Victorian Certificate of Education
2006

STUDENT NUMBER

Letter

Figures

Words

HEALTH AND HUMAN DEVELOPMENT
Written examination

Monday 6 November 2006

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

Number of questions	Number of questions to be answered	Number of marks
5	5	90

- 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 14 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

Ruby and Cody are both two years old. Ruby lives with her parents in Melbourne while Cody lives with his parents on a wheat farm south of Mildura in northwest Victoria. They do not have siblings. Both are developing within the normal range for height and weight for two year olds.

a. List **one normal** characteristic of their development at this lifespan stage.

Physical development

_____

_____

Social development

_____

_____

Emotional development

_____

_____

Intellectual development

_____

_____

$4 \times 1 = 4$ marks

b. Describe the role of **one** inherited factor in determining the physical development of two-year-old children.

Inherited factor _____

Role

_____

_____

_____

_____

_____

_____

3 marks

c.   One environmental factor that is important in optimising the development of Ruby and Cody is nutrition. Describe the interrelationship between protein, vitamin D and calcium in the formation of hard tissue.

_____

_____

_____

_____

_____

_____

_____

6 marks

d.   Describe the influence of **one** environmental factor (apart from nutrition) on Cody's social development.

Environmental factor _____

Influence on social development

_____

_____

_____

_____

_____

_____

3 marks

Total 16 marks

Question 2

Table 1.   The annual percentage of deaths by cause for children under five years of age in two World Health Organization (WHO) regions (selected causes)

Causes of death	Western Pacific (Australia, Japan, New Zealand) %	Southeast Asia %
HIV/AIDS	less than 1	1
Diarrhoeal disease	less than 1	18
Measles	less than 1	3
Injuries	7	2

Source: Adapted from World Health Organization, The World Health Report 2005, Make Every Mother and Child Count www.who.int/whr/previous/en

a.   The factors that contribute to health status and developmental outcomes in developing countries include poverty, illiteracy, cultural factors and lack of access to primary health care. Choose **one** of these factors and identify how it may account for the differences in the percentage of deaths between the two regions given in Table 1.

Factor _____

Difference

_____

_____

_____

_____

_____

_____

2 marks

b.   Many organisations such as AusAID have a range of strategies to optimise health and development globally.

   i.   Identify **one** strategy supported by AusAID and explain how it would reduce the burden of disease from **one** of the causes of death listed in Table 1 in Southeast Asia.

Name of strategy _____

Cause of death _____

Explanation

_____

_____

_____

_____

_____

_____

_____

_____

_____

                                                              3 marks

ii. List **three** elements of sustainable primary health care. Describe the effect of **each** of these elements
on the strategy in decreasing the burden of disease from the cause of death identified in part **i.**

Element 1 _____

Effect _____

_____

_____

_____

_____

Element 2 _____

Effect _____

_____

_____

_____

_____

Element 3 _____

Effect _____

_____

_____

_____

_____

                                                      $3 \times 3 = 9$ marks

                                                        Total 14 marks
                                                        TURN OVER

Question 3

In 2001 the estimated Indigenous population in Victoria was 27 928. This is 0.6% of Victoria's overall population and 6.1% of Australia's Indigenous population. The estimated residential population of Indigenous Victorians is distributed evenly between metropolitan and country regions. The health status of Indigenous Victorians varies from non-Indigenous people in Victoria; for example

- life expectancy for Indigenous people is 17 years shorter than for the non-Indigenous population
- Indigenous people in Victoria are hospitalised more frequently than non-Indigenous people
- alcohol and substance-use related disease is 2.0–7.7 times more frequent in the Indigenous population
- cardiovascular disease, including stroke and rheumatic disease, is 1.4–5.0 times more frequent in Indigenous people
- chronic lung disease, including emphysema, is 1.9–25.7 times more frequent in Indigenous people.

Source: adapted from Koori Health in Victoria, Koori Health www.health.vic.gov.au accessed February 2006

a.   i.   List **four** important characteristics of the social model of health.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

ii.   Explain how socioeconomic status may impact on the variations in health status between Indigenous and non-Indigenous Victorians as listed above.

_____

_____

_____

_____

_____

_____

_____

_____

iii. Explain how lifestyle and behaviour may impact on the variations in health status between Indigenous and non-Indigenous Victorians.

_____

_____

_____

_____

_____

_____

4 + 2 + 2 = 8 marks

b.   **Table 2.**   State government expenditure on public health activities, percentages, Victoria, 2003–04

Public health activities	(%)
Communicable disease control	17.9
Selected health promotion	28.3
Organised immunisation	19.3
Environmental health	2.2
Food standards and hygiene	1.4
Breast cancer screening	10.4
Cervical screening	4.8
Prevention of hazardous and harmful drug use	10.2
Public health research	5.6
Total public health	100.0

Source: Adapted from Australian Institute of Health and Welfare (AIHW) 2006. National public health expenditure report 2001–02 to 2003–04. Health and Welfare's Expenditure Series No. 26, AIHW Cat No. HWE 33. Canberra: AIHW p. 57

Evaluate how well the public health expenditure in Victoria reflects the characteristics of the social model of health you listed in part **a.i.**

_____

_____

_____

_____

_____

_____

_____

4 marks

Question 3 – continued
TURN OVER

c. The National Aboriginal Health Strategy states that

> *Health to Aboriginal peoples is a matter of determining all aspects of their life, including control over their physical environment, of dignity, of community self-esteem, and of justice. It is not merely a matter of the provision of doctors, hospitals, medicines or the absence of disease and incapacity.*

> Source: Australian Health Ministers' Advisory Council's Standing Committee on Aboriginal and Torres Strait Islander Health Working Party, 2004, *Cultural Respect Framework for Aboriginal and Torres Strait Islander Health 2004–2009*, Department of Health, South Australia, p. 6

Using the information provided at the beginning of this question, Table 2 in part **b.** and the statement above, how could public health expenditure improve the health of Indigenous people in Victoria?

_____

_____

_____

_____

_____

_____

_____

_____

6 marks

Total 18 marks

Question 4

Table 3.   Disease burden attributable to overweight/obesity by condition, Victoria, 2001

Condition	Deaths	DALYs	% of total DALYs
Type 2 diabetes	1 190	23 479	3.6
Ischaemic heart disease	1 255	113 579	2.1
Osteoarthritis	5	3 130	0.4
Colo-rectal cancer	217	3 130	0.5
Hypertension	146	1 301	0.5
Ischaemic stroke	124	5 255	0.8
Total burden	**2 937**	**149 874**	**7.9**

Source: Adapted from Department of Human Services 2005, *Victorian Burden of Disease Study, Mortality and Morbidity in 2001*, Public Health Group, Rural and Regional Health and Aged Care Services Division, Victorian Government Department of Human Services, Melbourne, p. 87

a.   **i.**   Explain the term DALY.

_____

_____

_____

_____

ii.   Outline **one** reason why there is a large difference in **deaths** between osteoarthritis and colo-rectal cancer, while the DALYs for these two conditions are the same.

_____

_____

_____

_____

2 + 2 = 4 marks

b.   **i.**   Nutrition can be a **risk** factor for each of the conditions in Table 3. Choose **one** of these conditions (except osteoarthritis) and show how a person's food choices may be a risk for developing that condition.

Condition chosen _____

Nutrition as a risk factor for this condition

_____

_____

_____

_____

   ii.   Nutrition can be a **protective** factor for each of the conditions in Table 3. Choose **one** of these conditions (except osteoarthritis) and show how a person's food choices may protect them against developing that condition.

Condition chosen _____

Nutrition as a protective factor for this condition

_____

_____

_____

_____

<div align="right">2 + 2 = 4 marks</div>

c.   *The Australian prevalence of obesity and overweight is high and continues to rise. Over half of adult Australians are overweight or obese, a proportion that has risen sharply in the last twenty years.*

Source: Public Health Association of Australia, Prevention and Management of Overweight and Obesity http://www.phaa.net.au/policy/obesity.htm

Describe **two** consequences of the rise in figures for obesity and their effect on the Australian health budget in the future.

Consequence 1 _____

Effect on the health budget

_____

_____

_____

Consequence 2 _____

Effect on the health budget

_____

_____

_____

<div align="right">3 + 3 = 6 marks
Question 4 – continued</div>

d. The Australian Government has developed dietary guidelines across the lifespan, partly in an attempt to reduce the risks associated with obesity.

    i. Choose **two** of the Dietary Guidelines for Adults and show how they may assist an individual to maintain a healthy **body mass index**.

Dietary guideline 1

_____

_____

Assistance in maintaining a healthy body mass index

_____

_____

_____

_____

Dietary guideline 2

_____

_____

Assistance in maintaining a healthy body mass index

_____

_____

_____

_____

    ii. Describe why the Dietary Guidelines for Adults may not be a complete success in assisting an individual to make effective changes to their food intake.

_____

_____

_____

_____

_____

_____

_____

6 + 4 = 10 marks

Total 24 marks

TURN OVER

Question 5

Globally, alcohol consumption has increased in recent decades, with all or most of that increase in developing countries. The rise in alcohol consumption in developing countries provides ample cause for concern over the possible rise in alcohol-related problems in those regions of the world most at risk. Worldwide, alcohol causes 1.8 million deaths (3.2% of total) and 58.3 million (4% of total) of DALYs.

Source: Adapted from World Health Organization, *Management of Substance Abuse – Alcohol* http://www.who.int/substance_abuse/facts/alcohol/en/index.html

a.   **i.**   Describe **one** possible consequence of increased alcohol intake on the **health** of people in developing countries.

\
\
\
\

ii.   Describe **one** possible consequence of increased alcohol intake on the **development** of people in developing countries.

\
\
\
\

2 + 2 = 4 marks

b.   The Australian Government has addressed the issue of high alcohol consumption through laws limiting the sale of alcohol to people under the age of 18 years.

    i.   Give **two** reasons why this strategy may decrease alcohol consumption in a **developed** country such as Australia.

Reason 1

_____

_____

_____

_____

Reason 2

_____

_____

_____

    ii.   Give **two** reasons why this strategy may **not** decrease alcohol consumption in a **developing** country.

Reason 1

_____

_____

_____

_____

Reason 2

_____

_____

_____

_____

$2 + 2 = 4$ marks

c. The World Health Organization is coordinating a range of strategies aimed at reducing the levels of alcohol intake worldwide to enhance the health and development of people.

i. Identify **two** components of primary health care that may reduce inappropriate alcohol consumption.

Component 1 _____

Component 2 _____

ii. Select **one** of the components of primary health care as listed in part **i.** and explain how it could be implemented to reduce inappropriate alcohol consumption.

Component _____

How inappropriate alcohol consumption could be discouraged

_____

_____

_____

_____

_____

_____

_____

_____

iii. Explain **two** barriers that may make it more difficult to implement one of the components identified in part **i.** in developing countries when encouraging appropriate alcohol consumption.

Component _____

Barrier 1

_____

_____

Barrier 2

_____

_____

2 + 4 + 4 = 10 marks

Total 18 marks

END OF QUESTION AND ANSWER BOOK