HEALTH AND HUMAN DEVELOPMENT
Written examination

Friday 5 November 2010
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

<table>
<thead>
<tr>
<th>Structure of book</th>
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<tbody>
<tr>
<td><strong>Section</strong></td>
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<tr>
<td>A</td>
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<tr>
<td>B</td>
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<tr>
<td>Total</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.

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SECTION A

Question 1
From September 2009, mandatory folic acid fortification requires Australian flour millers to add folic acid (a form of the B vitamin folate) to wheat flour for bread-making purposes. This means that most bread (except organic) in Australia will contain folic acid.

a. Identify one health benefit of fortifying bread with folic acid.

__________________________________________________________________________

1 mark

b. Name the main organisation responsible for monitoring folic acid fortification and for governing the safety and quality of food in Australia.

__________________________________________________________________________

1 mark

Question 2
Briefly outline two indicators that are used to measure the health status of populations.

1. ________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

2. ________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

4 marks

Question 3
Explain how Medicare may influence the health status of Australians.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

3 marks
Question 4
List two characteristics used by the World Health Organization (WHO) to describe a developing country.

1. ____________________________________________________________

2. ____________________________________________________________

2 marks

Question 5
Identify and then explain one dimension of health.

______________________________________________________________

______________________________________________________________

______________________________________________________________

2 marks

Question 6
Define the following.

glycaemic index________________________________________________

______________________________________________________________

bilateral aid____________________________________________________

______________________________________________________________

2 marks

Question 7
Outline two major characteristics of the biomedical model of health.

1. ____________________________________________________________

2. ____________________________________________________________

2 marks

Question 8
Name the Millennium Development Goal that relates specifically to gender equality.

______________________________________________________________

1 mark
Question 9
The following table indicates the leading causes of death in 2004 globally, compared with the leading causes of death predicted in 2030.

Table 1. Leading causes of death globally – ranked 1 to 15 for 2004 and 2030 (predicted)

<table>
<thead>
<tr>
<th>Disease or Injury</th>
<th>Rank</th>
<th>Rank</th>
<th>Disease or Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td>ischaemic heart disease</td>
<td>1</td>
<td>1</td>
<td>ischaemic heart disease</td>
</tr>
<tr>
<td>cerebrovascular disease</td>
<td>2</td>
<td>2</td>
<td>cerebrovascular disease</td>
</tr>
<tr>
<td>lower respiratory infections</td>
<td>3</td>
<td>3</td>
<td>chronic obstructive pulmonary disease</td>
</tr>
<tr>
<td>chronic obstructive pulmonary disease</td>
<td>4</td>
<td>4</td>
<td>lower respiratory infections</td>
</tr>
<tr>
<td>diarrhoeal diseases</td>
<td>5</td>
<td>5</td>
<td>road traffic injuries</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>6</td>
<td>6</td>
<td>trachea, bronchus, lung cancers</td>
</tr>
<tr>
<td>tuberculosis</td>
<td>7</td>
<td>7</td>
<td>diabetes mellitus</td>
</tr>
<tr>
<td>trachea, bronchus, lung cancers</td>
<td>8</td>
<td>8</td>
<td>hypertensive heart disease</td>
</tr>
<tr>
<td>road traffic injuries</td>
<td>9</td>
<td>9</td>
<td>stomach cancer</td>
</tr>
<tr>
<td>prematurity and low birthweight</td>
<td>10</td>
<td>10</td>
<td>HIV/AIDS</td>
</tr>
<tr>
<td>neonatal infections and other</td>
<td>11</td>
<td>11</td>
<td>nephritis and nephrosis</td>
</tr>
<tr>
<td>diabetes mellitus</td>
<td>12</td>
<td>12</td>
<td>self-inflicted injuries</td>
</tr>
<tr>
<td>malaria</td>
<td>13</td>
<td>13</td>
<td>liver cancer</td>
</tr>
<tr>
<td>hypertensive heart disease</td>
<td>14</td>
<td>14</td>
<td>colon and rectum cancer</td>
</tr>
<tr>
<td>birth asphyxia and birth trauma</td>
<td>15</td>
<td>15</td>
<td>oesophagus cancer</td>
</tr>
</tbody>
</table>

Adapted from: www.who.int p. 33

a. Global marketing is considered to have a major influence on health status. Select one leading cause of death that is predicted to rise in ranking from 2004 to 2030 that could be due to the influence of global marketing.

________________________________________________________________________

________________________________________________________________________

1 mark

b. Describe how global marketing might contribute to this increased ranking.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2 marks
Question 10
a. Outline the circumstances under which the United Nations provides humanitarian assistance.

b. Describe one example of humanitarian assistance.

Question 11
Explain, using one example, how AusAID improves sustainable human development.

Question 12
Use two examples of determinants of health to explain why males are more likely to be seriously injured in road traffic crashes than females.

1. 

2.
SECTION B

Question 1
Jeanette has been diagnosed with the early symptoms of Diabetes Mellitus Type II. She lives in the City of Moonee Valley and has been asked by the health promotion officer at the Council to be involved in the ‘Life!’ program. Diabetes Australia Vic. has ranked the City of Moonee Valley 57th in Victoria for the number of cases of Diabetes Mellitus. Although not considered a ‘hot spot’ it has had an increase of 94% in the prevalence of Diabetes in its population.

Source: Diabetes Australia

a. Define prevalence.

________________________________________________________________________

1 mark

b. Briefly outline two reasons for the inclusion of diabetes mellitus as a National Health Priority Area.

1. ________________________________________________________________

________________________________________________________________________

2. ________________________________________________________________

________________________________________________________________________

2 marks

c. A major part of the ‘Life!’ program is based on the achievement of four goals which include

• no more than 30% of total energy intake from fat
• no more than 10% of total energy intake from saturated fat
• at least 30 min/day moderate physical activity
• at least 5% weight reduction.

Apart from providing energy in an individual’s diet, outline one function and one major food source of

i. saturated fat

ii. fibre

in the table below.

<table>
<thead>
<tr>
<th>Function</th>
<th>Major food source</th>
</tr>
</thead>
<tbody>
<tr>
<td>saturated fat</td>
<td></td>
</tr>
<tr>
<td>fibre</td>
<td></td>
</tr>
</tbody>
</table>

2 + 2 = 4 marks

SECTION B – Question 1 – continued
d. Promoting healthy eating is a major focus of the “Life!” program, a local government initiative. The Australian Government also plays an important role in promoting healthy eating. Identify two ways in which the Australian Government promotes healthy eating and how these promotions could reduce the prevalence of diabetes mellitus.

1. 

2. 

6 marks
Question 2

The 2007 Australian National Children’s Nutrition and Physical Activity Survey’s key findings were that only 1% of 14–16-year-old boys and girls consumed sufficient fruit and 5% of 14–16-year-old boys and girls met the dietary guideline for vegetable intake.

a. Identify two ways in which the Australian Government could use the nutrition information from surveys like this.

1. ____________________________________________________________________________

2. ____________________________________________________________________________

2 marks

b. i. Identify two National Health Priority Areas (NHPAs) where fruit and vegetable intake is a protective factor.

1. ____________________________________________________________________________

2. ____________________________________________________________________________

ii. Select one of these NHPAs and describe how fruit and vegetable intake acts as a protective factor.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

iii. Briefly outline one direct cost of this NHPA to the community.

______________________________________________________________________________

2 + 2 + 1 = 5 marks

c. Describe one way in which a nongovernment organisation could use this data to increase fruit and vegetable consumption by 14–16-year-old boys and girls.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

3 marks
**Question 3**

The following information is about the program LEAD (Localities Embracing and Accepting Diversity).

Greater Shepparton City Council has been awarded this program by the Victorian Health Promotion Foundation (VicHealth) aimed at improving community acceptance of cultural diversity. The VicHealth Chief Executive Officer said that communities that support cultural diversity have been found to have better health outcomes. The focus is on the community as a whole, not just on people from migrant, refugee and Aboriginal communities affected directly by discrimination or racism. The responses will include a range of different approaches such as communications, community development, and supporting organisations with training and other resources. Working across settings such as education, employment, and sport and recreation, the LEAD program plans to support local organisations to

- ensure that environments are safe and welcoming for people from a range of cultural backgrounds
- increase understanding and empathy among different community groups
- ensure fairer outcomes for all.

A goal is to identify what works when it comes to reducing discrimination and promoting diversity at the local level.

Adapted from: www.vichealth.vic.gov.au

a. Describe two principles of the social model of health and explain how they are evident in this program.

1. ____________________________________________________________

2. ____________________________________________________________

6 marks
b. Using the elements that ensure sustainability of programs, predict the potential contribution to sustainable human development of this VicHealth-funded program.

5 marks
Question 4

a. In developing regions most of the burden of collecting drinking water falls on women and girls. Explain how this burden may impact on human development.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2 marks

b. Explain how increasing access to safe drinking water promotes health and sustainable human development.

Health

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Sustainable human development

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

6 marks
Question 5
One of the Millennium Development Goals is to reduce child mortality, with a specific target to reduce the under-five mortality rate by two thirds between 1990 and 2015.

Table 2 below shows under-five mortality rates per 1000 live births for 1990 and 2007 and includes the targets for 2015 for a range of regions and for developed and developing regions.

Table 2. Goal 4: Reduce child mortality

<table>
<thead>
<tr>
<th>Regions</th>
<th>1990</th>
<th>2007</th>
<th>2015 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>183</td>
<td>145</td>
<td></td>
</tr>
<tr>
<td>Southern Asia</td>
<td>122</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Oceania</td>
<td>85</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Commonwealth of Independent States, Asia</td>
<td>78</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Northern Africa</td>
<td>83</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Western Asia</td>
<td>67</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>South-Eastern Asia</td>
<td>77</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Latin America &amp; the Caribbean</td>
<td>54</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Eastern Asia</td>
<td>45</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Commonwealth of Independent States, Europe</td>
<td>26</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Developed regions</td>
<td>11</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Developing regions</td>
<td>103</td>
<td>74</td>
<td></td>
</tr>
</tbody>
</table>


a. Identify the region where the greatest effort is required to achieve the 2015 target.

1 mark
b. Using the information in Table 2, evaluate the progress made by developed and developing regions towards reducing child mortality between 1990 and 2007.

2 marks

c. Identify one example of a nongovernment organisation that promotes global health and sustainable human development. Describe one strategy it could implement to help achieve the Millennium Development Goal of reducing child mortality.

Nongovernment organisation

Strategy

1 + 3 = 4 marks
Question 6
The following information is about Ethiopia – a country located in Africa.

- Ethiopia ranks 27th in the world in under-five mortality rates, with a rate of 210 per 1000 and an infant mortality rate of 69 per 1000.
- Ethiopians have a life expectancy of 55 years.
- One third of the population survive on less that $US1 per day.
- Children in Ethiopia are orphaned as a result of HIV/AIDS. This has increased the number of child-only household families and the burden on the elderly, particularly the grandparents and the community. Ethiopia has the largest HIV/AIDS infected population in the world, contributing to very high adult mortality.
- Access to basic and quality education and educational materials in Ethiopia is generally low. Female enrolment/attendance compared to male is low.
- The total adult literacy rate is 36%.
- Children in Ethiopia die from childhood diseases that could easily be prevented through immunisation and basic health services.
- Access to clean water and sanitation facilities are inadequate.
- Malnutrition affects a large proportion of the population. Children in particular are highly affected by malnutrition.

Adapted from: www.unicef.org

a. Identify the mortality strata that Ethiopia belongs to according to the WHO classification and justify your choice.

Mortality strata

<table>
<thead>
<tr>
<th>Justification</th>
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<tbody>
<tr>
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</table>

1 + 2 = 3 marks

b. Explain the likely influence of income and gender equality on health status in Ethiopia.

Income

<p>| |</p>
<table>
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</table>

SECTION B – Question 6 – continued
Gender equality

The overall goal of the United Nations (UN) Ethiopia country program (through its UNICEF program) is to support the national and regional efforts towards the realization of the rights of the child to survival, development, protection and participation, with the following priority areas.

- girls education
- integrated policies for early childhood development
- immunisation
- HIV/AIDS prevention among children
- food supplementation

Adapted from: www.unicef.org

i. Describe an HIV/AIDS program that could be introduced into Ethiopia including reasons why the program should be introduced, the types of aid that could be used and how it might be implemented.

Description

Types of aid

Implementation
ii. Use this program to discuss the interrelationship between health, human development and sustainability.

6 + 6 = 12 marks