



# Units 3 and 4 Health and Human Development

## Practice Exam Solutions

Stop!

Don't look at these solutions until you have attempted the exam.

Any questions?

Check the Engage website for updated solutions, then email [practiceexams@ee.org.au](mailto:practiceexams@ee.org.au).

## Short-answer questions

Note: Some of the solutions below are only possible examples. In some instances a range of responses is acceptable. Please consult with your teacher or tutor if unsure.

### Question 1a

Students are required to accurately define health: [1 mark]

A complete state of physical, mental and social wellbeing, and not merely the absence of disease or infirmity.

### Question 1b

Students are required to explain how stress can affect physical health, [1 mark per point, 1 mark for referencing case study, for a total of 2 marks] mental health [1 mark per point, 1 mark for referencing case study, for a total of 2 marks] and social health. [1 mark per point, 1 mark for referencing case study, for a total of 2 marks]

Various answers are acceptable, but must explicitly address all three dimensions of health. Students must also explicitly refer to the case study presented as part of Question 1 in their answer. Justifications include but are not limited to:

#### Physical health:

- Juliana has taken up smoking due to stress, which is a risk-factor for lung cancer
- Juliana has trouble sleeping due to stress, which may weaken the immune system
- (Stress may lead to higher blood pressure, which is a risk factor for illnesses including cardiovascular disease)
- (Stress may lead to 'emotional eating,' resulting in increased body weight)

#### Mental health:

- Juliana has become irritable
- Juliana's stress itself is an example of mental ill-health, and may result in anxiety or depression
- (Stress may lead to low self-esteem)

#### Social health:

- Juliana has become distant toward her friends and family
- Juliana's smoking may limit her social connections
- (Juliana's irritability may limit her social connections)
- (Anxiety may result in Juliana having less interest in her social life)

### Question 2a

Students are required to identify two trends [1 mark per trend, for a total of 2 marks] from Figure 1.1 presented as part of Question 2. Trends must be over a particular period of time. Students should not be awarded marks without specific reference to the data provided.

Trends include but are not limited to:

- Males consistently have a higher incidence of cardiovascular disease-related events than females in Australia from 1994 to 2009
- The incidence of cardiovascular disease-related events for males in Australia from 1994 to 2009 is decreasing
- The incidence of cardiovascular disease-related events for females in Australia from 1994 to 2009 is decreasing

**Question 2b**

Students are required to accurately define the National Health Priority Area initiative: [1 mark]

A collaborative initiative endorsed by the Commonwealth and all state and territory governments. The NHPA initiative seeks to focus the health sector's attention on diseases or conditions that have a major impact on the health of Australians. The NHPAs represent the disease groups with the largest burden of disease and potential costs (direct, indirect and intangible) to the Australian community.

**Question 2c**

Students are required to explain how the behavioural determinant of health can be a risk factor for cardiovascular health, [1 mark per point, for a total of 2 marks] and how the behavioural determinant of health can be a protective factor for cardiovascular health. [1 mark per point, for a total of 2 marks]

Reasons include but are not limited to:

Behavioural risk factors for cardiovascular health:

- Tobacco smoking
- Physical inactivity
- Poor diet (particularly in terms of the consumption saturated and trans fat)
- Infrequent medical checks

Behavioural protective factors for cardiovascular health:

- Regular physical activity
- Healthy diet
- Regular medical checks

**Question 3a**

Students are required to name one NHPA apart from cardiovascular health. [1 mark] Students are also required to explain why that NHPA has been selected. [1 mark]

Various answers are acceptable, as there are eight other NHPAs:

Mental health  
Arthritis and musculoskeletal conditions  
Diabetes mellitus  
Cancer control  
Obesity  
Asthma  
Injury prevention and control  
Dementia

A sample answer is:

*Obesity is a National Health Priority Area (NHPA). It has been selected as an NHPA as: it is a risk factor for many other conditions such as cardiovascular disease and diabetes mellitus; it contributes significant costs to both the individual and the community; it is highly preventable; and it contributes to a large burden of disease for Australians.*

**Question 3b**

Students are required to explain how nutrition can be a protective factor for the NHPA they selected in Question 3.a. [2 marks] Students are also required to explain how nutrition can be a risk factor for the NHPA they selected in Question 3.a. [2 marks]

Various answers are acceptable, and are dependent on the student's answer in Question 3.a.

A sample answer is:

Protective factor for cardiovascular disease:

- *Fibre promotes satiety. A diet high in fibre, therefore, will make the individual feel fuller for longer. This means that they are less likely to overeat, thus reducing the risk of obesity, which is a risk factor for cardiovascular disease.*
- *A diet high in fatty acids (omega-3 and omega-6) will lower low-density lipoproteins (LDLs), which are risk factors for cardiovascular disease.*

Risk factor for cardiovascular disease:

- *A diet high in sodium (and low in potassium) may result in hypertension (high blood pressure), which is a risk factor for cardiovascular disease.*
- *A diet high in saturated and trans fats is a risk factor for obesity, which in itself is a risk factor for cardiovascular disease.*

**Question 3c**

Students are required to name a health promotion program that relates to the NHPA they chose in Question 3.a. [1 mark] Students are also required to explain that program. [2 marks]

Various answers are acceptable, and are dependent on the student's answer in Question 3.a.

A sample answer is:

*(Arthritis and musculoskeletal conditions)*

Waves Warm Water Wellness Program: *The health promotion program is run by Arthritis Victoria. It aims to provide a full-body workout in warm water (~32° - 34°) without putting strain on the bones and joints. The program is designed to strengthen muscles around the joints, reducing the likelihood of damage or fracture. The program also provides information and support regarding various kinds of arthritis and musculoskeletal conditions.*

**Question 4a**

Students are required to show the difference between incidence [1 mark] and prevalence. [1 mark]

Incidence refers to the rate at which a particular disease or condition occurs over a period of time (i.e. the new cases), whereas prevalence refers to the number or proportion of cases of a particular disease or condition present in a population at a given time (i.e. the total number of cases).

**Question 4b**

Students are required to explain how Matilda's broken leg may result in direct costs [1 mark], indirect costs [1 mark] and intangible costs [1 mark] *to the individual* (i.e. Matilda).

Various answers are acceptable. Costs include but are not limited to:

Direct costs:

- The cost of pain medication for an injury
- The cost of ambulance to transport to the hospital
- The cost of private health insurance for private hospital treatment

Indirect costs:

- Loss of income (Matilda has to quit her job as a result of the injury)
- Potential loss of future earnings due to her injury
- Travel costs (to/from doctor etc.) for appointments related to her injury

Intangible costs:

- Pain and suffering from her injury
- Anxiety due to a lack of recovery from her injury
- Loss of quality of life due to her injury

**Question 4c**

Students are required to name two determinants of health. [2 marks] Students are also required to explain how those determinants of health are likely to contribute to the variation in health status between Matilda's area (a rural and remote area) and a metropolitan/urban area. [2 marks] Students are also required to outline how, in general, rural and remote areas are likely to differ in health status to metropolitan/urban areas. [1 mark]

Various answers are acceptable (based on two determinants out of biological, behavioural, social and physical environment).

A sample answer is:

*In general, individuals in rural/remote areas are likely to have inferior health status in terms of burden of disease, levels of morbidity and levels of mortality. This can be attributed to numerous factors, including:*

*Behavioural determinant*

- *Individuals living in rural/remote areas, such as Matilda, are more likely to consume dangerous amounts of alcohol. This may lead to an increase in risk-taking behaviour (which is a risk factor for potentially fatal injuries), and may also lead to excess calorie consumption (leading to overweight/obesity, which is a risk factor for a multitude of diseases and conditions).*

*Physical environment determinant*

- *Individuals living in rural/remote areas, such as Matilda, are less likely to have adequate access to basic healthcare as they are likely to live greater distances from such facilities. This is likely to reduce the prevalence of diagnosis, screening, treatment and cure of illness and disease, therefore increasing the duration and prevalence of illness, disease and injury.*

**Question 5a**

Students are required to accurately define health promotion: [1 mark]

Activities aimed at improving health and preventing disease by enabling people to increase control over and improve their health.

**Question 5b**

Students are required to outline *two* disadvantages of the biomedical model of health. [1 mark per accurate outline, for a total of 2 marks]

Various answers are acceptable. Disadvantages of the biomedical model of health include but are not limited to:

- No emphasis on prevention
- Places a large financial burden on the Australian healthcare system
- Promotes being reactive rather than proactive
- Uses funds which could otherwise be spent on education and prevention

**Question 5c**

Students are required to accurately define the social model of health: [1]

A conceptual framework within which improvements in health and wellbeing are achieved by directing effort towards addressing the social, economic and environmental determinants of health. The social model is based on the assumption that for improvements in health to occur, these determinants need to be addressed.

**Question 5d**

Students are required to explain how the program presented in the case study of Question 5 reflects the social model of health. Students must name two guiding principles of the social model of health. [1 mark per guiding principle, for a total of 2 marks] Students must also *specifically relate* those guiding principles to the case study provided, explaining how they are reflected. [1 mark per explanation with reference to the case study, for a total of 2 marks]

Various answers are acceptable. Guiding principles of the social model of health are:

- Addresses the broader determinants of health
- Acts to reduce social inequities
- Empowers individuals and communities
- Acts to enable access to healthcare
- Involves intersectoral collaboration

A sample answer is:

*Acts to reduce social inequities: Mount Eddington Primary School's 'Fun of Sun Protection Program' targets individuals in a primary school of rural Victoria. In general, individuals in rural/remote areas of Australia experience inferior health outcomes compared to those living in urban/metropolitan areas. Thus, focusing on those in a rural/remote area should help to reduce the social inequality of relative location.*

*Involves intersectoral collaboration: Individuals and groups from many sectors have collaborated in order to make the 'Fun of Sun Protection Program' both feasible and successful. The program was an initiative of a Government primary school (Mount Eddington), is partially funded by VicHealth, and collaborates with a local business from the private sector (a pharmacy) in order to run a workshop regarding sun protection.*

**Question 6a**

Students are required to accurately outline the Ottawa Charter for Health Promotion: [1]

An approach to health developed by the World Health Organisation (WHO) that attempts to reduce inequalities in health. The Ottawa Charter for Health Promotion was developed from the social model of health, and identifies three basic strategies for health promotion: enabling, mediating and advocacy.

**Question 6b**

Students are required to explain how the program presented in the case study of Question 2 reflects the Ottawa Charter for Health Promotion. Students must name two priority actions of the Ottawa Charter [1 mark per priority action, for a total of 2 marks]. Students must also *specifically relate* those priority actions to the case study provided, explaining how they are reflected. [1 mark per explanation with reference to the case study, for a total of 2 marks]

Various answers are acceptable. Priority actions of the Ottawa Charter for Health Promotion are:

- Build healthy public policy
- Create supportive environments
- Strengthen community actions
- Develop personal skills
- Reorient health services

A sample answer is:

*Strengthen community actions: Gehani's new support centre for struggling teenagers encourages the entire community ("individuals, families, businesses and the local government of Gehani") to work together in order to successfully address the issue of mental health. As the program offers support and education to teenagers, relationships between those providing and utilising the services may be strengthened.*

*Create supportive environments: The support centre in Gehani builds physical links between individuals and the community by creating a new piece of infrastructure which can be used by society as a whole (the physical support centre). A supportive environment for those suffering from mental illness has also been created in a social sense, as the entire community has pledged to address the issue of mental health on the back of the program.*

**Question 6c**

Students are required to outline two responsibilities of local governments in Australia. [1 mark per outline, for a total of 2 marks] Students should not refer to the provision of community services in their answer. Various answers are acceptable. Responsibilities of local governments in Australia include but are not limited to:

- Upholding public safety
- Overseeing the cleanliness of food storage in local restaurants and shops
- Operation of home-care services
- Immunisations
- Maintaining a sanitary environment in public areas
- Ensuring a safe water supply
- Overseeing planning of land use

**Question 6d**

Students are required to name three values that underpin the Australian healthcare system. [1 mark per value, for a total of 3 marks] Students are also required to specifically explain how those chosen values that underpin the Australian healthcare system relate to the case study provided in Question 6.

Various answers are acceptable. As per the new study design, the values that underpin the Australian healthcare system are:

- Continuous
- Accessible
- Responsive
- Effective
- Safe
- Efficient
- Sustainable

A sample answer is:

*Sustainable: The support centre in Gehani provides not only infrastructure, but focuses on support and education (which in itself is a sustainable method of improving health outcomes). Further to the short-term benefits of providing somewhere to stay, the education provided by the support centre is likely to improve health outcomes of future generations.*

*Safe: The support centre in Gehani is likely to result in a reduction of potential harm, as it provides a place for teenagers to stay (which will likely get them off the street). This reduces the risk of numerous diseases and violence-related injuries.*

*Continuous: The support centre in Gehani is continuous as it provides an uninterrupted service (care and support is offered 24 hours per day).*

**Question 6e**

Students are required to explain how the case study presented in Question 2 reflects the mission of VicHealth. [1 mark per linking statement, for a total of 2 marks]

As per the new study design, the mission of VicHealth is:

VicHealth commits to:

- In partnership with others, promote good health
- Recognise that the social and economic conditions for all people influence their health
- Promote fairness and opportunity for better health
- Support initiatives that assist individuals, communities, workplaces and broader society to improve wellbeing
- Seek to prevent chronic conditions for all Victorians

Various answers are acceptable. A sample answer is:

*The program promotes fairness and opportunity for better health by targeting a) a rural town (Gehani), b) those suffering from mental illness, and c) Indigenous teenagers.*

*The program also seeks to prevent chronic conditions by focusing on reducing the prevalence of mental illness, which can be both chronic and acute.*



**Question 7a**

Students are required to name the level of government responsible for Medicare in Australia: [1]

The Federal/Commonwealth Government.

**Question 7b**

Students are required to outline the objectives of Medicare. [1 mark per objective, for a total of 2 marks]

Objectives of Medicare include but are not limited to:

- Make healthcare more affordable for all Australians
- Give all Australians access to healthcare services with priority according to clinical need
- Provide a high quality level of care

**Question 7c**

Students are required to outline three services that Medicare does not cover. [1 mark per service, for a total of 3 marks]

Services not covered by Medicare include but are not limited to:

- Ambulance services
- Private hospital costs
- Physiotherapy
- Speech therapy
- Medicines not covered by the Pharmaceutical Benefit Scheme
- Medical costs incurred overseas
- Unnecessary medical services
- Alternative medicines
- Hearing aids
- Glasses and contact lenses

**Question 7d**

Students are required to explain how Medicare is funded. Students should explain that it is funded by the Australian Federal Government via some general taxation revenue. [1 mark] Students should also explain that the 2% Medicare levy on taxable income funds Medicare. [1 mark] Medicare surcharge levy on high income earners may also be mentioned.

**Question 7e**

Students are required to name one incentive scheme used in private health insurance. [1 mark] Students are also required to explain the incentive scheme that they have named. [1 mark]

The three incentive schemes used in private health insurance are:

- Private health insurance premium rebate (approx 30% for those with private health insurance, is income tested)
- Lifetime health cover/lifetime loading (lower premiums for those who take out private health insurance before the July after their 30<sup>th</sup> birthday; those over 30 are charged an additional 2%)
- Medicare levy surcharge (usually 2% levy, but increases for high income earners who do not have private health insurance)

**Question 7f**

Students are required to explain two benefits of private health insurance. [1 mark per explanation, for a total of 2 marks]

Benefits of private health insurance include but are not limited to:

- Additional healthcare to what is provided by Medicare
- Can affect specific areas (e.g. just dentistry, or just podiatry etc.)
- Shorter waiting times
- Access to public *or* private hospitals
- Choice of doctor
- Places less burden on the Australian public healthcare system

**Question 8a**

Students are required to name one way in which the Australian Government promotes healthy eating. [1] Students are then required to discuss their chosen method. [1 mark per distinguishing feature, for a total of 3 marks]

Ways in which the Australian Government promotes healthy eating include but are not limited to:

- Nutrition surveys
- The Australian Guide to Healthy Eating
- Dietary Guidelines for Australian Adults
- Funding of health promotion campaigns

Various answers are acceptable. A sample answer is:

*The Australian Guide to Healthy Eating (AGHE) is promoted by the Federal Government of Australia. It aims to provide an understanding of the relationship between foods and their associated nutrients, making it easier for Australians to have a balanced and healthy diet. The AGHE uses a visual representation of the five food groups, organised to look like a plate of food, to show the proportion in which each food group should be consumed. Importantly, the AGHE also suggests that people consume water. The AGHE also provides images of foods that should be consumed only sometimes and in small amounts.*

**Question 8b**

Students are required to explain the role of Nutrition Australia in promoting healthy eating. [1 mark per correct point, for a total of 2 marks]

Nutrition Australia are involved in the activities included below:

- Provide information through the Healthy Living Pyramid
- Provision of the latest information on nutrition research and current food and health trends
- Co-ordination of events in the annual National Nutrition Week campaign
- Facilitation of high-profile seminars for the general public and health professionals
- Extensive media coverage and public speaking demonstrations
- Media commentary
- Food industry consultancies
- Nutrition training and presentations
- Menu assessments

**Question 9a**

Students are required to accurately define the Human Development Index: [1 mark]

A tool developed by the United Nations to measure and rank countries' levels of social and economic development. It provides a single statistic based on three dimensions – health, education and living standards, and four indicators – life expectancy at birth, mean years of schooling, expected years of schooling and gross national income per capita.

**Question 9b**

Students are required to explain why a higher Human Development Index does not necessarily mean a greater life expectancy.

Students should explain that life expectancy is only one of four indicators that combine to form the Human Development Index. [1 mark] Students should then explain that high levels of education and income, therefore, could result in a relatively high Human Development Index, regardless of life expectancy. [1 mark]

**Question 9c**

Students are required to explain how gender equality may explain the difference in health status between individuals in Australia and Sierra Leone. [1 mark for discussing gender equality as a force of health status, 1 mark for including reference to Australia and Sierra Leone, for a total of 2 marks]

Students are then required to explain how education may explain the difference in health status between individuals in Australia and Sierra Leone. [1 mark for discussing gender equality as a force of health status, 1 mark for including reference to Australia and Sierra Leone, for a total of 2 marks]

Various answers are acceptable. A sample answer is:

*Gender equality: In general, developed countries (such as Australia) have greater gender equality than developing countries (such as Sierra Leone), which may favour males over females. As a result of a lack of gender equality in Sierra Leone, females may be subject to inferior nutrition, limited education (resulting in a lack of income), and inferior living conditions. Overall health status of Sierra Leone, therefore, would be reduced. Comparatively, in a developed country like Australia where genders are relatively equal, individuals are more likely to have favourable health outcomes.*

*Education: In general, developed countries (such as Australia) have better educational facilities and levels than developing countries (such as Sierra Leone). As such, individuals in Australia are more likely to have a vast knowledge-base, which makes employment more likely. As a result, Australians are more likely to achieve a sustainable income, meaning that they are more likely to be able to afford nutritious foods and good housing than those in Sierra Leone. This alongside with the improved health literacy education provides will result in Australian having a higher health status.*

**Question 9d**

Students are required to explain the likely impact of global marketing. [1 mark] Students are then required show how this is likely to reduce the health status of Sierra Leone. [1 mark]

A sample answer is:

*Global marketing is likely to result in the globalisation of goods and services generally associated with developed nations. That is, there is likely to be an increase in production, advertisement and sale of tobacco, alcohol and processed foods in developing countries. As a result, the physical health of individuals in Sierra Leone may decrease. For example, tobacco smoking can lead to lung cancer, and the consumption of processed foods can lead to overweight/obesity and cardiovascular disease. Those in Sierra Leone, then, may be suspect to lifestyle factors which have not been an issue in the past. This may result in a greater burden of disease, higher levels of morbidity, and lower life expectancies.*

**Question 9e**

Students are required to name one main area of action of the United Nations. [1 mark] Students are then required to explain how that main area of action could lead to greater health outcomes in Sierra Leone. [1 mark per relevant point, for a total of 2 marks]

The four main areas of action of the United Nations are:

- World peace and security
- Human rights
- Humanitarian assistance
- Social and economic development

Various answers are acceptable. A sample answer is:

*Social and economic development: The United Nations may focus on development in Sierra Leone. To focus on economic development, they could start a microfinance system, whereby locals are given the funds to start a new, sustainable method of work. This is likely to improve health status in Sierra Leone, as the initial funds provided are likely to lead to a sustainable income. Further, the United Nations could focus on social development in Sierra Leone through achieving Millennium Development Goals (MDGs), such as MDG #2 Achieve universal primary education and MDG #3 Promote gender equality and empower women. If the MDGs are achieved, more people in Sierra Leone are likely to have the opportunities to take control over and improve their own health.*

**Question 10a**

Students are required to correctly identify the Millennium Development Goal relating to malaria: [1 mark] MDG #6 Combat HIV/AIDS, malaria and other diseases. Students are then required to provide one reason why MDG #6 is important. [1 mark]

Reasons that MDG #6 is important include but are not limited to:

- A reduction in HIV/AIDS, malaria and other diseases will contribute to an improvement in the physical health of individuals
- A reduction in HIV/AIDS, malaria and other diseases will allow individuals to be at work and contribute to their community
- If people are well due to a reduction in HIV/AIDS, malaria and other diseases then they can attend school and reach their full potential

**Question 10b**

Students are required to devise a sustainable program that addresses the risk of malaria in Phueng's region of Northern Thailand. [1 mark per appropriate aspect of the program, for a total of 3 marks] Students should explain how the program is sustainable in terms of being appropriate [1 mark], affordable [1 mark] and equitable. [1 mark]

Various answers are acceptable. A sample answer is:

*A program could be devised relating to bed nets in Northern Thailand, which protect individuals from mosquito bites at night (thus reducing the risk of malaria). The program could involve free educational seminars within a local village, explaining the risks of malaria and how to prevent it. At the end of the seminar, each attendee could be given a free bed net for their family. This program is appropriate, as it empowers individuals of Phueng's community, is accessible (as it is in the local village) and respects local customs. It is affordable in the long-term as the bed nets are free, and there is a focus on education. This focus on education also makes the program sustainable. The program is also equitable as it focuses those most in need (Phueng's region is particularly at risk of malaria, and has limited options to reduce that risk without assistance).*

**Question 10c**

Students are required to accurately define sustainable human development: [1 mark]

The process of people striving to achieve their full potential, lead more productive lives, expand their choices and meet their needs without compromising the opportunities of future generations to meet their own needs.

**Question 10d**

Students are required to explain how the Australian Government could encourage sustainable human development in Phueng's region of Northern Thailand.

Students should identify one type of aid. [1 mark] Students should then explain how this method of providing aid would specifically promote sustainable human development in Phueng's region. [1 mark per relevant point, for a total of 2 marks]

Ways in which aid can be provided include:

- Emergency aid
- Bilateral aid
- Multilateral aid
- Non-government organisation aid

Various answers are acceptable. A sample answer is:

*The Australian Government could provide aid to Phueng's region of Northern Thailand via bilateral aid; the Australian Government would be providing funds directly to the Government of Thailand. These funds could be used to implement new programs of education in Phueng's region, making them more likely to gain an education, and therefore more likely to develop to their full potential. A program focused on education is also sustainable, as each generation can pass down knowledge and skills to the generation behind them, resulting in a very efficient way of enhancing human development. As a result, sustainable human development would be promoted.*

**Question 10e**

Students are required to identify two reasons why Australia provides aid. [1 mark per reason, for a total of 2 marks]

Reasons why Australia provides aid include but are not limited to:

- For humanitarian reasons (to provide assistance to those in need)
- To improve regional security
- To benefit from trade with other countries
- To help manage international issues (migration, spread of disease, population control etc.)
- To promote peace and security in Australia's region