

HEALTH AND HUMAN DEVELOPMENT

Trial examination 2011

Suggested answers



Please note

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SECTION A

Question 1

Physical dimensions of health – relates to the efficient functioning of the body and its systems, and includes the physical capacity to perform tasks.

Social dimensions of health – being able to interact with others and participate in the community in both an independent and cooperative way.

Question 2

- a. The glycaemic index (or GI) is a ranking of carbohydrate foods based on their overall effect on blood glucose levels.
- b. Foods that have a low glycaemic index (GI) include apples, pears, bananas, sweet potato, baked beans, grain bread, pasta, noodles and yoghurt.

Question 3

There are a number of behavioural determinants that may explain the information provided. For example:

- Below 65 years of age, the greater rate of hospitalised injury for males than for females is largely due to transport injury (mainly road crashes) and interpersonal violence.
- The behavioural determinant that most likely explains the female rate exceeding the male rate at ages older than 65 years is unintentional falls, causing injury.

Question 4

	Action area of the Ottawa Charter for Health Promotion
guidelines for the sale of healthy food and drink in school canteens	build healthy public policy OR create supportive environments
general practitioners (GPs) working in secondary schools to provide information about reproductive health	reorient health services OR develop personal skills

Question 5

- a. Values that underpin the Australian health system – efficient, accessible, effective, appropriate, responsive, safe, continuous, capable and sustainable.
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- b. The Pharmaceutical Benefits Scheme (PBS) has been in existence since 1948 and is administered by the Australian government. The PBS provides a range of necessary prescription medications at affordable prices for Australian citizens. So, when a pharmacist fills a prescription for a medicine on the PBS, the pharmacist receives a subsidy payment from Medicare Australia. This means that PBS medications are purchased at an affordable cost for the consumer.
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Question 6

- c. Based on World Health Organization (WHO) categorisations, ‘least developed countries’ would be placed in mortality strata E. This means that such countries have high child mortality and very high adult mortality.
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- d. Factors why developing countries have higher infant- and under-5 mortality rates (U5MR) compared with Australia:
- Poverty.
 - The greater prevalence of infectious diseases, including lung infections, diarrhoeal diseases, HIV/AIDS, tuberculosis and malaria.
 - Complications of pregnancy and childbirth.
 - Income and food availability in the family (food security).
 - Malnutrition and undernutrition.
 - Availability and access to child health services.
 - The level of immunisation.
 - Access to safe water and sanitation.
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Question 7

- a. The areas of action of the UN in providing global health and sustainable human development are:
- world peace and security
 - human rights
 - humanitarian assistance
 - social and economic development.
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- b. According to the UN, human development refers to creating an environment in which people can develop to their full potential and lead productive, creative lives in accord with their needs and interests. It is about expanding people’s choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and an adequate standard of living, and participating in the life of community and decisions affecting their lives.

Question 8

- a. The Millennium Development Goal that relates specifically to education is ‘Achieve universal primary education’.
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- b. The purpose of the Millennium Development Goals (MDGs) is to commit the international community to a vision that promotes human development as a key to sustaining social and economic progress and creating global partnerships for development.
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Question 9

Core functions of the World Health Organization (WHO):

- leadership in global health issues.
 - health research to improve the health and wellbeing of individuals throughout the world.
 - assisting countries in addressing public health issues, which include monitoring and assessing health trends and patterns.
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Question 10

Food security refers to the state in which all persons obtain nutritionally adequate, culturally appropriate and safe food regularly through local non-emergency sources. Students are also to give one example of a program by a government or non-government organisation related to this issue e.g. the World Food Programme (WFP), which is the United Nations program addressing global hunger and food security.

SECTION B

Question 1

a. Prevalence refers to the number or proportion of cases of a particular disease or condition present in a population at a given time.

b. Similarities:

- For both socioeconomic groups, overweight and obesity and sedentary exercise level are greatest in terms of risk factors identified.
- For both socioeconomic groups, the prevalence of cardiovascular disease is greatest of all identified health conditions.

Differences:

- Compared to the lowest SES group, the prevalence (percentage) of risky or high-risk alcohol use is greater in the highest SES group.
- Compared to the highest SES group, the prevalence (percentage) is greater in the lowest SES group for – daily smoking, overweight and obesity, sedentary exercise level, chronic disease, depression, Type 2 diabetes, severe/profound disability, and cardiovascular disease. (Students could group these together or write separate statements).

c. Drawing on the information in Figure 2, students could choose from the following biological determinants of health:

- Blood pressure – as a risk factor for cardiovascular disease.
- Blood cholesterol – linked to coronary heart disease and stroke, which are cardiovascular diseases.
- Body weight – identified in Figure 2 (overweight and obesity); increases the risk of developing Type 2 diabetes, cardiovascular disease, depression.
- Impaired glucose regulation – risk factor for diabetes; more common in people who also have other risk factors for diabetes or cardiovascular disease.

d.

Nutrient	Function of nutrient as a determinant of health
fibres	Diets that regularly include fibre appear to protect against diseases such as cardiovascular disease and colorectal cancer. A low-fibre diet is associated with constipation, coronary heart disease, irritable bowel syndrome and some cancers. Fibre lowers cholesterol levels in the blood and glucose absorption into the cells.
sodium	Sodium helps regulate fluids in the body and plays an important role in nerve transmission and muscle contraction. Too much sodium in the diet has been linked to high blood pressure (hypertension), stroke, kidney problems or kidney stones and oedema.
saturated fat	Protects the organs, develops and maintains cell membranes, is a component of hormones, and contains fat-soluble vitamins. A concentrated source of energy. Saturated fat has been linked to diet-related diseases including heart disease.

e.

- i. Ways in which the Australian government promotes healthy eating and how these promotions could increase the intake of fruit and vegetables of Australian males:
- The Australian Guide to Healthy Eating helps people understand the relationship between food and nutrients, and the amounts and varieties of food that should be eaten for a balanced diet. This food model encourages Australians to eat plenty of plant foods, including fruit and vegetables.
 - Dietary Guidelines for Australians provide direction in relation to groups of foods and healthy lifestyle practices. They include advice on the importance of eating a wide variety of different foods each day, including plenty of fruits and vegetables.

Other Australian government promotions that students could include are: Food Standards Australia and New Zealand (FSANZ) and Nutrient Reference Values (NRVs).

- ii. The Heart Foundation provides dietary advice to promote healthy eating through resources, awards and programs. For example:
- The Heart Foundation produces a wide range of brochures, booklets and cookbooks to help individuals and families manage healthy eating patterns.
 - The Heart Foundation website is a major resource which provides an extensive range of information.
 - Each year the Heart Foundation recognises outstanding achievements from local governments that work to build healthy communities.
 - The Heart Foundation Tick program.
 - Industry programs e.g. to assist fast food and baking industries reduce the use of saturated and trans fats.
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Question 2

a. Health status refers to an individual's or a population's overall health, taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors.

b. Measures of health status from the information provided are:

- Burden of disease – refers to the impact of diseases and injuries; specifically it measures the gap between current health status and an ideal situation where everyone lives to an old age free of disease and disability.
 - Disability adjusted life year (DALY) – a measure of burden of disease where one DALY equals one year of healthy life lost due to premature death (YLL) and time lived with illness, disease or injury (YLD).
 - Incidence – the number of new cases of an illness or event occurring during a given period.
 - Mortality – the number or rate of deaths in a specified time.
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c. In general, factors that account for a disease or condition to be included as a priority include: the prevalence of the disease or condition in the community; impact on morbidity, mortality, quality of life lost; cost to the community; effective interventions and their impact. So, cancer poses a significant burden of disease and has potential for health gains and improved outcomes for the public.

Therefore, some reasons why 'cancer control' is one of the National Health Priority Areas:

- The prevalence and incidence of the disease in the community.
 - According to the figure, cancer is estimated to be the leading cause of Australia's burden of disease and injury in 2010.
 - The impact on mortality – many cancers shorten people's lives (cancer accounted for three of every ten deaths in 2007).
 - The impact on morbidity and quality of life lost.
 - Direct, indirect and intangible costs to individuals and communities.
 - The cost to the Australian economy is significant (health system, loss of productivity, wellbeing).
 - There are effective interventions for some cancers.
 - Improvements in early detection and treatment have resulted in improved survival and decline in mortality rates for some cancers.
 - There is potential for health gains and improved outcomes for the public.
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d. For this question, students are to identify and justify the role of one health promotion program in Australia that addresses cancer. There is a range of programs that students could choose from, such as Quit, SunSmart, BreastScreen, Movember (prostate cancer), the National Cervical Cancer Screening Program.

Question 3

- a. The VicHealth priority (as identified in the VicHealth Strategy and Business Plan 2009–2013) which is evident in the program stated is ‘increasing social and economic participation’.
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- b. Key principles of the social model of health that are evident in this program are:
- Addresses the broader determinants of health (e.g. culture, race, ethnicity, socioeconomic status, disability, location)
 - Involves intersectoral collaboration (e.g. the LEAP program works in conjunction with local governments; local networks, organisations and partnerships)
 - Acts to redress social inequities (e.g. works right across the community, including disadvantaged communities)
 - Empowers individuals and communities (e.g. gives people the opportunity to express their creativity through their creativity; brings individuals together as a community and engages individuals)
 - Acts to enable access to health care (indirectly through reduced social isolation and improved mental health).
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- c. Students are to identify the potential health outcomes of this VicHealth-funded program. For example:
- Strengthening relationships and contributing to healthy communities
 - Improved social connections and engagement through providing opportunities to participate in arts and cultural activities
 - Reduced social isolation
 - Improved mental and social health and wellbeing for participants
 - For individuals, over time there may be a decreased prevalence of mental health problems.

Question 4

- a. The Human Development Index (HDI) is a measurement of human development which combines indicators of life expectancy, educational levels and income. The HDI provides a single statistic which can be used as a reference for both social and economic development.

Two uses of the HDI:

- Ranks countries by level of human development.
 - Captures attention of policy-makers, the media and NGOs to focus on human outcomes rather than just measuring development in economic terms.
 - Promotes questioning of national policy choices.
 - Highlights differences e.g. between countries.
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- b. Reasons why Australia's HDI ranking is higher than that of Country Z :

- Australia is a developed country and Country Z is developing country (most likely in WHO strata E).
 - Australia would have a higher life expectancy than Country Z.
 - The educational levels in Australia are significantly higher than those of Country Z.
 - As one of the measures of HDI, standard of living is measured by using economic data in the form of GDP. Australia would have a higher standard of living than Country Z.
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- c. Using the information in the table, students could make the following points about the progress made by countries in the five regions towards improving maternal health:

- There has been no progress or deterioration in meeting the target 'Reduce maternal mortality by three quarters' in Sub-Saharan Africa (very high maternal mortality) and in Oceania (high maternal mortality).
 - The target 'Reduce maternal mortality by three quarters' has already been met or is expected to be met by 2015 in eastern Asia and Caucasus and Central Africa; and for 'Access to reproductive health' in South Eastern Asia.
 - Other than those above, in all other countries progress is insufficient to reach each of the targets if prevailing trends persist.
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d.

- i. AusAID (the Australian Agency for International Development) is the Australian government's federally-funded overseas aid program. Australia, through AusAID, works with other governments, the United Nations (UN), Australian companies and non-government organisations (NGOs) to design and set up projects.
- ii. Sustainability is the consideration of how we can meet the needs of today without reducing the capacity of future generations. The ways in which the program could be sustainable are:
 - The trained midwives could pass on their knowledge and skills to others in the local community, which would have long-term benefits.
 - Appropriate – focuses on those in need e.g. the women who are trained return to their local communities to provide health care to other women; important to have trained birth attendants to reduce the maternal and infant mortality rates in the community.
 - Affordable – AusAID contributes financially to both the college and the Hamlin hospitals; cost-effective to deploy these midwives back into their local communities.
 - Equitable – program of training midwives who return to their communities and, because they know the language, culture and have respect from the local women, their skills are more likely to be used; reaches those women most at risk.

Question 5

- a. The term humanitarian (assistance) aid can also be called ‘emergency aid’. This refers to the rapid assistance given to people or countries in immediate distress to relieve suffering, during and after man-made emergencies such as wars, and natural disasters such as flood, tsunami or earthquake.
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- b. Students are to identify one non-government organisation with a base in Australia and give an example of a current program that addresses one of the health issues identified. Some examples of NGOs are World Vision, CARE Australia, Médecins Sans Frontières, Oxfam, ActionAid Australia and Caritas.
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- c. Examples of how factors such as income, gender equality, peace, education, access to health care, political stability, global marketing and physical environments may be influencing the health status of people in Somalia:
- Income – Income can determine individual health status and the overall health of the country; health status of individuals will be poor; the cycle of hunger, ill-health and poverty means fewer resources are dedicated to health.
 - Access to health care – Lack of access to health care results in higher levels of morbidity and mortality, particularly of the more vulnerable, such as women and children.
 - Peace – The conflict in Somalia has led to tens of thousands of people fleeing to neighboring countries; more people living in poverty; increase in disease; reduction in available food and access to health care.
 - Physical environments – Drought affects the capacity to produce food, leads to a lack of safe water, poor sanitation, therefore more disease.
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- d. The Millennium Development Goals (MDGs) that could be impacted by addressing the malaria problem are:
- MDG 1 – Eradicate extreme poverty and hunger
 - MDG 2 – Achieve universal primary education
 - MDG 4 – Reduce child mortality
 - MDG 5 – Improve maternal health
 - MDG 6 – Combat HIV/AIDS, malaria and other diseases
 - MDG 8 – Develop a global partnership for development
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- e. Students are to describe a malaria prevention program that could be introduced including reasons why the program should be implemented, types of aid that could be used and how it might be implemented.

Question 6

- a. Safer water supplies, hygienic sanitation and good water management promote health. For example, poor sanitation and lack of access to safe water contribute to the global burden of disease. Water-related diseases, particularly diarrhoeal diseases due to contaminated food and water and malaria (due to mosquitoes) contribute to millions of deaths per year. Ongoing illnesses also mean that adults are unable to work and provide an income for their families or produce sufficient food; children can't attend school. Insufficient water also impacts on the ability to produce crops or support livestock.
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- b. Using the information provided, students are to discuss the interrelationships between health, human development and sustainability to produce sustainable human development. Sustainability is the consideration of how we can meet the needs of today without reducing the capacity of future generations and human development is about being able to enhance one's capacities, that is, what people can achieve. Students need to draw on the information provided about the importance of safe water supplies, hygienic sanitation and good water management to demonstrate their understanding of the interrelationships between the three concepts. For example, in order to have a healthy and prosperous community, it is essential to have a healthy environment for all its members.