



**Victorian Certificate of Education
2005**

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER

Figures										Letter	
Words											

HEALTH AND HUMAN DEVELOPMENT
Written examination

Monday 7 November 2005

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

<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
5	5	100

- 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 17 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

Cancer is one of the National Health Priority Areas (NHPA) in Australia.

- a. Table 1 shows the contribution of cancer and other NHPAs to the burden of disease.

Table 1. Indicators of the impact of NHPA diseases and conditions (various years)

	Prevalence	Disability	Deaths	Burden of disease
NHPA	% of population	% with disability	% all deaths	% total DALY
Cardiovascular problems	16.8	8.6	37.6	21.9
Cancers	1.4	1.7	28.1	19.1
Mental disorders	9.6	14.7	2.4	13.3
Injury and poisoning	11.9	6.8	5.8	8.4
Diabetes	2.9	1.8	2.5	4.9
Asthma	11.6	4.7	0.3	2.6
Arthritis	32.0	34.4	0.8	3.6

Adapted from: Australian Institute of Health and Welfare 2004. Australia's health 2004. Canberra: AIHW. p. 389

- i. Define Disability Adjusted Life Years (DALY).

2 marks

- ii. Describe two differences in the way cancer and arthritis contribute to the burden of disease as shown in Table 1.

1. _____

2. _____

2 marks

There were 88 398 new cancer cases and 36 319 deaths due to cancer in Australia in 2001. Cancer currently accounts for 31% of male deaths and 26% of female deaths. In males, prostate cancer is the most common registrable cancer, followed by colorectal cancer, lung cancer and melanoma. These four cancers account for 60% of all registrable cancers in males. In females, breast cancer is the most common registrable cancer, followed by colorectal cancer, melanoma and lung cancer. These four cancers account for 60% of all registrable cancers in females.

Adapted from: Australian Institute of Health and Welfare (AIHW) and Australasian Association of Cancer Registries (AACR) 2004. Cancer in Australia 2001. AIHN cat. no. CAN 23. Canberra: AIHW p. xiii

- b. Various factors impact on health status. Choose **three** factors and describe how each may contribute to the differences **or** similarities in cancers between males and females.

Factor 1 _____

Description _____

Factor 2 _____

Description _____

Factor 3 _____

Description _____

2 + 2 + 2 = 6 marks

- c. The Ottawa Charter outlines five priority areas for the practice of health promotion. Choose **one** area and explain how a focus on this area could make an impact on the burden of disease from cancer.

Priority area _____

3 marks

Total 13 marks

Question 2

Social and economic circumstances can affect health and development throughout life.

- a. Briefly describe the likely difference in the health status of higher and lower socioeconomic groups in Australia.

2 marks

- b. Generally, those most at risk of not eating healthy and nutritious food include people with low income.
 - i. Dietary imbalance has consequences for individuals and for communities. Explain **one** consequence for the community and **one** consequence for the individual of dietary imbalances experienced by people with low incomes.

Consequence for the community _____

Consequence for the individual _____

4 marks

- ii.** List **one** example each of behavioural, social, economic and environmental factors that may affect food selection and purchase.

Behavioural factor _____

Social factor _____

Economic factor _____

Environmental factor _____

4 marks

- iii.** Identify **two** factors in part **ii.** above and demonstrate the effect they may have on the ability of low socioeconomic individuals to select and purchase nutritious food.

Factor 1 _____

Effect _____

Factor 2 _____

Effect _____

4 marks

- c. The description below is of local action to create access to healthy eating for low socioeconomic groups.

Access to healthy eating

The Café Meals Program targets people who are homeless or at risk of homelessness and therefore lack both access and opportunities to prepare food for healthy eating. The program provides social dining opportunities in participating cafés that are affordable, easy to access and acceptable to homeless people. Once in the program, clients are given a membership card that entitles them to access one subsidised meal per day from any of four participating cafés. Clients present their membership cards at the café and pay \$2 toward a meal valued up to \$8.80. The program provides reliable access to food that is socially acceptable. The program was established as part of the food insecurity demonstration program funded by VicHealth and the Department of Human Services working with the North Yarra Community Service and the City of Yarra.

Adapted from: VicHealth 2003, *Food For All?* Food Insecurity Community Demonstration Projects, Maribyrnong City Council and North Yarra Community Health, Case Studies, VicHealth, Melbourne, December, 2003. pp. 5–6

- i. Explain why nutrition is important in public health programs.

3 marks

- ii. Discuss the use of a public health nutrition program like the Café Meals Program for sustaining the health **and** development of low socioeconomic status groups.

5 marks

Total 22 marks

TURN OVER

Question 3

- a. As part of the 2001 National Health Survey, older Australians living in private households were asked to assess their own health status. The table below details the findings showing the percentage at each age level and how they rate their health.

Table 2. Self-assessed health status of older Australians

Self-assessed health status	Males (%)			Females (%)		
	65–74	75–84	85+	65–74	75–84	85+
Excellent	11.0	8.5	6.5	13.4	7.6	6.5
Good/very good	57.6	52.0	65.7	58.2	54.3	53.2
Poor/fair	31.4	39.5	27.8	28.4	38.1	40.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Adapted from: Australian Institute of Health and Welfare 2004. Australia's health 2004. Canberra: AIHW. p. 359

- i. Describe **two** differences in how older Australians have assessed their own health status as shown in Table 2 above.

Difference 1 _____

Difference 2 _____

2 marks

- ii. Predict **two** criteria that older Australians may have used to assess their own health status.

Criterion 1 _____

Criterion 2 _____

2 marks

- b. The table below illustrates the average Medicare benefits paid per person, broken down by age and sex, in 2002–03.

Table 3. Medicare benefits paid to males and females in each age group

Age group	Males (\$)	Females (\$)
0–4	259.99	229.60
5–9	138.13	130.06
10–14	133.05	129.47
15–19	151.22	241.86
20–24	159.07	325.32
25–34	192.11	451.34
35–44	258.95	460.51
45–54	376.88	543.84
55–64	582.63	687.13
65–74	920.04	882.49
75 and over	842.69	954.06
All	338.66	475.68

Source: Australian Institute of Health and Welfare 2004. Australia's health 2004. Canberra: AIHW. p. 377, Table 8.24

- i. Explain **two** reasons that might contribute to the different levels of Medicare benefits paid for the 10–14 age group compared with the 75+ age group as shown in Table 3.

Reason 1 _____

Reason 2 _____

4 marks

- ii. Give **two** possible reasons as to why the average Medicare benefits paid for females aged 25–34 is greater than those paid to males of the same age group as shown in Table 3.

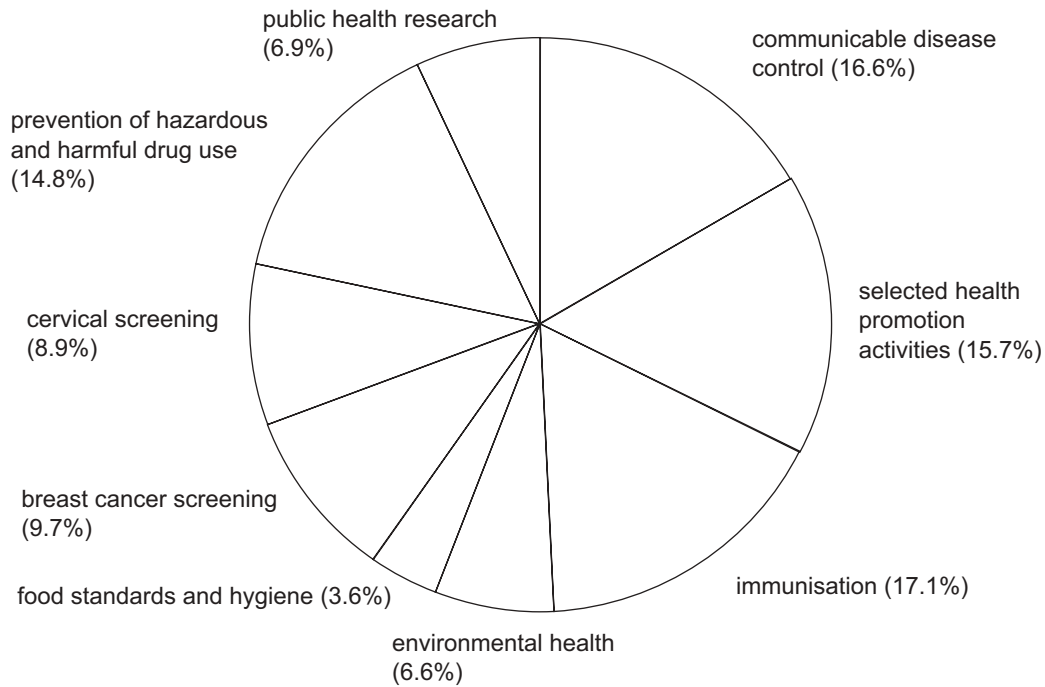
Reason 1 _____

Reason 2 _____

2 marks

- c. State and territory health departments spent \$690.7 million on public health activities in 2000–01. Figure 1 shows the expenditure on public health by activity in 2000–01.

Figure 1. The expenditure on public health by activity in 2000–01



Source: Australian Institute of Health and Welfare 2004. Australia’s health 2004. Canberra: AIHW. p. 239

i. Identify **two** areas of expenditure in Figure 1 that represent a biomedical approach to health.

- 1. _____
- 2. _____

2 marks

ii. Identify **two** areas of expenditure in Figure 1 that represent a preventative approach to health.

- 1. _____
- 2. _____

2 marks

iii. Predict whether the biomedical or preventative approach would be more effective in decreasing the average Medicare benefits paid and, ultimately, expenditure on health generally. Justify your answer.

5 marks

Total 19 marks

Question 4

Trudie and Tim are both 13 and attend the same school and live close to each other. Both are healthy and active.

- a. i. List **two similarities** in their **physical development** at this stage of the lifespan.

Similarity 1 _____

Similarity 2 _____

2 marks

- ii. List **two differences** in their **physical development** at this stage of the lifespan.

Difference 1 _____

Difference 2 _____

2 marks

- iii. Describe how his **physical development** may impact on Tim’s social and emotional development.

Impact on social development _____

Impact on emotional development _____

4 marks

- b. On the table below, list **three** hormones that influence the **physical development** of Tim and/or Trudie. Explain the roles these hormones play in **physical development**.

Hormone	Role the hormone plays in physical development

9 marks

- c. i. Choose **one** environmental factor and show how it may influence **Tim's development** at his stage of the lifespan.

Environmental factor _____

Influence of the environmental factor on development _____

2 marks

- ii. Choose **one** environmental factor and show how it may influence **Trudie's health** at her stage of the lifespan.

Environmental factor _____

Influence of the environmental factor on health _____

2 marks

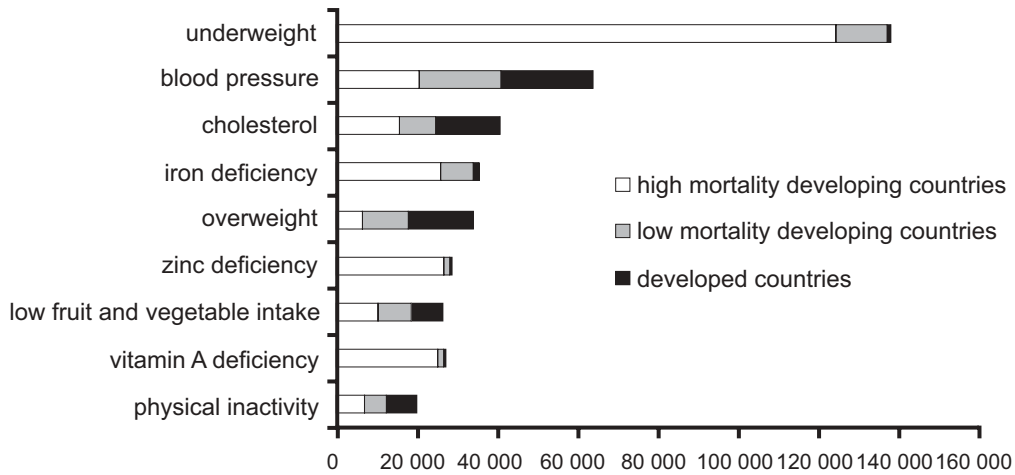
Total 21 marks

TURN OVER

Question 5

- a. Dietary imbalance is one of the factors contributing to the global burden of disease. Figure 2 shows the burden of disease (measured in DALYs) attributable to undernutrition and other diet-related risks and physical inactivity.

Figure 2. Burden of disease attributable DALYs in 2000 by undernutrition and diet-related risks and physical inactivity (000s)



Source: www.who.int/hpr/NPH/docs/whr_2002_risk_factors.pdf. Accessed February 2005

- i. Using the information in Figure 2 list **three** differences **and/or** similarities in the DALYs in high mortality developing countries, low mortality developing countries and developed countries.

1. _____

2. _____

3. _____

3 marks

- ii. Choose **one** area from Figure 2 and describe how it affects health **or** development in a high mortality developing country compared with a developed country.

Area _____

Health or development _____

Effect _____

3 marks

- iii. Fruit and vegetable intake contribute to DALYs.

Complete the following table outlining **three** major nutrients found in fruit and vegetables, their major food sources and their function for optimal health and development.

Major nutrient	Major food source	Function for optimal health and development
1.		
2.		
3.		

9 marks

- b. Read the following media report and then answer the questions that follow.

WHO AND FAO ANNOUNCE GLOBAL INITIATIVE TO PROMOTE CONSUMPTION OF FRUIT AND VEGETABLES.

The World Health Organization's (WHO) mandate is to improve the health around the world. In May 2002, WHO was requested to develop a Global Strategy on Diet, Physical Activity and Health.

In November 2003 WHO and the Food and Agricultural Organisation (FAO) announced a unified approach to promote greater global consumption of fruit and vegetables to optimise the health and development of all individuals.

The WHO and FAO joint fruit and vegetable promotion, '5-a-day' initiative, has been developed within the framework of the Global Strategy on Diet, Physical Activity and Health. '5-a-day' is an international program designed to encourage fruit and vegetable consumption, encouraging all women, children and men to consume at least five servings of fruit and vegetables (approximately 400 g) every day (excluding starchy tubers such as potatoes).

Adapted from: <http://www.who.int/dietphysicalactivity/fruit/en/index3.html>
Accessed February 2005

- i. Given the contribution of DALYs to the burden of disease of low fruit and vegetable intake, outline **two** reasons why resources should be put into a fruit and vegetable promotion.

1. _____

2. _____

4 marks

- ii. Discuss **one** factor in each of a high mortality developing country, a low mortality developing country and a developed country that would impact on implementing the WHO program in urban areas.

High mortality developing country _____

Low mortality developing country _____

Developed country _____

6 marks

Total 25 marks