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# Geography

## Higher level

### Paper 1

6 November 2024

Zone A afternoon | Zone B afternoon | Zone C afternoon

2 hours 15 minutes

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#### Instructions to candidates

- Do not open this examination paper until instructed to do so.
- Answer the questions in three options.
- The accompanying **geography resource booklet** is required for this examination paper.
- The maximum mark for this examination paper is **[60 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

Answer the questions in **three** options.

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 map on page 2 of the accompanying resource booklet.

The map shows the Mekong River and its main dams in 2020.

- (a) (i) State how many countries on the Mekong River have dams. [1]
- (ii) State the main direction of flow of the Mekong River along the border of Thailand and Laos. [1]
- (b) Outline **one** effect that the dams in the upper course of the Mekong River might have on agricultural land in Cambodia. [2]
- (c) (i) Explain how river deposition may create a delta. [3]
- (ii) Explain how river erosion may create a waterfall. [3]

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

**Either**

2. (a) Examine why growing pressures from stakeholders might make future management of wetlands difficult. [10]

**Or**

2. (b) To what extent do physical factors cause increasing freshwater scarcity? [10]

**End of Option A**

**Option B — Oceans and coastal margins**

Answer the following question.

3. Refer to the map on page 3 of the accompanying resource booklet.

The map shows the Great Pacific Garbage Patch between Asia and North America.

- (a) (i) Estimate the length of the Great Pacific Garbage Patch from east to west. [1]  
(ii) State the direction of circulation of the North Pacific Gyre. [1]  
(b) Outline **one** reason why plastic pollution occurs along ocean coastlines. [2]  
(c) Explain **two** economic benefits of coral reefs. [3 + 3]

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

**Either**

4. (a) Examine the importance of wave processes **and** lithology in the formation of coastal landforms of erosion. [10]

**Or**

4. (b) Examine why it is difficult to manage international conflict concerning the strategic value of oceans. [10]

**End of Option B**

### Option C — Extreme environments

Answer the following question.

5. Refer to the diagram on page 4 of the accompanying resource booklet.

The diagram shows the proportions of Earth’s ice loss (a total of 28 trillion tonnes) between 1994 and 2017.

- (a) (i) State the sector with the greatest loss of ice. [1]
- (ii) Estimate the percentage of Earth’s ice lost from mountain glaciers. [1]
- (b) Outline **one** way in which the melting of mountain glaciers can negatively affect local communities. [2]
- (c) Explain how **two** new technologies might help sustainable development in local communities in extreme environments. [3 + 3]

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

**Either**

6. (a) To what extent is water important in the formation of hot, arid landscape features? [10]

**Or**

6. (b) Examine the opportunities **and** challenges associated with irrigation in hot, arid areas. [10]

**End of Option C**

**Option D — Geophysical hazards**

Answer the following question.

7. Refer to the map on page 5 of the accompanying resource booklet.

The map shows the arrival times (in hours) of the waves from the Indian Ocean tsunami of 2004. The earthquake that generated the tsunami occurred at 10.00 am.

- (a) (i) State the number of islands that the tsunami had reached after two hours. [1]
- (ii) State how many hours it took the tsunami to reach **X**. [1]
- (b) Outline **one** reason for the formation of a tsunami. [2]
- (c) Explain **two** ways in which land-use zoning might reduce risk from geophysical hazards. [3 + 3]

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

**Either**

- 8. (a) Examine how social and economic factors may increase the vulnerability of communities to geophysical hazards. [10]

**Or**

- 8. (b) Evaluate the effectiveness of post-event management strategies for mass movement hazards. [10]

**End of Option D**

**Option E — Leisure, tourism and sport**

Answer the following question.

9. Refer to the map on page 6 of the accompanying resource booklet.

The map shows the ski routes in the Aviemore area of Scotland.

- (a) (i) Identify the fastest way to reach the top station from the base station. [1]
- (ii) State the difficulty of the longest ski route shown on the map. [1]
- (b) Outline **one** physical factor that could reduce the number of visitors to this area. [2]
- (c) (i) Explain how **movie location** tourism is used to achieve tourism growth. [3]
- (ii) Explain how **adventure** tourism is used to achieve tourism growth. [3]

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

**Either**

10. (a) Examine the extent to which economic factors **and** social factors affect personal participation in sporting activities. [10]

**Or**

10. (b) Examine ways in which the growth of tourism in rural hotspots can be managed for a sustainable future. [10]

**End of Option E**

**Option F — Food and health**

Answer the following question.

**11.** Refer to the graph on page 7 of the accompanying resource booklet.

The graph shows the number of cholera cases and related events in Lusaka, Zambia, from October 2017 to May 2018.

- (a) (i) Estimate the number of reported cases at the peak of the cholera outbreak. [1]
- (ii) Identify **one** physical reason that could explain why cholera cases increased again in 2018. [1]
- (b) Outline **one** human factor contributing to the diffusion of water-borne disease. [2]
- (c) Explain **two** benefits of using media in the management of a pandemic. [3 + 3]

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

**Either**

- 12.** (a) To what extent does international aid affect the severity of famine in **one or more** countries or areas? [10]

**Or**

- 12.** (b) To what extent is food waste reduction the best solution to the problem of food insecurity? [10]

**End of Option F**

**Turn over**



**Option G — Urban environments**

Answer the following question.

**13.** Refer to the map on pages 8 and 9 of the accompanying resource booklet.

The map shows part of the urban area of Nashville, USA. The scale of the map is 1:24 000, and the contour interval is 3 metres.

- (a) (i) State the six-figure grid reference for Ewing Park School in the northern part of the map. [1]
- (ii) Estimate the distance, in kilometres, between the two buildings marked **A** and **B** in the northern part of the map. [1]
- (b) Outline, using map evidence, **one** factor that might explain the absence of built-up areas to the south of Cheatham Lake. [2]
- (c) Explain **two** different ways in which human activities can modify the microclimate in an urban area. [3 + 3]

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

**Either**

- 14.** (a) Examine the extent to which management strategies have reduced the impacts of traffic congestion in **one or more** urban areas. [10]

**Or**

- 14.** (b) Examine the importance of physical factors **and** land values on the pattern of economic activities in urban areas. [10]

**End of Option G**

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