Victorian Certificate of Education
2007

STUDENT NUMBER

Letter

Figures

Words

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

Number of questions	Number of questions to be answered	Number of marks
7	7	86

- 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'.

_____

_____

1 mark

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

_____

Characteristic 1

_____

_____

Characteristic 2

_____

_____

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

Physical signs	Score immediately after birth	Score 5 minutes after birth
Appearance/colour	1	2
Pulse/heart rate	1	2
Grimace reflex	1	2
Activity/muscle	1	2
Respiration/respiratory effort	1	2
Total	**5**	**10**

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

TURN OVER

Question 2

Table 2 below shows the Disability-Adjusted Life Years (DALYs) by age, sex and cause in Victoria 2001.

Table 2

Broad Disease Group	Males by age group years (years)					Females by age group (years)				
	0–14	15–34	35–54	55–74	75+	0–14	15–34	35–54	55–74	75+
Cancer	592	1 581	11 849	38 954	18 165	373	2 098	15 660	28 248	17 632
Diabetes	175	496	5 450	7 017	2 177	169	381	4 180	5 818	3 320
Mental disorders	4 408	25 421	12 665	3 429	467	2 477	23 376	17 074	4 570	530
Cardiovascular disease	121	1 488	9 869	26 332	22 579	220	1 188	4 567	16 821	31 868
Musculoskeletal diseases	63	592	2 613	3 648	1 239	66	724	3 555	5 335	2 814
Injuries	2 138	14 479	8 830	3 209	1 050	1 207	4 172	3 340	1 793	1 690
Other	21 575	9 056	16 641	33 024	27 017	16 869	13 450	15 115	25 638	38 393
Total	29 072	53 113	67 917	115 613	72 694	21 381	45 389	63 491	88 223	96 247

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

TURN OVER

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.
>
> Source: Adapted from National Public Health Partnership, 2001, *Eat Well Australia:*
> *A Strategic Framework for Public Health Nutrition* 2000–2010, p. 3

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.

Strategy

_____

_____

Description

_____

_____

_____

_____

_____

_____

_____

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

Question 3 – continued
TURN OVER

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?

_____

_____

2 marks

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

c.   Justify how the strategy may promote health and development.

Health _____

_____

_____

Development _____

_____

_____

2 + 2 = 4 marks

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. _____

_____

2 marks

The Ottawa Charter for Health Promotion was developed from the Social Model of Health. It recognises there are a number of prerequisites for health to be met for good health to be achieved.

> In Adelaide a community based Diabetes group was developed to encourage Indigenous people to manage their own health. Patients who came to the Community Health Service were invited to fortnightly lunchtime programs with their families. They helped prepare a healthy meal and were able to talk about diabetes related issues. A visual poster was used to help indigenous families to understand diabetes, the importance of eating a healthy diet and measuring blood glucose levels. Participants were encouraged to ask questions and discuss complications associated with diabetes. Transport was provided to and from the lunchtime meetings. The group gained in confidence with each meeting. By the end participants felt comfortable sharing understandings about diabetes and helping other group members to manage their diabetes.
>
> Source: Adapted from http://www.healthinfonet.ecu.edu.au/. Accessed 22 March 2007

The Ottawa Charter for Health Promotion identifies five priority action areas or elements for health promotion to improve the health of populations.

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

Indicator	Sudan	Australia
Life Expectancy at birth (years) for females	60.0	83.0
Healthy Life Expectancy at birth (years) for females	49.9	74.3
Child mortality for females (per 1000)	84	5
Adult mortality (per 1000) females	304	50
Total health expenditure as a % of Gross Domestic Product (GDP)	4.3%	9.5%
Literacy rate for females	34.6%	Not available

Source: Adapted from World Health Organization, 'Countries'.

www.who.org/countries. Accessed March 2007

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. _____

_____

_____

_____

<div align="right">

2 + 2 = 4 marks

Total 8 marks

</div>

Question 7

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

Area of development	Characteristics of development
Physical	
Social	
Emotional	
Intellectual	

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.

Source: Adapted from: World Health Organization, *World Food Programme*

http://www.wfp.org/english. Accessed March 2007

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

END OF QUESTION AND ANSWER BOOK