



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.

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

The social model of health is 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 model is based on the understanding that in order for health gains to occur, social, economic and environmental determinants must be addressed.

The answer above is the definition provided in the VCAA glossary. You do not need to have the answer word for word to get the 2 marks allocated for this question.

Question 1b

For this question, students can choose any two physical environment or behavioural determinants of health examples, for example, work environment, physical activity, sexual practices, housing etc. They must then argue HOW that determinant can have a positive and negative effect on health.

- Behavioural determinant example – physical activity

People who regularly exercise are likely to have better physical health than those that do not. Physical activity, if coupled with a healthy lifestyle, can prevent the onset of many obesity-related diseases such as type 2 diabetes and cardiovascular diseases.

Physical activity can lead to injury which can be negative for physical health.

- Physical environment determinant example – poor housing

People who live in poor housing conditions are likely to experience worse health than those who do not. This is because poor housing conditions, such as overcrowding, lack of sanitation and poor sewage can lead to the spread of disease and illness, negatively impacting physical health.

People who live in poor housing often are required to build strong relationships with their family members in order to overcome the challenges associated with living in poor housing. This can be positive for their mental health.

Question 2a

Biomedical model focuses on the person whereas the social model focuses on the community.

Biomedical model looks only at the physiological symptoms, whereas the social model looks at the broader determinants, e.g. economic and social.

The biomedical model treats and attempts to cure the symptoms present, whereas the social model aims to prevent illness in the first place.

Question 2b

1. Advances in technology are generally slow to emerge and costly to access, thus they may be unavailable to some people, which may lead to poor health.
2. Social, environmental and economic factors are also important in determining health and can thus influence poor health.

Question 3a

One of:

- Economic development, including encouraging trade and private sector investment
- Health, including supporting the fight against HIV/AIDS, malaria and tuberculosis
- Education
- Empowering women and girls
- Effective governance
- Humanitarian aid.

Question 3b

An example for humanitarian aid:

The Australian government responds quickly to disasters around the globe by providing humanitarian assistance. Australia may supply food, shelter, medicines, clean water or trained personnel to support the response to such disasters.

Question 4a i

Physical health refers to the efficient functioning of the body and its systems, and includes the physical capacity to perform tasks and physical fitness.

Question 4a ii

A lives in remote NSW whereas B lives in a heavily urbanised inner city location therefore A and B may experience differences in food security. A is likely to suffer from food insecurity as rural areas have less access to fresh fruit and vegetable and rely more on processed foods. B on the other hand would likely have more access to fresh food. Therefore, B is likely to have a better diet and as a result better functioning of his body and physical health.

[Students receive one mark for each definition and two marks for each explanation]

Question 4b i

Being able to interact with others and participate in the community in both an independent and cooperative way.

Question 4b ii

A has to work and take care of her family which means she has less time for herself. This may result in less social interaction due to her overwhelming responsibilities. B on the other hand attends university where he is likely to have friends who he would meet on a regular basis. He would probably also have fewer responsibilities than A and as such would have more time to go out with friends and socialise.

Question 4c i

'State of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.' (WHO, 2009)

Question 4c ii

The death of A's parents would probably have caused extreme stress and trauma, especially since she was left with the responsibility of her siblings. She is probably also unsatisfied and maybe even depressed considering her situation and the fact that may have been forced to take up full time employment. B lives at home with his family and is getting a higher education. He is likely to be happier than A and more satisfied with his life as he is likely to feel a sense of accomplishment after achieving his dream/goal.

Question 5

There is no right answer for this question. The marks are awarded for the quality of explanation. Students may choose either option and will be given the marks depending on how well they argue their choice.

School-based injury program – this approach is education-based. By educating children and raising awareness about potential dangers and how to avoid them, injuries can be prevented. In addition, by educating not only children, but the whole community, the message will be passed down through generations and safety will become of paramount importance. Awareness is essential to prevention.

Safer venues – safer environments reduce the likelihood and incidence of injury. An environment that supports and promotes good health is essential in achieving positive health outcomes. By removing hazards from the environment, the risk of injury is heavily reduced. Further, through advocating, more people and sections of the community may be able to get involved, and when people work together and collaborate better results are achieved.

Question 6a

Cancer control and cardiovascular health.

Question 6b

Any two of – arthritis and musculoskeletal conditions, asthma, injury prevention and control, obesity, mental health, dementia and diabetes mellitus.

Question 7a

Two marks are allocated for each reason. This question is broken up into 2 parts – rate of heart attacks and survival from heart attacks. It would be best if students provide one reason for each of these parts.

Falling rate of heart attacks – a potential reason for why rate of heart attacks continues to fall is increased awareness. As people become more aware of the risks of heart attacks they are likely to adopt behaviours that reduce this risk. It is this awareness that leads people to make healthier choices, for example low fat, low salt foods, which in turn is reducing the number of heart attacks due to lower risk of obesity which is a biological risk factor for poor cardiovascular health.

Improved survival – a potential reason for why survival from heart attacks continues to improve is medicine and technology. Advances in drugs and technology are making it easier for people to survive heart attacks. Doctors have more tools at their aid to help patients survive, which is why the rate of survival from many conditions, heart attacks being one, is continually increasing.

Question 7b

1 mark for identifying a reason and 1 mark for giving a brief explanation.

Poor lifestyle choices may be one the reasons why type 2 diabetes is expected to become a leading cause of burden of disease. Increasingly, people are living busier lives, with less time for exercise and even meal preparation. These people do minimal exercise, are often overworked and have a poor diet leading to overweight and obesity. This combination heavily increases the risk of developing type 2 diabetes.

Question 8a

2 marks for each definition. Students may have any 3 of:

- Burden of Disease (BOD) – A measure of 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. Burden of disease is measured in a unit called the DALY.
- Health Adjusted Life Expectancy (HALE) – A measure of burden of disease based on life expectancy at birth, but including an adjustment for time spent in poor health. It is the number of years in full health that a person can expect to live, based on current rates of ill health and mortality.
- Disability Adjusted Life Years (DALY) – A measure of burden of disease, one DALY equals one year of healthy life lost due to premature death and time lived with illness, disease or injury.
- Life Expectancy (LE) – ‘An indication of how long a person can expect live, it is the number of years of life remaining to a person at a particular age if death rates do not change.’ (AIHW, 2008)
- Under 5 Mortality Rate (U5MR) – ‘The number of deaths of children under five years of age per 1000 live births.’ (WHO, 2008)
- Mortality – the rate or level of deaths in a population.
- Morbidity – ‘Refers to ill health in an individual and the levels of ill health in a population or group.’ (AIHW, 2008)
- Incidence – the number or rate of new cases of a disease during a specified period of time.
- Prevalence – ‘The number or proportion of cases of a particular disease or condition present in a population at a given time.’ (AIHW, 2008)

Question 8b

For the chosen indicator students must give a brief explanation of why there may be a difference. For example, it is not enough to say developing countries have a lower life expectancy than developed countries. Students must say why this may be so.

For example:

Burden of disease = developed countries tend to have a relatively small burden of disease with major contributors being non-communicable diseases such as cancers, diabetes and cardiovascular disease. Developing countries tend to have a higher burden of disease with major contributor being communicable diseases, much of which is due to malnutrition and infectious diseases. Reproductive ill health and landmines also contribute to the higher burden of disease in developing countries.

Some developing countries have a small percentage of very wealthy people, so they face a ‘double burden’. This means that the country’s burden of disease is made up on conditions related to poverty (such as malnutrition) and others related to affluence (such as CVD and obesity).

Question 9a

2 marks are allocated to each strategy.

Local governments can increase awareness of local facilities such as parks and walking tracks through the use of media. This may be through the use of posters in schools and workplaces, or ads and feature articles in the local newspaper. If people are aware that their community has facilities that are accessible to all, they are more likely to use them.

State or federal governments have larger budgets than local governments. They are therefore able to use expensive media outlets such as television ads. These can be used, as they have in the past, to improve people's diets and reinforce the "2 fruit and 5 veg message".

Question 9b

One mark for identifying a federal health promotion strategy – current or otherwise, eg Swap It, Don't Stop It, or Shape Up Australia. No marks for state programs such as Go For Your Life.

One mark for describing the strategy.

Two marks for explaining how it promotes health.

- Health promotion strategy = Swap It, Don't Stop It
- Description = Swap It, Don't Stop It is an initiative of the federal government that aims to improve lifestyle choices of all Australians. Its basic message is that we don't have to give up what we love in order to be healthy.
- How it promotes health = the program is based on the notion that small lifestyle changes can have a large impact on our health. For example, by swapping 3 scoops of ice cream for one, we still get to enjoy what we love, but our health doesn't suffer as much as a result of it. The program promotes health through the message of moderation. It takes a realistic approach that is accessible to all Australians. It raises awareness through media advertising and provides 'Swappers' with all the resources they need to help them get started on their website.

Question 10a

1. The indigenous Australian population is concentrated at the lower ages compared to the general Australian population.

Data should be included to show that the figure had been used.

2. Australia has an ageing population, with nearly 40% of Australian over the age of 40, while the indigenous Australian population does not.

Question 10b

1. As people age they tend to have poorer health. As Australia has an overall ageing population this puts a lot of pressure on the health care system as increasing numbers of older Australians need care. This also means that more funding is required to provide for an aging population.

Data should be included to show that the figure had been used.

2. Indigenous Australians have a lower life expectancy, as can be inferred from the figure, as a very small portion of Indigenous Australians live past 50. This means that immediate improvements are required to the health care system to better provide for Indigenous Australians and bring their health status to par with that of all Australians, which places more pressure on the Australian health system.

Question 10c

The data in the figure shows that attention is needed in the 30 and above age group of Indigenous Australians. This can help with the development of interventions that are targeted at older Indigenous Australians as it is their health which significantly worse than their non-Indigenous counterparts.

Question 11

Students can choose any of the action areas as long as they back up their choice with a sound explanation.

Action area one: Reorient health services.

- Example: By reorienting health services to become more preventative, rather than treatment focused, the incidence of HIV is likely to reduce. As HIV has no cure, prevention is the best method of reducing the incidence of the disease. If health care professionals take on an educator role and help their patients become more aware of the risks of HIV and make more informed choices, the incidence is likely to reduce. These health care professionals could also work in schools or the local community in order to achieve a more preventative model

Action area two: Develop personal skills.

- Example: In order to stop the spread of and deaths caused by HIV, people need to be made more aware of the risks and means of protection. By developing people's personal skills they can take better care of themselves, be more careful when selecting sexual partners (e.g. encouraging them to have STD tests) and reinforce the benefits of protected sex.

Question 12

3 marks for each reason. A detailed explanation is required for this question.

Gender Inequality:

- The status and treatment of women in many developing countries lags behind that of men in almost all areas. As a result, women have less opportunities in life which means they are often denied access to resources that will keep their families and themselves in good health. Gender inequality has many negative effects on the health of women in developing countries, leading to a lower life expectancy than women in developed countries, where gender inequality tends not to be as pronounced. This is because in developing countries, women have the responsibility of caring for the home and children, so they are often overworked and malnourished. They have to travel long distances to collect water which can cause chronic exhaustion. In addition it is customary for men to eat first so in times of food shortages women go without food altogether.

Income:

- In developing countries, many families live in poverty. This means that people do not have their needs met in relation to basic human requirements such as food, clean water, healthcare and education, nor do they have the opportunity to improve their living standards. Many families in developing countries have no money to buy food and as a result go hungry. This weakens their immune system making them more susceptible to diseases. Developing countries have a high rate of communicable diseases, so if a female does get sick, the lack of income means the family cannot afford to see a doctor, which leads to a low life expectancy, due to inferior screening, treatment, etc.

Question 13

The six WHO priorities are:

- Universal health coverage
- International health regulations
- Increasing access to medical products
- Social, economic and environmental determinants
- Non-communicable diseases
- Health-related Millennium Development Goals

An example of two responses that would obtain the full three marks are:

Increasing access to medical products. Access to medical products contributes to a reduction in spread of communicable diseases such as HIV/AIDS, Hepatitis and Influenza, allowing people to remain well and contribute to their community. When people have access to medical products they have access to health and are therefore able to live their lives in accord with their interests and needs.

Social, economic and environmental determinants. When the social, economic and environmental determinants are favourable people are able to maximise their health outcomes. For example, adequate housing, access to clean water and the ability to engage in the community via employment all contribute to individuals obtaining a decent standard of living.

Question 14a

The NHPAs are 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 14b

Biological = age. Muscle density and muscle strength tends to increase until mid-20s. After this point our joint health, bone density and muscular capacity start decreasing. This means that older people are more likely to be injured or suffer worse injuries from the same incident than younger people. For example, older people are more likely to break a hip after a fall in the shower whereas young people would just be bruised.

Behavioural = alcohol and drug use. The use of alcohol and drugs impairs an individual's ability to make informed choices. As a result, when a person is under the influence they are more likely to injure themselves. For example, there is a higher risk of getting into an accident when drink driving.

Social = income. People with lower incomes are more likely to buy cheap cars that are barely road worthy as it is all they can afford. There is a higher risk of accidents in old or poorly maintained cars.

Question 14c

Note – the description of the program explicitly states that MyLiveTribe is a research project. It is therefore not designed to be sustainable. 1 mark is deducted if students conclude that the program has all three elements of sustainability.

For a program to be sustainable it must have all three elements of sustainability – appropriateness, affordability and equity.

Appropriateness – this program is appropriate because it targets the age group that has the highest rate of road accidents and injuries. By surveying 17-22 year olds about their road attitude and behaviours, the program can determine the root cause of accidents for this age group and then work to prevent them.

Affordability – the program is affordable as it comes at no cost to the participant. It is funded by its sponsors. The program gives its participants prizes which encourage people to participate as the program can only be successful if it can reach a large number of people.

Equity – this program is not equitable as it is limited to 17-22 year olds. However, it is necessary for the program to have such a small target because its aim is to reduce the number of accidents amongst this age group. In addition, as it is only a research project, it is not designed to be sustainable. Research projects are only an intermediate step before the implementation of a more active and involved program.

Question 15

Health: 'A complete state of physical, social and mental wellbeing, and not merely the absence of disease or infirmity.' (WHO, 1946)

Human development: 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 a decent standard of living, and participating in the life of their community and decisions affecting their lives. (Adapted from the UN Development Programme, 1990)

Sustainability: 'Meeting the needs of the present without compromising the ability of future generations to meet their own needs.' (UN, 1992)

The remaining 6 marks are allocated for describing the interrelationships between health, human development and sustainability. 2 marks for each of the 3 interrelationship explained. For example:

Being underweight can impact on levels of energy and the functioning of an individual's body systems, such as the immune system. Therefore underweight people are more likely to become unwell which is negative for their physical health. When people have poor physical health they are less likely to attend school and therefore are more likely to have low levels of education and be less likely to achieve their potential. When people have low levels of education they are less able to obtain work and a decent income and this is likely to impact on their families. Children with parents who have low levels of education and income are likely to be less educated also and eat more processed foods. The consumption of high levels of processed foods can contribute to weight gain and be negative for the self-esteem of these children and their mental health.