GEOGRAPHY
Written examination

Thursday 12 November 2015
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

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<th>Structure of book</th>
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<tr>
<td>Number of questions</td>
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<td>5</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 15 pages.
- A 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.
Instructions
Answer all questions in the spaces provided. Refer to the data book as indicated.

Use Figure 1 on pages 2 and 3 of the data book when responding to Question 1.

Question 1 (2 marks)
Select the most appropriate answer (A.–D.) for parts a. and b., and write your answers in the boxes.

a. Grazing areas at location A on Figure 1b are spatially associated with areas receiving an average annual rainfall of
   A. 100–200 millimetres.
   B. 200–300 millimetres.
   C. 300–600 millimetres.
   D. over 600 millimetres.

b. The land use at location B on Figure 1b is predominantly
   A. conservation and natural environments.
   B. grazing and irrigated agriculture.
   C. forestry and other intensive use.
   D. dryland agriculture and grazing.
Question 2 (18 marks)

a. Name one specific location within the Murray-Darling Basin where there has been or where there is a conflict over a water resource. 1 mark

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b. At the location named in part a., comment on each of the following:
   • water resource
   • availability of the water
   • importance of the water as a resource 3 marks

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c. Explain how the conflict over the use of water at the named location developed. 4 marks

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Question 2 – continued
d. Evaluate the effectiveness of a water management policy or strategy to reduce the conflict explained in parts a–c.  

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e. Discuss two factors that will significantly influence the future sustainability of the Murray-Darling Basin’s water resources.  

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

**Question 3** (10 marks)
Identify the local resource for which you have collected data in the field.

a. State how different or similar the scale of one of the resources, shown in the data book, is to the local resource for which you have collected data in the field. 2 marks

b. All the resources illustrated in the data book have some spatial interaction occurring. Define spatial interaction with reference to one of the resources illustrated. 2 marks

c. With reference to data collected in the field, identify how spatial interaction occurs at your chosen local resource. 2 marks
d. Using observations and/or data collected in the field, evaluate how the impact of human activity on your selected local resource has been managed.  

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Use Figure 3 on page 6 of the data book when responding to Question 4.

**Question 4** (15 marks)

a. Describe the link between changes in life expectancy and changes in each of the following:
   - the under-five-years mortality rate, 1985–2050  
   - the projected crude death rate, 2025–2050  

b. Provide one reason why the number of births generally continued to rise until 2015 despite an earlier fall in the crude birth rate.
c. With reference to the total fertility rate and the annual growth rate, explain why the projected total world population will continue to increase to 2050 and beyond. 3 marks

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d. i. Outline a change to the population structure in a specific country.  

ii. Provide two factors that have contributed to this change.  

iii. Assess the relative importance of the two factors provided in part ii. and justify your response.
Use Figure 4 on page 7 of the data book when responding to Question 5.

**Question 5** (15 marks)

a. Which figure – Figure 4a or Figure 4b – is a better example of a global phenomenon? Justify your response.  

b. Use the outline map below to map the distribution of a global phenomenon. Include a title and a legend. Do not use the phenomenon of human population, shipping lanes or the Arctic fox.
c. Describe the distribution of your mapped global phenomenon with reference to regions and specific places within the regions. 3 marks

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d. Discuss the impact of the global phenomenon on people or environments at both:
   • a local scale
   • a regional or national scale. 4 marks

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e. Justify a policy designed to manage the impact of your global phenomenon at a specific location. 3 marks

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Extra space for responses

Clearly number all responses in this space.
An answer book is available from the supervisor if you need extra paper to complete your 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.
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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.
Figure 1 | Water as a resource

Figure 1a: Australia’s average annual rainfall

Figure 1b: Land use in the Murray-Darling Basin

Key to Figure 1b

Figure 2a: A transport intersection

Figure 2b: A shopping mall
Figure 2c: A gallery in a museum
### Figure 3: Global population statistics, 1985–2050

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<tbody>
<tr>
<td>total population (billions)</td>
<td>4.86</td>
<td>5.70</td>
<td>6.47</td>
<td>7.26</td>
<td>8.0</td>
<td>9.41</td>
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<tr>
<td>annual growth rate (percentage)</td>
<td>0.7</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
<td>0.9</td>
<td>0.5</td>
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<tr>
<td>total fertility rate (per woman)</td>
<td>4.2</td>
<td>2.8</td>
<td>2.5</td>
<td>2.4</td>
<td>2.3</td>
<td>2.1</td>
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<td>crude birth rate (per 1000 people)</td>
<td>11</td>
<td>22</td>
<td>19</td>
<td>19</td>
<td>17</td>
<td>14</td>
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<tr>
<td>births (millions)</td>
<td>52.7</td>
<td>126.2</td>
<td>125.6</td>
<td>134.8</td>
<td>132.6</td>
<td>131.3</td>
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<tr>
<td>life expectancy (years)</td>
<td>55</td>
<td>63</td>
<td>65</td>
<td>69</td>
<td>71</td>
<td>76</td>
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<tr>
<td>infant mortality rate (per 1000 births)</td>
<td>96</td>
<td>62</td>
<td>48</td>
<td>35</td>
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<tr>
<td>under-five-years mortality rate (per 1000 births)</td>
<td>148</td>
<td>91</td>
<td>70</td>
<td>51</td>
<td>40</td>
<td>19</td>
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<tr>
<td>crude death rate (per 1000 people)</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>deaths (millions)</td>
<td>17.5</td>
<td>48.2</td>
<td>49.8</td>
<td>56.7</td>
<td>63.6</td>
<td>89.0</td>
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Data: US Census Bureau
Figure 4b: Distribution of the Arctic fox

Figure 4a: Global shipping lanes, 2014

Source: Grolltech