GEOGRAPHY

Written examination

Thursday 15 November 2018
Reading time: 11.45 am to 12.00 noon (15 minutes)
Writing time: 12.00 noon to 2.00 pm (2 hours)

QUESTION AND ANSWER BOOK

Structure of book

<table>
<thead>
<tr>
<th>Number of questions</th>
<th>Number of questions to be answered</th>
<th>Number of marks</th>
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<tbody>
<tr>
<td>8</td>
<td>8</td>
<td>80</td>
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- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers, coloured pencils, water-based pens and markers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.
- No calculator is allowed in this examination.

Materials supplied
- Question and answer book of 12 pages
- Data book
- Additional space is available at the end of the book if you need extra paper to complete an answer.

Instructions
- Write your student number in the space provided above on this page.
- All written responses must be in English.

At the end of the examination
- You may keep the data book.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.
Question 1 (8 marks)
Land use change can have both positive and negative impacts on a local area.

a. Describe either one positive or one negative impact of land use change in the local area that you investigated using fieldwork techniques or secondary sources. 4 marks

b. Evaluate the effectiveness of one of the fieldwork techniques or secondary sources used in reaching your conclusion about the impact of land use change described in part a. 4 marks
Use Figure 1 on page 3 of the data book when responding to Question 2.

**Question 2** (5 marks)

a. Which of the glaciers shown in the data book has experienced the largest percentage of ice loss in one year since 1980? 1 mark

b. Glacial ice loss and gain can be very erratic from year to year.
   Which of the glaciers shown in the data book displays the largest variation in ice loss for the years shown? 1 mark

c. Suggest one natural phenomenon that could contribute to substantial glacial ice loss in a single year. 2 marks

d. Tick (✓) the correct box.
   Which is the most correct statement about the overall trend of ice loss of the glaciers shown in the data book? 1 mark
   
   - [ ] There have been constant annual increases in the percentage of ice loss.
   - [ ] The most significant increases in ice loss have occurred since 1990.
   - [ ] The percentage of ice loss has been between 2% and 5% since 1990.
   - [ ] The percentage of ice loss has been between 4% and 7% since 2000.
**Question 3** (20 marks)

a. On the outline map below, mark and name:
   - one location where desertification occurs
   AND
   - one location where deforestation occurs. 4 marks

b. Discuss the impacts of deforestation on economic activity at the location mapped in part a. 6 marks
c. Evaluate the role of climate change in the process of desertification at the location mapped in part a. 10 marks
Question 4 (7 marks)
Discuss the success or failure of a global response to the impacts of deforestation or desertification or melting ice sheets and glaciers at a selected location.

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Use Figures 2 and 3 on pages 4 and 5 of the data book when responding to Question 5.

Question 5 (14 marks)
a. Compare the levels of the under-five-years mortality rate in Europe with those in Africa. 6 marks

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b. The strong spatial association between the information in Figures 2 and 3 can be explained by a number of factors.

With reference to either specific regions or specific countries, explain how one factor accounts for the level of spatial association shown in Figures 2 and 3. 8 marks
Question 6 (8 marks)

a. Demographers classify Cuba’s population structure in 1959 as being at Stage 2 of the Demographic Transition Model.

Identify one piece of quantified evidence that supports this classification. 2 marks

b. Cuba’s population structure in 2048 is predicted to be typical of Stage 5 of the Demographic Transition Model.

Identify one piece of quantified evidence that supports this prediction. 2 marks

c. Outline two ways in which the migration of Cubans to the United States of America has had an impact on Cuba’s population structure in 2018. 4 marks
Question 7 (8 marks)
Discuss the contribution of migrants to a change in population structure at either a specific origin or a specific destination. Do not use the migration of Cubans in your answer.
Question 8 (10 marks)
Discuss the effectiveness of one strategy developed in response to one issue of population growth in one country. Do not use the migration of Cubans in your answer.
Extra space for responses

Clearly number all responses in this space.

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TURN OVER
An answer book is available from the supervisor if you need extra paper to complete an answer. Please ensure you write your student number in the space provided on the front cover of the answer book. At the end of the examination, place the answer book inside the front cover of this question and answer book.
GEOGRAPHY
Written examination

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DATA BOOK

Instructions
A question and answer book is provided with this data book.
Refer to the data in this book for each question as indicated in the question and answer book.
The data contained in this book is drawn from current real-world case studies.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.
An increase on the graphs represents a decrease in percentage of volume of ice. This is represented on the vertical axis as a⁻¹.

Source: adapted from Lonnie G. Thompson et al., ‘Tropical glaciers, recorders and indicators of climate change, are disappearing globally’, *Annals of Glaciology*, 52(59), 2011, p. 29

**Figure 1:** Yearly ice loss of glaciers at four locations

- **A – Naimona’nyi, China**
- **B – Qori Kalis, Peru**
- **C – Kilimanjaro, Tanzania**
- **D – Glaciers near Puncak Jaya, Indonesia**
Figure 2: Under-five-years mortality, per 1000 live male and female births, 2018 (estimated)

Data: US Census Bureau, International Programs, International Data Base

Key
- 130 and over
- 100–129.9
- 70–99.9
- 40–69.9
- 10–39.9
- less than 10

Figure 2 Human population
Figure 3: Life expectancy, average years for males and females, 2018 (estimated)

Data: US Census Bureau, International Programs, International Data Base
Background information

Since the Cuban Revolution of 1959, approximately 1.4 million people have left the island country. Most of these migrants went to the United States of America, where there are now (2018) approximately 1.2 million Cuban-born residents and another 800,000 residents with one or two Cuban-born parents.

Cuban migration has occurred in waves: the migration immediately after the 1959 revolution, the 1965–1973 freedom flights funded by the United States government, the 1980 boatlift from Mariel Harbor, the Cuban-government-sanctioned migrations of 1994, and the ongoing but controlled admissions of Cuban refugees to the United States of America.

Figure 4: Cuba’s regional location

Figure 5: Cuba’s changing population, 1959–2048

Figure 6: Cubans admitted into the United States of America

Figure 7 | Human population

Figure 7a: Cuba’s population structure, 1959

Figure 7b: Cuba’s population structure, 1981

Figure 7c: Cuba’s population structure, 2018

Figure 7d: Cuba’s population structure, 2048 (estimated)

Source: adapted from Population Pyramids of the World from 1950 to 2100, <www.populationpyramid.net>

END OF DATA BOOK