

**STUDENT NUMBER**

<b>Figures</b>								<b>Letter</b>
<b>Words</b>								

# HEALTH AND HUMAN DEVELOPMENT

## Trial examination 2011

Reading time: 15 minutes

Writing time: 2 hours

### QUESTION AND ANSWER BOOK

#### Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	10	10	30
B	6	6	70
			Total 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.

#### **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.**



### **Please note**

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## SECTION A

### Question 1

Define the following:

physical dimensions of health

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social dimensions of health

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2 marks

### Question 2

a. Define 'glycaemic index'.

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1 mark

b. Give two examples of foods that have a low glycaemic index (GI).

1. \_\_\_\_\_

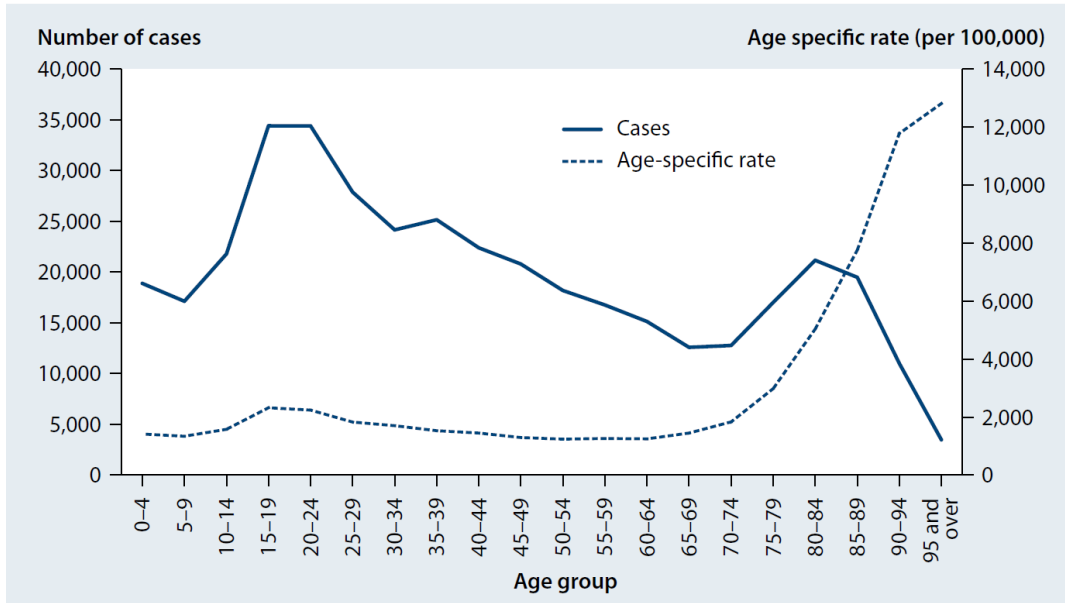
2. \_\_\_\_\_

2 marks

**Question 3**

The figure below shows hospitalisations due to injury and poisoning in 2007–2008; the number of cases and rates by age groups.

**Figure 1**



Source: AIHW 2010, *Australia's Health 2010*, p. 195

The incidence of injury varies with age, with cases being most numerous for teenagers and young adults. There is also a peak in rates at this age, but the highest rates are in the oldest age groups. The rate of hospitalised injury is greater for males than for females in every age group below the age of 65 years. At ages older than 65 years, the female rate exceeds the male rate.

Explain the role of two behavioural determinants that may account for the differences in the information above.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
2. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

4 marks

**Question 4**

The Ottawa Charter for Health promotion is a framework to help people increase control over and improve their health. For each of the examples in the table, identify a relevant key action area.

	<b>Action area of the Ottawa Charter for Health Promotion</b>
<b>Guidelines for the sale of healthy food and drink in school canteens</b>	
<b>General practitioners (GPs) working in secondary schools to provide information about reproductive health</b>	

2 marks

**Question 5**

Over two-thirds of total health expenditure in Australia is funded by government. The Australian government's major contributions include the two national subsidy schemes, Medicare and the Pharmaceutical Benefits Scheme (PBS).

a. Identify two values that underpin the Australian health system.

1. \_\_\_\_\_

2. \_\_\_\_\_

2 marks

b. Explain the function of the Pharmaceutical Benefits Scheme (PBS).

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2 marks

**Question 6**

The following table shows infant and under-5 mortality rates (U5MR) in 2009.

**Table 1**

Location	Infant mortality rate (under 1) per 1000 live births, 2009	U5MR per 1000 live births, 2009
Developed countries	5	6
Developing countries	47	66
Least developed countries	78	121
Australia	4	5
World	42	60

*Source: UNICEF 2011, State of the World's Children 2011*

- a. Based on the World Health Organization's (WHO) mortality strata, explain in which stratum the 'least developed countries' would be placed.

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2 marks

- b. Give two reasons why developing countries have higher infant and under-5 mortality rates (U5MR) compared with Australia.

1. 

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2. 

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2 marks

**Question 7**

a. Identify two areas of action of the UN in providing global health and sustainable human development.

1. \_\_\_\_\_

2. \_\_\_\_\_

2 marks

b. According to the UN, what is human development?

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2 marks

**Question 8**

Read the following facts about progress towards meeting one of the Millennium Development Goals (MDGs).

- Enrolment in primary education in developing regions reached 89 per cent in 2008, up from 83 per cent in 2000.
- The current pace of progress is insufficient to meet the target by 2015.
- About 69 million school-age children are not in school. Almost half of them (31 million) are in sub-Saharan Africa, and more than a quarter (18 million) are in Southern Asia.

a. Name the Millennium Development Goal that this information specifically relates to.

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1 mark

b. What is the purpose of the Millennium Development Goals (MDGs)?

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2 marks

**Question 9**

Identify two core functions of the World Health Organization (WHO).

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

2 marks

**Question 10**

Define the term ‘food security’ and give one example of a program by a government or non-government organisation related to this issue.

Definition

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Example of program \_\_\_\_\_

2 marks

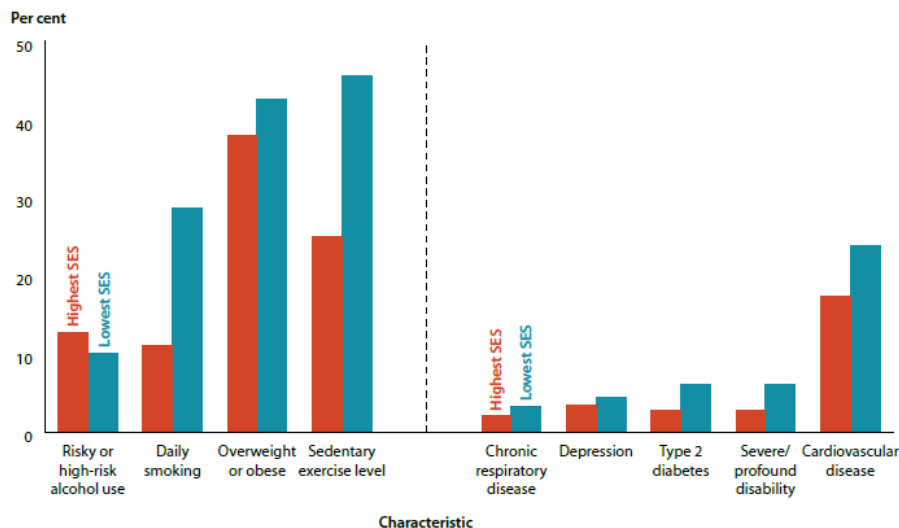


# SECTION B

## Question 1

Figure 2 shows prevalence by socioeconomic status for a number of risk factors and health conditions.

**Figure 2**



Source: AIHW, Australia's health 2010 – In brief, p. 34

a. Define 'prevalence'.

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1 mark

b. Based on the information in Figure 2 above, identify two similarities and two differences between the lowest and highest socioeconomic (SES) groups.

Similarities:

1. 

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2. 

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Differences:

1. 

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2. 

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4 marks

c. Drawing on the information in Figure 2, explain the role of two biological determinants of health.

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

2 marks

Based on self-reported data from the 2007–2008 ABS *National Health Survey*, it is estimated that among adult males (aged 18 years and over):

- Over half (54%) did not usually consume sufficient serves of fruit.
- More than 9 in 10 (92%) did not usually consume sufficient serves of vegetables.
- Fewer than 1 in 20 (5%) usually consumed sufficient fruit and vegetables.
- Fruit and vegetable intake was generally highest among males aged 65 years and over and lowest among those aged 15–34 years.
- Overall, adult males were less likely than adult females to eat sufficient fruit and vegetables.

The food we eat plays an important role in our health and wellbeing. A healthy diet may protect against certain cancers as well as a number of other chronic diseases. Many fruits and vegetables are good sources of carbohydrate (including fibre), low in sodium and do not contribute fats to the diet.

d. Complete the table by briefly outlining the function of each nutrient as a determinant of health.

Nutrient	Function of nutrient as a determinant of health
fibre	
sodium	
saturated fat	

3 marks

e.

- i. The Australian government plays an important role in promoting healthy eating. Identify two ways in which the Australian government promotes healthy eating. For each example, explain how the promotion could increase the intake of fruit and vegetables among Australian males.

1. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4 marks

- ii. Explain the role of the Heart Foundation in providing dietary advice to promote healthy eating.

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\_\_\_\_\_

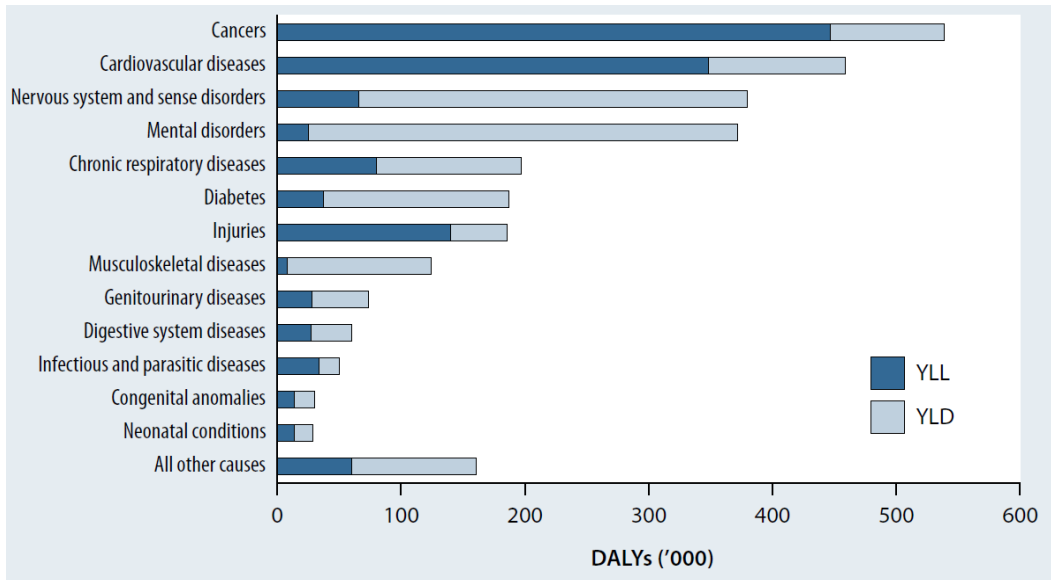
\_\_\_\_\_

2 marks

**Question 2**

Consider the following figure that shows the projected fatal and non-fatal burden of major disease groups in Australia (2010).

**Figure 3**



Source: AIHW, Australia's health 2010 – In brief, p. 18

According to the Australian Institute of Health and Welfare (AIHW):

- By the age of 85 years, 1 in 2 males and 1 in 3 females will have been diagnosed with cancer at some stage in their lives.
- Cancer is estimated to be the leading contributor to the burden of disease (accounting for 19 per cent of the total burden in 2010) and many cancers shorten people's lives.
- Cancer accounted for three of every ten deaths registered in 2007, which made it one of the most common causes of death in that year.
- In the decade to 2006, improvements in early detection and treatment have resulted in improved survival and a clear decline in mortality rates for some cancers, despite the overall cancer incidence rate increasing by 4 per cent.
- Mortality rates of cancer vary across different population groups.

a. Define 'health status'.

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1 mark

**b.** From the information above, identify and define three measures of health status.

- 1. \_\_\_\_\_  
\_\_\_\_\_
- 2. \_\_\_\_\_  
\_\_\_\_\_
- 3. \_\_\_\_\_  
\_\_\_\_\_

3 marks

**c.** Give three reasons why ‘cancer control’ is one of the National Health Priority Areas (NHPAs).

- 1. \_\_\_\_\_  
\_\_\_\_\_
- 2. \_\_\_\_\_  
\_\_\_\_\_
- 3. \_\_\_\_\_  
\_\_\_\_\_

3 marks

**d.** Identify and justify the role of one health promotion program in Australia that addresses cancer.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3 marks

**Question 3**

The following information is about the Localities Enhancing Arts Participation (LEAP) program, which encourages greater social engagement through arts and cultural activities.

- The LEAP program works in conjunction with local government to support new and existing arts and cultural activities. Local governments are being funded to work right across the community, for instance with sports clubs, children and disadvantaged communities, to give people the opportunity to express their creativity and tell their stories.
- It aims to strengthen and improve the organisations, networks, partnerships, resources, and events that are able to expand participation in – and sustain – arts and cultural activities.
- LEAP brings individuals together as a community, engaging individuals and communities who have not previously been involved in arts activities.
- The program focuses on strengthening arts activities through new and diverse local networks, organisations and partnerships.
- Research shows that participating in the arts and other social activities has big benefits for health and wellbeing of local communities.
- Increasing participation in this way brings social benefits that improve the health of individual participants.
- Participation in arts activity can reduce social isolation as well as contribute to lower crime rates, increased employment rates, and enhanced educational performance.
- This ties in with VicHealth’s social connection strategy, which aims to improve mental health and physical health and wellbeing.
- It’s about being connected socially and that’s why it is more beneficial for community members to actively participate in the arts rather than passively sitting and watching a performance – to be a participant rather than a spectator.

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

**a.** Identify the current VicHealth priorities that are evident in the program above.

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1 mark

**b.** Identify two principles of the social model of health. Describe how each of the identified principles is evident in this program.

**1.** \_\_\_\_\_

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2. \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

4 marks

c. Identify the potential health outcomes of this VicHealth-funded program.

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\_\_\_\_\_  
\_\_\_\_\_

4 marks

**Question 4**

Table 2 shows the 2011 Human Development Index (HDI), HDI ranking and description of level of human development for Australia and three other countries.

**Table 2**

	<b>Human Development Index (HDI)</b>	<b>HDI ranking</b>	<b>Description</b>
<b>Australia</b>	0.937	2	Very high human development
<b>Country X</b>	0.775	46	High human development
<b>Country Y</b>	0.519	121	Medium human development
<b>Country Z</b>	0.140	169	Low human development

a. Define the Human Development Index (HDI) and give two uses.

Definition

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Uses:

1. 

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2. 

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1 + 2 = 3 marks

b. Give two reasons why Australia’s HDI ranking is higher than that of Country Z.

1. 

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2. 

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2 marks



One of the Millennium Development Goals (MDGs) is to improve maternal health. The table below shows an assessment of progress for this MDG based on selected indicators.

**Table 3**

	Goals and targets	
	Reduce maternal mortality by three quarters	Access to reproductive health
<b>Africa</b>		
<b>Northern</b>	low mortality	moderate access
<b>Sub-Sahara</b>	very high mortality	low access
<b>Asia</b>		
<b>Eastern</b>	✓ low mortality	✓ high access
<b>South Eastern</b>	moderate mortality	moderate access
<b>Southern</b>	high mortality	moderate access
<b>Western</b>	low mortality	moderate access
<b>Oceania</b>	high mortality	low access
<b>Latin America and Caribbean</b>	low mortality	high access
<b>Caucasus and Central Asia</b>	✓ low mortality	moderate access

*Adapted from the United Nations MDG Progress Chart 2011*

The words in each box indicate the present degree of compliance with the target.



No progress or deterioration



Target already met or expected to be met by 2015

In all other cases, progress insufficient to reach the target if prevailing trends persist

- c. Using the information in the table, evaluate the progress made by countries in these five regions towards improving maternal health.

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3 marks

In October 2010, eleven midwives graduated from the Hamlin College of Midwives in Addis Ababa, Ethiopia, with their Bachelor of Applied Science in Midwifery. AusAID has been a major contributor to the work of this college. AusAID has also funded the Addis Ababa Fistula Hospital since 1984 with approximately \$7.4 million, which has included the building of five further Hamlin hospitals around the country.

The College trains highly skilled midwives so they can return to their region and provide maternal health care to women in their communities. The strategy to deploy women back into their regions means that women speak the local language, know the culture and are respected and trusted. This is critical because untrained birth attendants have been the norm and new ideas are sometimes treated with suspicion.

*Source: Focus, the magazine of Australia’s Overseas Aid Program, Feb–May 2011, pp. 8–9.*

**d.**

**i.** What is AusAID?

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1 mark

**ii.** Outline ways that this program could be sustainable, including the elements of appropriateness, affordability and equity.

Appropriateness

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Affordability

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Equity

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6 marks

### Question 5

According to the World Health Organization (July 2011), the Horn of Africa is facing what has been described as the worst drought in over half a century.

- Around 10 million people are in need of urgent humanitarian assistance.
- The health and nutritional status of many communities is fast deteriorating.
- The cycle of hunger, ill-health and poverty means that fewer resources are dedicated to health – just as health needs increase as a result of poor diet.
- Lack of water and precarious sanitation further increases the risk of communicable diseases.
- In Somalia, where the drought is compounded by the escalating conflict, tens of thousands of people have fled to neighboring countries where many of them are living in overcrowded camps without adequate health care, clean water or proper sanitation.
- Malnutrition rates are soaring and the low vaccination coverage of children is leading to concern over possible communicable disease outbreaks.

a. Explain what is meant by humanitarian (assistance) aid.

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1 mark

b. Name one non-government organisation based in Australia and give an example of a current program that addresses one of the health issues identified above.

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2 marks

- c. A range of factors influences health status. These include income, gender equality, peace, education, access to health care, political stability, global marketing and physical environments.

Choose two of these factors and explain how each may be influencing the health status of people in Somalia.

1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4 marks

Malaria is a leading global killer, particularly of children. It is also a consistent driver of poverty worldwide. Beyond the suffering malaria causes individuals, families and communities, the disease also deepens and reinforces poverty in some of the poorest areas of the world. Look at the following facts about malaria.

- Annual cases of malaria – globally 247 million.
  - Annual deaths from malaria – 881,000; 91 per cent of these deaths were in Africa.
  - Population at risk – 3.3 billion (half of the world’s population).
  - Nigeria is the top country for malaria numbers – 57,506,000
  - Uganda and Ethiopia are the top two countries for malaria deaths.
  - Malaria accounts for 85 per cent of deaths in children under 5 years old.
  - 35.4 million Disability Adjusted Life Years attributed to malaria.
  - Up to 30 per cent of malaria deaths in Africa occur in the wake of war, local violence or natural disasters.
  - Costs of interventions: long-lasting insecticidal net (LLIN) – \$10 (includes the net, distribution, teaching usage and monitoring usage); course of ACTs (Artemisinin-Based Combination Treatments) for adults – \$6.
- d. Identify two Millennium Development Goals (MDGs) that could be impacted by addressing the malaria problem.

1. \_\_\_\_\_

2. \_\_\_\_\_

2 marks

- e. Describe a malaria prevention program that could be introduced including reasons why the program should be implemented, the types of aid that could be used and how it might be implemented.

Description and reasons for implementation

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Types of aid

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Implementation

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6 marks

**Question 6**

According to the World Health Organization, safe water supplies, hygienic sanitation and good water management are fundamental to global health. Almost one tenth of the global disease burden could be prevented by:

- increasing access to safe drinking water
- improving sanitation and hygiene
- improving water management to reduce risks of water-borne infectious diseases, and accidental drowning during recreation.

Annually, safer water could prevent:

- 1.4 million child deaths from diarrhoea
- 500 000 deaths from malaria
- 860 000 child deaths from malnutrition
- 280 000 deaths from drowning.

**a.** Explain how safer water supplies, hygienic sanitation and good water management promote health.

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2 marks

**b.** Using this information, discuss the interrelationships between health, human development and sustainability to produce sustainable human development.

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3 marks

**END OF QUESTION AND ANSWER BOOK**