic activity, variations in solar output.
	b. Evidence for natural climate change (ice cores, tree rings, historical sources) and how it is used to reconstruct glacial and interglacial climate during the Quaternary and UK climate since Roman times to the present day. (2)
1.3 Global climate is now changing as a result of human activity, and there is uncertainty about future climates	a. How human activities (industry, transport, energy, farming) produce greenhouse gases (carbon dioxide, methane) that cause the enhanced greenhouse effect leading to global warming.
	b. Evidence for how human activity is causing climate change (sea level rise and warming oceans, global temperature rise, declining Arctic ice, increased extreme weather events) and the possible consequences on people.
	c. The range of projections for global temperature change and sea level rise in the future, including physical process and human reasons for uncertainty about those projections. (3)

1. Explain **one** way in which ocean currents transfer heat energy around the Earth (3 marks)
Page – 3 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

2. Explain how ocean currents can influence the climate (3 Marks)
Page – 3 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

3. Explain **one** reason why some areas have low annual rainfall. (3 Marks)
Page – 2 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

4. Explain **one** reason why some areas have high annual rainfall. (3 Marks)
Page – 3 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

5. Explain how **orbital change** can affect global climate (3 marks)
Page – 4 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

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6. Explain **two** other natural causes of climate change (4 Marks)

Page – 4 in revision guide

(P) oint	(D) velop	(P) oint	(D) velop

7. Explain one way that trees provide evidence of past climate change (3 marks)

Page – 5 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

8. Explain one way that ice cores provide evidence of past climate change (3 marks)

Page – 5 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

9. Explain the enhanced greenhouse effect (4 marks)

Page – 2 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	(Dd) ouble develop

10. Explain how human activity is leading to climate change (4 Marks)

Page –6 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	(Dd) ouble develop

11. Explain the impacts of climate change on people (4 marks)

Page – 7 in revision guide

(P) oint	(D) velop	(P) oint	(D) velop

12. Explain the impacts of climate change on the environment (4 Marks)

Page – 7 in revision guide

(P) oint	(D) velop	(P) oint	(D) velop

13. Explain the human reason for uncertainty about future climate projections (3 marks)

Page – 8 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

Question	Assess the different causes of climate change. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Question	Assess the possible consequences of climate change on people. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				



Question	1. Assess the view that sea level rise is the main physical hazard caused by climate change. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				


Geography Edexcel B

Paper 1. Topic 1 – Hazardous Earth

Extreme Weather Exam Booklet

Enquiry question: How are extreme weather events increasingly hazardous for people?

Enquiry question: How are extreme weather events increasingly hazardous for people?	
Key idea	Detailed content
1.4 Tropical cyclones are caused by particular meteorological conditions	a. Characteristics (pressure, rotation, structure) and seasonal global distribution of tropical cyclones (hurricanes and typhoons) including source areas and tracks and how these change over time. (4)
	b. How the global circulation of the atmosphere leads to tropical cyclones in source areas, reasons why some tropical cyclones intensify and their dissipation. (5)
1.5 Tropical cyclones present major natural hazards to people and places	a. Physical hazards of tropical cyclones (high winds, intense rainfall, storm surges, coastal flooding, landslides) and their impact on people and environments. (6)
	b. Why some countries are more vulnerable (physically, socially and economically) than others to the impacts of tropical cyclones.
1.6 The impacts of tropical cyclones are linked to a country's ability to prepare and respond to them	a. How countries can prepare for, and respond to, tropical cyclones: weather forecasting, satellite technology, warning and evacuation strategies, storm-surge defences.
	b. The effectiveness of these methods of preparation and response in one developed country  and in one developing or emerging country  .
Integrated skills: (4) Use of GIS to track the movement of tropical cyclones (5) Use of weather and storm-surge data to calculate Saffir-Simpson magnitude (6) Use of social media sources, satellite images and socio-economic data to assess impact.	

 = located example.

1. Describe the weather conditions during a tropical cyclone (3 marks)

Page – 9 in revision guide

(D) escription	(D) escription	(D) escription

2. Explain the formation of a tropical storm (4 Marks)

Page – 9 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	Dd) ouble develop

3. Explain why tropical storms change as they make landfall (3 Marks)

Page – 9 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

4. Explain two physical hazards associated with tropical storms. (4 Marks)

Page – 10 in revision guide

(P) oint	(D) velop	(P) oint	(D) velop

5. Explain the impact of tropical cyclones on the environment (3 marks)

Page – 10 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

6. Explain why some countries are more vulnerable to tropical cyclones (3 Marks)

Page – 11 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

7. Explain how countries can prepare for tropical cyclones (3 marks)

Page – 11 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

8. Explain how weather forecasting can help to prepare people for tropical storms (3 marks)

Page – 11 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

9. Explain how warning and evacuation strategies can help to prepare people for tropical storms (4 marks)

Page – 11 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	(Dd) ouble develop
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10. Explain how storm surge defences can help to prepare people for tropical storms (3 Marks)

Page – 11 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

Question	Evaluate the effectiveness of methods of response to a tropical cyclone in a named developing country. [8 marks]			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Question	Assess the possible consequences of climate change on people. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Geography Edexcel B

Paper 1. Topic 1. – Hazardous Earth

Tectonics Exam Booklet

Enquiry question: Why do the causes and impacts of tectonic activity and management of tectonic hazards vary with location?

Key idea	Detailed content
1.7 Earth's layered structure, and physical properties is key to plate tectonics	<p>a. Earth's layered structure (including the asthenosphere), with different composition and physical properties (temperature, density, composition, physical state) (7)</p> <p>b. How the core's internal heat source (through radioactive decay) generates convection, the key foundation for plate motion.</p>
1.8 There are different plate boundaries, each with characteristic volcanic and earthquake hazards	<p>a. Distribution and characteristics of the three plate boundary types (conservative, convergent and divergent) and hotspots. (8)</p> <p>b. Causes of contrasting volcanic (volcano type, magma type/lava flows and explosivity) and earthquake hazards, including tsunami (shallow/deep, magnitude).(9)</p>
1.9 Tectonic hazards affect people, and are managed, differently at contrasting locations	<p>a. Primary and secondary impacts of earthquakes or volcanoes on property and people in a developed🌐 and emerging or developing country🌐.</p> <p>b. Management of volcanic or earthquake hazards, in a developed🌐 and emerging or developing🌐 country including short-term relief (shelter and supplies) and long-term planning (trained and funded emergency services), preparation (warning and evacuation; building design) and prediction. (10)</p>
Integrated skills: (7) Interpret a cross-section of the Earth (8) Use and interpretation of world map showing distribution of plate boundaries and plates (9) Use of Richter Scale to compare magnitude of earthquake events (10) Use of social media sources, satellite images and socio-economic data to assess impact.	

1. Describe the features of the mantle (2 marks)

Page – 13 in revision guide

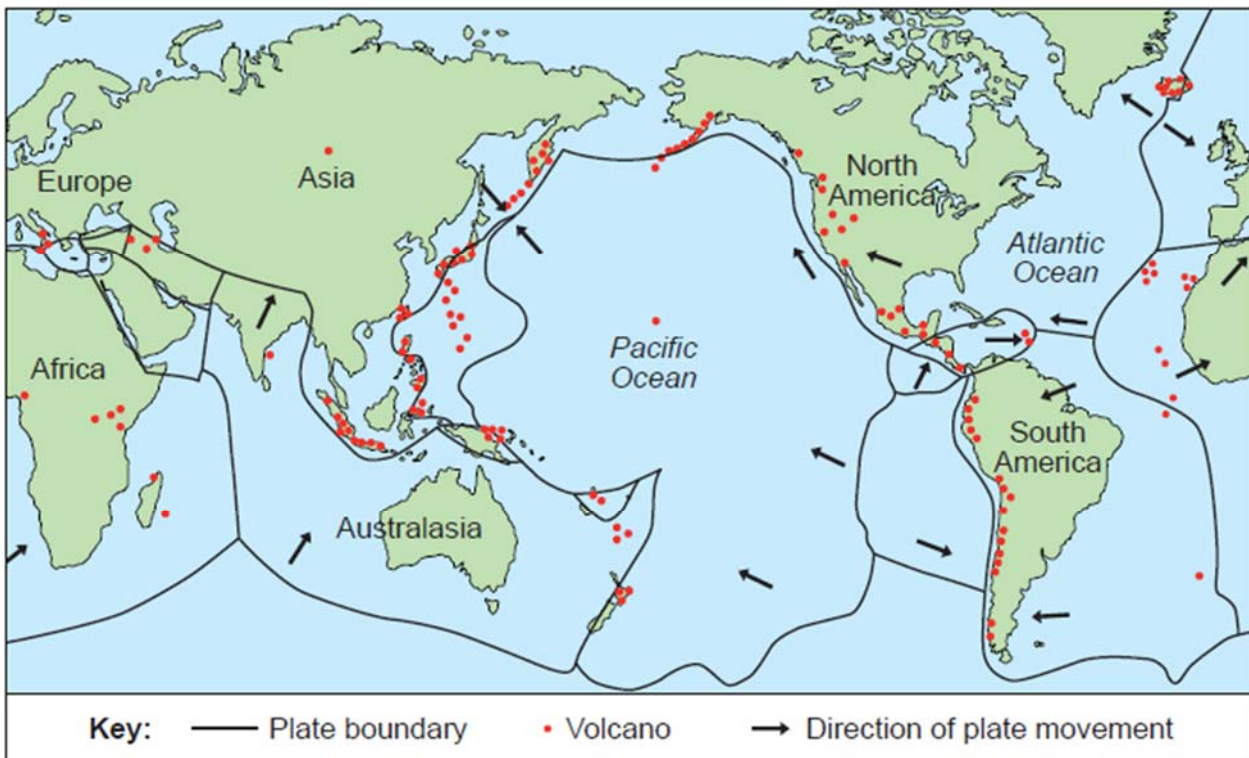
D1	D2

2. Describe the features of the crust (3 Marks)

Page – 13 in revision guide

D1	D2

Figure 1 – A world map showing plate boundaries and their direction of movement.



3. Using Figure 1 describes the distribution of volcanoes

(T)rend	(E)vidence	(A)nomaly

4. Explain why tectonic plates move (3 Marks)

(P) oint	(D) velop	(Dd) ouble develop

5. Explain how heat from the core causes tectonic plates to move (3 Marks)

Page – 13 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

6. Describe the characteristics of a divergent plate boundary (3 marks)

Page – 14 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

7. Describe the characteristics of a convergent plate boundary (3 marks)

Page – 14 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

8. Explain why earthquakes occur at a conservative plate boundary (4 marks)

Page – 14 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	(Dd) ouble develop

9. Explain why volcanoes occur at a convergent plate boundary (4 marks)

Page – 14/15 in revision guide

(P) oint	(D) velop	(Dd) ouble develop	(Dd) ouble develop

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10. Explain how volcanoes are formed at hot spots (3 marks)

Page – 15 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

11. Explain one difference between the volcanoes found at divergent and convergent boundaries (3 marks)

Page – 15 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

12. Explain one cause of a tsunami (3 Marks)

Page – 16 in revision guide

(P) oint	(D) velop	(Dd) ouble develop

13. Explain **two** reasons why some earthquakes are more deadly than others (4 Marks)

Page – 16 in revision guide

(P) oint	(D) velop	(P) oint	(D) velop

14. Explain how a shallow focus could influence the severity of an earthquake (3 Marks)

Page – 16 in revision guide

(P) oint	(D) velop	(Dd) ouble develop
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15. Explain how either a volcanic eruption or an earthquake can impact people and the environment (4 Marks)

Page – 18/19 in revision guide

(P)oint	(D)evelop	(P)oint	(D)evelop

16. Explain one way that people can predict volcanic eruptions or earthquakes (3 marks)

Page – 17 in revision guide

(P)oint	(D)evelop	(Dd)ouble develop

17. Explain **two** ways that people can prepare for the impacts of either a volcanic eruption or an earthquake (4 Marks)

Page – 18/19 in revision guide

(P)oint	(D)evelop	(P)oint	(D)evelop

18. Explain **one** advantage of short-term relief following a tectonic hazard (3 Marks)

Page – 17 in revision guide

(P)oint	(D)evelop	(Dd)ouble develop

Figure 2 –
Information on
selected recent
earthquakes.

Location	Magnitude	Estimated deaths	Cost of damage (US\$)
Eastern Sichuan, China	7.9	87 587	150 billion
Central Alaska, USA	7.9	0	0
Samoa Islands	8.1	192	3 million
Kuril Islands	8.3	0	0
Hokkaido, Japan	8.3	1	1 million
Southern Sumatra, Indonesia	8.5	25	180 million
Northern Sumatra, Indonesia	8.6	1313	2.2 billion
Maule, Chile	8.8	507	15 billion
Honshu, Japan	9.0	20 896	300 billion
Northern Sumatra, Indonesia	9.1	227 898	3 billion

19. Using Figure 2 describe the relationship between earthquake magnitude and number of deaths. (2 Marsk)

1 billion = 1 000 000 000

1 million = 1 000 000

the

(T)rend	(E)vidence

Question	Assess the importance of the primary and secondary impacts of either earthquakes or volcanoes in a developed country. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Question	Evaluate the effectiveness of the management of a volcanic or earthquake hazard in a developed country. (8 marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				

Question	Assess the view that earthquakes or volcanic activity have greater impacts on the environment than on people. (8 Marks)			
	A (application)	P (point)	D (develop)	DD (Double develop)
Paragraph 1				
Paragraph 2 (Challenge – grade 6 +)				
Conclusion (Challenge – grade 8+)				