GEOGRAPHY

Written examination

Friday 14 November 2008

Reading time: 3.00 pm to 3.15 pm (15 minutes)
Writing time: 3.15 pm to 5.15 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>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>60</td>
</tr>
</tbody>
</table>

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners, rulers, coloured water-based pens and markers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied
- Question and answer book of 11 pages.
- A data book.

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.
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Question 1

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

a. Name the drainage division which has the highest percentage of Australia’s total water runoff.

1 mark

b. ‘In Australia, the percentage of total water runoff in a drainage division closely reflects its population distribution.’ Provide one piece of evidence supporting this statement and one piece of evidence rejecting this statement.

i. Supporting evidence

ii. Rejecting evidence

4 marks

Total 5 marks
Question 2

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

a. Name one significant natural or physical geographic characteristic of the Murray-Darling Basin that makes it a unique region of Australia.

b. Describe the distribution of fruit and vegetable growing in the Murray-Darling Basin.

c. A new area of fruit and rice production was planned for the region between Broken Hill and Lake Menindee in the 2000–2007 period. With reference to the data provided, discuss the likely sustainability of this plan.
d. Below is a list of strategies, either existing or proposed, to manage water in the Murray-Darling Basin.
   - Improving irrigation techniques
   - Limiting water allocation rights
   - Compulsory purchase of water allocation rights
   - Recycling of saline water
   - Guaranteeing environmental water flows

Select one of the above strategies. Evaluate how effectively this strategy manages, or could manage, water resources for one location within the Murray-Darling Basin.

Strategy selected ____________________________

Location in the Murray-Darling Basin ____________________________

Evaluation ______________________________________________________

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

4 marks

e. ‘Use and management of water in the Murray-Darling Basin are complex. Conflicts are inevitable.’

Evaluate this statement with reference to one specific conflict within the Murray-Darling Basin you have studied.

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

5 marks

Total 17 marks
Question 3
Identify a local resource for which you have collected data in the field.

a. Classify and justify your classification of this resource.

b. Describe the local resource you studied in your fieldwork, using each of the following geographic characteristics.
   • Location within its region
   • Distance
   • Scale

c. Identify a management policy that is a response to a negative impact on either people or the environment as a result of the use of this resource.
d. Evaluate the future sustainability of this management response.


2 marks
Total 8 marks
Question 4

Use Figure 3 on pages 6 and 7 of the data book when responding to Question 4.

a. Quantify Mali’s infant mortality rate and total fertility rate.

Infant mortality rate

Total fertility rate

1 mark

b. Describe the overall pattern shown on the scattergraph, making specific reference to the countries located in groups A and B.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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________________________________________________________________________

4 marks

c. Define the term ‘replacement rate’.

________________________________________________________________________

1 mark

d. What is the significance, for a country’s future population, of a replacement rate below 2.1?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2 marks

Question 4 – continued
e. With reference to one country you have studied, evaluate the importance of two factors contributing to changes in its population. Indicate which factor you consider to be the more significant.

f. ‘Trends of declining infant mortality rates and declining birth rates, together with rising life expectancies, are producing an ageing global population.’
Discuss this statement in relation to one country’s population policy you have studied.
In your answer you may use the country you evaluated in part e.

4 marks

4 marks

Total 16 marks
Question 5

a. Use the outline map provided below to map the distribution of a global phenomenon you have studied. Do not use the phenomenon of human population.

b. Discuss two factors which explain the distribution of your mapped global phenomenon.

3 marks

4 marks
c. Locate and name on the map one place where your mapped global phenomenon is having either a positive impact on people or a negative impact on the environment. On your map or its key, clearly indicate whether the impact is positive on people or negative on the environment.  

1 mark

d. Describe the impact of the global phenomenon at the location you have mapped in part c. 

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

2 marks

e. Outline and justify an effective management strategy to deal with the impact of the global phenomenon you described in your answer to part d. 

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_________________________________________________________________________

4 marks 
Total 14 marks
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DATA BOOK

Directions to students

• 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.

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Figure 1b: Australia’s population distribution

Number of persons per km²

- 50 and above
- 10–50
- 1–10
- Less than 1

State/Territory boundary
River
Figure 2a: Generalised land use of the Murray-Darling Basin

- Mostly sheep and cattle raising
- Mostly wheat and barley cropping
- Rice
- Mostly fruit and vegetables, including grapes
- Rice, wheat, fruit and vegetables, including grapes
- Cotton
- Population centre
- Inland lakes
- State/Territory boundary

Source: Murray-Darling Commission
Figure 2b: Rainfall patterns of the Murray-Darling Basin
Source: Bureau of Meteorology

Figure 2c: Water needs for selected crops

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Annual Water Needs (in millimetres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pastures for sheep and cattle</td>
<td>600</td>
</tr>
<tr>
<td>Citrus Fruits</td>
<td>800</td>
</tr>
<tr>
<td>Grapes</td>
<td>1000</td>
</tr>
<tr>
<td>Lucerne</td>
<td>1200</td>
</tr>
<tr>
<td>Deciduous Fruits</td>
<td>1400</td>
</tr>
<tr>
<td>Rice</td>
<td>1600</td>
</tr>
</tbody>
</table>

Rainfall:
- More than 600 mm
- 500-600 mm
- 400-500 mm
- 300-400 mm
- Less than 300 mm
Figure 3: Infant mortality rates and total fertility rates for selected countries, 2007

1 Denmark
2 Australia
3 Canada
4 European Union countries
5 Japan
6 Singapore