Diploma Programme
Programme du diplôme
Programa del Diploma

Geography
Higher level
Paper 1

Friday 13 May 2022 (afternoon)

45 minutes

Instructions to candidates

- Do not open this examination paper until instructed to do so.
- Answer the questions in one option.
- The accompanying **geography resource booklet** is required for this examination paper.
- The maximum mark for this examination paper is **[20 marks]**.

Option	Questions
Option A — Freshwater	1–2
Option B — Oceans and coastal margins	3–4
Option C — Extreme environments	5–6
Option D — Geophysical hazards	7–8
Option E — Leisure, tourism and sport	9–10
Option F — Food and health	11–12
Option G — Urban environments	13–14

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Answer the questions in **one** option.

When relevant, answers should refer to case studies or examples, and where appropriate include well-drawn maps or diagrams.

Option A — Freshwater

Answer the following question.

1. Refer to the diagram on page 3 of the accompanying resource booklet.

The graph shows who has responsibility for collecting water from outside the home in countries where a high percentage of rural households lack access to piped water.

(a) (i) State the number of countries where more than 60 % of rural households rely on water from outside the home. [1]

(ii) Identify the country where men and women have equal responsibility for collecting water from outside the home. [1]

(b) Outline **one** environmental impact of increased human pressure on aquifers. [2]

(c) Explain **two** ways in which water can be managed to provide a more sustainable future for local communities in countries such as these. [3 + 3]

Answer either part (a) or part (b).

Either

2. (a) Examine why geographers use a systems approach in the study of drainage basins. [10]

Or

2. (b) Examine how conflicts between different stakeholders in the management of wetlands might be resolved. [10]

End of Option A

Option B — Oceans and coastal margins

Answer the following question.

3. Refer to the map on pages 4–5 of the accompanying resource booklet.

The map shows the pattern of movement of oil tankers and their chokepoints.

(a) (i) Identify the chokepoint with the most barrels of oil moved per day. [1]

(ii) State the number of millions of barrels of oil moved per day at the Strait of Malacca choke point. [1]

(b) Outline **one** reason why the ownership of **one named** ocean area or territory is contested. [2]

(c) Suggest **one** political challenge **and one** environmental challenge associated with the movement of oil around the globe by sea. [3 + 3]

Answer either part (a) or part (b).

Either

4. (a) Examine the major threats to coral reef environments. [10]

Or

4. (b) Examine why conflicts often develop over the commercial use of coastal margins. [10]

End of Option B

Option C — Extreme environments

Answer the following question.

5. Refer to the map on pages 6–7 of the accompanying resource booklet.

The world map shows the production of desalinized water in selected countries which include hot, arid areas.

(a) (i) Estimate the desalination capacity of the United States, in thousands of cubic metres per day. [1]

(ii) State the country shown on the map with the smallest desalination capacity. [1]

(b) Outline **one** reason why some semi-arid areas with low annual rainfall are considered to be extreme environments. [2]

(c) Explain **two** ways in which solar power can help the sustainable development of communities in hot, arid areas such as these. [3 + 3]

Answer either part (a) or part (b).

Either

6. (a) Examine the possible long-term challenges associated with tourism in **one or more** types of cold environment. [10]

Or

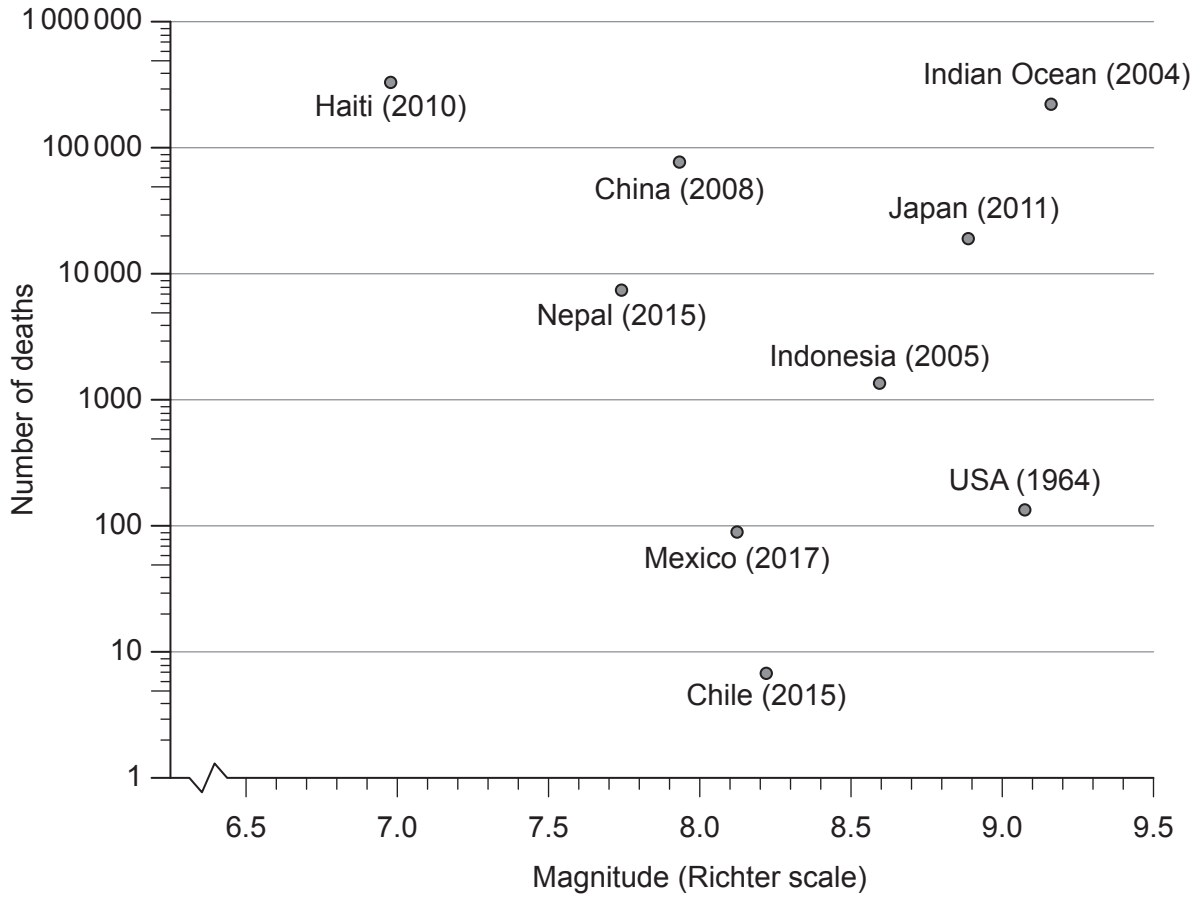
6. (b) Examine the importance of wind in the development of **two or more** hot, arid landscape features. [10]

End of Option C

Option D — Geophysical hazards

Answer the following question.

7. The graph shows the magnitude of selected earthquake events in relation to the number of deaths caused.



(a) (i) Identify the location of the earthquake event with the highest magnitude. [1]

(ii) State the number of deaths caused by the earthquake event in the USA. [1]

(b) Outline **one** reason why high-magnitude earthquake events do not occur very often. [2]

(c) Explain how the risk to a community from earthquake events such as these might be affected by:

(i) the age structure of its population; [3]

(ii) political factors (governance of the country). [3]

(Option D continues on the following page)

(Option D continued)

Answer either part (a) or part (b).

Either

8. (a) Examine the severity of the impacts of different types of mass movement on human well-being. [10]

Or

8. (b) Examine the effectiveness of technology and planning strategies in reducing human vulnerability to volcanic hazards. [10]

End of Option D

Option E — Leisure, tourism and sport

Answer the following question.

9. Refer to the photograph on page 8 of the accompanying resource booklet.

The photograph shows a football stadium in South America.

(a) Using the photograph, identify **two** characteristics of this area that may reduce accessibility for visiting football supporters. [1 + 1]

(b) Outline **one** reason why some city stadiums have a large sphere of influence. [2]

(c) Suggest how large numbers of visitors in an area such as this could have:

(i) **one** positive economic impact for local communities; [3]

(ii) **one** negative economic impact for local communities. [3]

Answer either part (a) or part (b).

Either

10. (a) Examine why views may differ on the benefits of tourism as a development strategy. [10]

Or

10. (b) Examine the influence of cultural and political factors on participation in sport at varying scales. [10]

End of Option E

Option F — Food and health

Answer the following question.

11. Refer to the graph on page 9 of the accompanying resource booklet.

The graph shows the incidence of dengue fever (a vector-borne disease) in an Asian country between 2010 and 2012 by age group.

(a) (i) State the age group which had the highest incidence of dengue fever in 2012. [1]

(ii) Estimate the mean incidence rate of dengue fever for all years in the 20–24 age group. [1]

(b) Outline **one** strategy used to limit the spread of a water-borne disease. [2]

(c) Explain how using genetically modified organisms (GMOs) to increase food production can lead to:

(i) **one** environmental disadvantage; [3]

(ii) **one** social disadvantage. [3]

Answer either part (a) or part (b).

Either

12. (a) Examine how food production systems can use water and energy more sustainably. [10]

Or

12. (b) Examine how different stakeholders influence the diets of individuals and societies. [10]

End of Option F

Option G — Urban environments

Answer the following question.

13. Refer to the topographic map on pages 10–11 of the accompanying resource booklet.

The topographic map shows the small town of Queenstown in New Zealand. Founded in the 1860s this town has experienced rapid growth since then. The scale of the map is 1:50 000.

(a) (i) Identify the state highway located in grid reference 6105. [1]

(ii) State **one** physical reason for the location of the airport to the east of Frankton (Queenstown Airport). [1]

(b) Outline **one** reason why land values are higher in some parts of an urban area. [2]

(c) Explain **two** challenges associated with making infrastructure improvements in urban settlements such as Queenstown. [3 + 3]

Answer either part (a) or part (b).

Either

14. (a) Examine the strengths and weaknesses of resilient city design as a way of managing climatic challenges. [10]

Or

14. (b) Examine why social deprivation occurs for different reasons in urban areas at varying stages of development. [10]

End of Option G

References: