HEALTH AND HUMAN DEVELOPMENT

Written examination

Friday 9 November 2007
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>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7</td>
<td>86</td>
</tr>
</tbody>
</table>

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- 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 16 pages.

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

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.
Question 1

a. Define the term ‘conception’.

There are three stages of prenatal development.

b. Choose one stage and briefly outline two characteristics of physical development that occur at that stage.

Stage of prenatal development

<table>
<thead>
<tr>
<th>Characteristic 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristic 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3 × 1 = 3 marks

Environmental factors such as socioeconomic status and access to healthcare can impact on health and development during pregnancy.

c. Select one of these environmental factors and explain how this improves health and development.

4 marks
The APGAR scale is used to assess how well a neonate adapts after birth. Table 1 represents the score a neonate has received. A rating of 0, 1 or 2 is given for each of the five physical signs for an optimum rating of 10 (2 is the best score for each sign).

Table 1

<table>
<thead>
<tr>
<th>Physical signs</th>
<th>Score immediately after birth</th>
<th>Score 5 minutes after birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/colour</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pulse/heart rate</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Grimace reflex</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Activity/muscle</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Respiration/respiratory effort</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

d. Describe the adaptations that have occurred in the neonate 5 minutes after birth that would explain the change in score relating to pulse/heart rate (circulation)

respiration/respiratory effort

2 + 2 = 4 marks
Total 12 marks
Question 2
Table 2 below shows the Disability-Adjusted Life Years (DALYs) by age, sex and cause in Victoria 2001.

### Table 2

<table>
<thead>
<tr>
<th>Broad Disease Group</th>
<th>Males by age group years (years)</th>
<th>Females by age group (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0–14</td>
<td>15–34</td>
</tr>
<tr>
<td>Cancer</td>
<td>592</td>
<td>1 581</td>
</tr>
<tr>
<td>Diabetes</td>
<td>175</td>
<td>496</td>
</tr>
<tr>
<td>Mental disorders</td>
<td>4 408</td>
<td>25 421</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>121</td>
<td>1 488</td>
</tr>
<tr>
<td>Musculoskeletal diseases</td>
<td>63</td>
<td>592</td>
</tr>
<tr>
<td>Injuries</td>
<td>2 138</td>
<td>14 479</td>
</tr>
<tr>
<td>Other</td>
<td>21 575</td>
<td>9 056</td>
</tr>
<tr>
<td>Total</td>
<td>29 072</td>
<td>53 113</td>
</tr>
</tbody>
</table>

Source: Adapted from Public Health Group, Rural and Regional Health and Aged Care Services Division, 2005, Victorian Burden of Disease Study, Mortality and morbidity in 2001, Victorian Government Department of Human Services, Melbourne, p. 177

a. i. Which disease group contributes most to the DALYs for the 15–34 year age group for males and females?

ii. Is this disease group likely to contribute more to DALYs through years of life lost to premature death (YLL), or healthy years lost due to disability (YLD)? Explain why.

1 + 3 = 4 marks
b.  

i. Variations in health status result from biomedical factors, lifestyle and behaviour, environmental factors, attitudes and beliefs, and genetic contribution.
Define ‘health status’.

ii. Using the data in Table 2, what conclusions can you make about the health status of Victorian males compared to Victorian females? Use examples from Table 2 to support your conclusions.

iii. Choose two of the factors stated in part b.i. and describe how they may cause variations in health status between males and females.

Name of factor 1  
How it may cause a variation in health status between males and females

Name of factor 2  
How it may cause a variation in health status between males and females

1 + 3 + (2 + 2) = 8 marks
Total 12 marks
Question 3

*Eat Well Australia* aims to improve the health of all Australians through better food and nutrition. This national public health strategy has been developed by SIGNAL, the nutrition part of the National Public Health Partnership, because of the vital role food and nutrition has in the health and wellbeing of all people. Poor nutrition is considered to account for at least 10% of the total burden of disease in Australia.


One of the health gains (priorities) identified in the *Eat Well Australia: A Strategic Framework for Public Health Nutrition* is **promoting optimum health for women, infants and children**. One of the key initiatives in this strategy is promoting good nutrition for school-aged children.

a. Outline two reasons to justify why this key initiative has been included in this health gain.

1. ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

2. ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

   2 + 2 = 4 marks
b. i. Identify and describe one strategy that governments could introduce to promote good nutrition for school-aged children and help address this health gain.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

ii. Suggest two criteria that could be used to determine the effectiveness of the strategy in part b.i.

1. ________________________________

   ________________________________

2. ________________________________

   ________________________________

   (1 + 3) + (1 + 1) = 6 marks

The work of a nongovernment organisation such as Nutrition Australia can help to address health gains.

c. Outline two ways that Nutrition Australia is contributing to the promotion of good nutrition for school-aged children.

1. ________________________________

   ________________________________

   ________________________________

   ________________________________

2. ________________________________

   ________________________________

   ________________________________

   2 + 2 = 4 marks
d. Select one other health gain (apart from promoting optimal nutrition for women, infants and children) included in the *Eat Well Australia* plan. **Explain** how improvements in this area could contribute to a reduction in the burden of disease in Australia.

Name of health gain _____________________________________________________________

Explanation _________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________


1 + 3 = 4 marks
Total 18 marks
Question 4

a. What is AusAID?

b. AusAID contributes to international health programs in association with nongovernment organisations. For example
   • education programs for HIV/AIDS
   • landmine clearing
   • small business projects for women.
   Select one of these programs.

   Explain AusAID’s contribution to this program.

   2 marks

   2 + 2 = 4 marks
   2 marks
   Health
   Development

   Total 8 marks

   TURN OVER
**Question 5**

The Social Model of Health recognised that despite improvements in health over the previous century, there were many people who were still not healthy. It recognised that improvements in health were best achieved by addressing the underlying social and environmental determinants of health.

a. Identify **two** principles on which the Social Model of Health is based.

1. 

2. 

b. Name **two** priority action areas and describe how these are evident in the Indigenous Diabetes initiative.

Priority action area 1 

Example from the health initiative
Priority action area 2

Example from the health initiative

3 + 3 = 6 marks
Total 8 marks
Question 6
Sudan is a developing country in the North East of Africa in the African World Health Organization (WHO) Region. Australia is a developed country in the Western Pacific Region of the WHO.

Table 3. Selected health statistical indicators for Sudan and Australia

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sudan</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Expectancy at birth (years) for females</td>
<td>60.0</td>
<td>83.0</td>
</tr>
<tr>
<td>Healthy Life Expectancy at birth (years) for females</td>
<td>49.9</td>
<td>74.3</td>
</tr>
<tr>
<td>Child mortality for females (per 1000)</td>
<td>84</td>
<td>5</td>
</tr>
<tr>
<td>Adult mortality (per 1000) females</td>
<td>304</td>
<td>50</td>
</tr>
<tr>
<td>Total health expenditure as a % of GDP</td>
<td>4.3%</td>
<td>9.5%</td>
</tr>
<tr>
<td>Literacy rate for females</td>
<td>34.6%</td>
<td>Not available</td>
</tr>
</tbody>
</table>


a. List two major differences between Sudan and Australia evident in Table 3 above.

1. __________________________________________________________________________

2. __________________________________________________________________________

1 + 1 = 2 marks

b. What is the difference between Life Expectancy and Healthy Life Expectancy?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

2 marks
c. Outline two reasons why the Healthy Life Expectancy for females may be so different in Sudan from that in Australia.

1. 

2. 

$2 + 2 = 4$ marks  
Total 8 marks
Question 7

a. In the table below, identify one characteristic of development for each area for young adult women.

<table>
<thead>
<tr>
<th>Area of development</th>
<th>Characteristics of development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
</tr>
<tr>
<td>Intellectual</td>
<td></td>
</tr>
</tbody>
</table>

4 marks

b. Describe two consequences that undernutrition may have on the physical development of women.

1. ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

2. ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

2 + 2 = 4 marks
The *World Food Programme* (WFP) is the food aid part of the United Nations. Food aid is one way to promote food security, which is defined as access of all people at all times to the food needed for an active and healthy life. One of the core policies for the *World Food Programme* is

- to improve the nutrition and quality of life of the most vulnerable people at critical times in their lives.

In January 2002, the *World Food Programme* and the government of Sudan launched a five year program to improve maternal and child nutrition. The *World Food Programme* recognises that women are the first and fastest solution to reducing poor nutrition. Experience shows that in the hands of women, food aid is far more likely to reach children. Seven out of ten of the world’s hungry are women and girls. The *World Food Programme* seeks to give over half its food aid to females.


c. Describe **two** ways in which ongoing conflict in countries like Sudan would impact on the availability of food for women and children.

1. 

2. 

2 + 2 = 4 marks

d. Describe how cultural factors may impact on the access to food by women in Sudan.

2 marks

e. Describe **one** effect that undernutrition may have on the health of children.

2 marks

**Question 7 – continued**

**TURN OVER**
Expenditure on health in Australia is much higher than in Sudan. One aspect of Australia’s high level of expenditure is the health care provided through Medicare.

f. Explain how Medicare could contribute to the differences in Life Expectancy or Healthy Life Expectancy for women in Australia when compared to women in Sudan.

4 marks
Total 20 marks