



Trial Examination 2022

VCE Health and Human Development Units 3&4

Written Examination

Suggested Solutions

Question 1 (4 marks)

a. *For example:*

Health and wellbeing is considered to be dynamic as it is constantly changing. The changes in Megan's life since starting university have affected her ability to interact in her usual social groups, such as with her basketball team and friends and family, which has negatively impacted her social health.

2 marks

One mark for a correct explanation of the concept of the dynamic nature of health and wellbeing.

One mark for using information from the case study to refer to an example of one dimension of health and wellbeing.

Note: For full marks, it is not necessary to name the dimension of health and wellbeing, but the meaning of the dimension must be made clear.

b. *For example, any one of:*

- Having fewer opportunities to interact with her friends and family (social health and wellbeing) means Megan could lose the chance to share any problems she may be experiencing. This could cause her to feel anxious, impacting her mental health and wellbeing. Feeling anxious could lead Megan to seek counselling and to find ways to adapt to her changed social situation (social health and wellbeing).
- In having fewer opportunities to interact with her family (social health and wellbeing), Megan may feel isolated from the people she is closest to, negatively impacting her sense of belonging (spiritual health and wellbeing). If Megan is feeling a loss of connection with her family, it may inspire her to seek alternative ways to stay in contact with them. This could strengthen her relationship with the people she values most (social health and wellbeing).
- Having to give up playing basketball may cause Megan to gain weight (physical health and wellbeing). This may lead to her becoming self-conscious and withdrawing from social activities, which would impact her social health and wellbeing. If she withdraws from social situations, Megan may lose motivation to exercise at all, which could lead to her becoming less physically fit (physical health and wellbeing).

2 marks

One mark for a link made from one example of the social dimension of health and wellbeing to one other dimension of health and wellbeing.

One mark for a link made from the other dimension of health and wellbeing back to a different example of the social dimension of health and wellbeing.

Note: A response could begin and end with a dimension of health and wellbeing other than the social dimension. However, a link must be made to the social dimension before linking back to the original dimension.

Question 2 (3 marks)

For example:

Economic sustainability relates to ensuring that future generations can earn sufficient income and that resources are used in a way that allows economic growth over time. If governments invest in infrastructure such as safe water and sanitation systems, it will prevent the spread of infectious diseases in the community. This will promote physical health and wellbeing for both current and future generations.

3 marks

One mark for describing the meaning of economic sustainability.

One mark for at least one example of economic sustainability.

One mark for linking the example of economic sustainability to the promotion of health and wellbeing.

Note: For full marks, a response must refer to future generations.

Question 3 (11 marks)

a. *For example:*

The HALE for males is lower than for females in all regions.

1 mark

One mark for a correct comparison.

b. *For example, any one of:*

- **Glucose regulation:** Males are more likely to experience impaired glucose regulation than females. This puts them at a greater risk of developing type 2 diabetes and kidney disease, which would result in lower HALE for males than females.
- **Body weight:** Males are more likely to be overweight than females. Excess body weight places strain on the cardiovascular system and increases the risk of developing heart conditions or stroke, which would result in lower HALE for males than females.
- **Genetics:** Higher levels of the hormone testosterone in males have been linked to greater risk-taking behaviours, which may lead to increased injuries in males and, therefore, may result in lower HALE for males than females.
- **Blood pressure:** Males are more likely to experience hypertension than females, putting them at greater risk of developing cardiovascular and kidney disease and, therefore, resulting in lower HALE for males than females.

2 marks

One mark for explaining the variation in one biological factor between males and females.

One mark for linking the variation to lower HALE in males than females.

c. *For example:*

As remoteness increases, HALE decreases for both males and females. For example, HALE for males at age 65 in major cities is approximately 16 more years. This decreases to 15 more years for males in inner and outer regional areas and drops to approximately 12 more years for males in remote and very remote areas.

2 marks

One mark for identifying that HALE decreases as level of remoteness increases.

One mark for using data from the graph.

Note: Responses must refer to data correctly. For example, a response may refer to either the number of additional years at age 65 OR add 65 to the years shown on the graph.

d. *For example, any two of:*

- **Sociocultural factor:** income
Explanation: Individuals living outside major cities have lower average incomes than those within major cities. This may reduce the ability of those living outside major cities to travel to specialist health services due to the cost involved. Delays in diagnosis or treatment of conditions could reduce HALE in more remote areas.
- **Sociocultural factor:** unemployment
Explanation: Those living outside major cities are more likely to suffer unemployment. This may lead to a greater prevalence of stress-related conditions and depression in these areas compared to major cities. Increased prevalence of mental health and wellbeing issues would reduce HALE in more remote areas.
- **Sociocultural factor:** education
Explanation: Individuals living outside major cities experience lower levels of education on average than those living within major cities, which may limit their understanding of health risk behaviours such as smoking and low levels of physical activity. Higher levels of these behaviours may lead to higher prevalence of cardiovascular disease, reducing HALE in more remote areas.
- **Sociocultural factor:** food security
Explanation: Individuals living in remote areas are more likely to experience food insecurity due to the high cost of transporting and storing fresh foods. This may lead to individuals living in these areas consuming more processed, packaged foods that are often high in fats and sugars. Overconsumption of these foods could increase the rates of obesity-related conditions such as type 2 diabetes, reducing HALE in more remote areas.

6 marks

For each sociocultural factor (two required):

One mark for identifying one relevant sociocultural factor.

One mark for identifying the variation in the sociocultural factor between people living within and those living outside major cities.

One mark for linking the variation to a decrease in HALE for those living outside major cities.

Note: For full marks, responses must include a health condition.

Question 4 (5 marks)

a. *For example:*

Vegetables are an excellent source of fibre. A high intake of fibre leads to feelings of fullness. Underconsumption of vegetables may, therefore, lead to consuming more energy-dense foods. If excess energy is not used by the body, it will cause an increase in body weight. Being overweight is a risk factor for cardiovascular disease, therefore increasing years of life lost (YLL) from heart attacks and decreasing life expectancy in Australia.

2 marks

One mark for explaining one function of vegetables.

One mark for explaining how under-consumption of vegetables may influence health status and burden of disease.

Note: For full marks, a health condition must be included.

b. Enjoy a wide variety of nutritious foods from the five food groups every day and drink plenty of water.

1 mark

One mark for identifying the correct guideline.

Note: A response must be worded in a way that reflects the key meaning of the guideline to gain a mark.

c. *For example, any one of:*

- **Food security:** It may not be possible for some people living in remote regions of Australia to access adequate amounts of fruit and vegetables as the cost of transporting fresh foods to more remote locations greatly increases the cost to consumers. Lack of affordability may prevent some people in remote areas from consuming fruit and vegetables on a regular basis.
- **Personal preference:** An individual may have a strong preference for foods that are made more appealing due to their enhanced flavour; for example, foods high in fat, salt and sugar. This may lead to some people in Australia experiencing inadequate amounts of more nutrient-dense fresh foods such as fruit and vegetables.
- **Time constraints/convenience:** Fast-food outlets are readily available in most regions of Australia and supermarkets are well-stocked with prepared meals and processed foods. An individual who has limited time to prepare meals or snacks from fresh fruit and vegetables due to work commitments or location, for example, may resort to consuming these convenience foods.

2 marks

One mark for describing one relevant challenge bringing about dietary change.

One mark for explaining how this may present a challenge to consuming adequate proportions of fruit and vegetables in Australia.

Note: Other relevant challenges include willpower; food marketing and media; education, knowledge and cooking.

Question 5 (5 marks)

a. *For example:*

A stable ecosystem occurs when there is a balance between the environment and the species that exist within that environment. For example, agricultural and manufacturing industries use water resources in a way that does not interfere with either the quality or amount required to meet the needs of the local species and communities. Maintaining a stable ecosystem in this way would support the sustainability of resources by ensuring that future generations could also meet their needs for water.

2 marks

One mark for including the meaning of both prerequisites.

One mark for an explanation of the connection between these prerequisites.

b. *For example:*

Fish are a major source of nutrition and income for the populations of some countries. If national and international laws are implemented to prevent overfishing, the current generation would have sufficient supplies without compromising the ability of future generations to meet their nutritional and economic needs. With ongoing access to nutritious food, people have enough energy to work productively, earn an income and contribute to tax revenue. This benefits the national economy as governments can reinvest this money into essential services such as health, education and transport systems.

3 marks

One mark for one relevant example of sustainable resources.

One mark for linking the example to either a dimension of health and wellbeing or an indicator of health status.

One mark for explaining how this prerequisite acts as a resource nationally.

Question 6 (14 marks)

a. multilateral aid

1 mark

One mark for identifying multilateral aid.

b. *For example:*

- **Strategic priority 1:** achieving universal health coverage

This strategic priority relates to all countries having strong health care systems that enable access to essential health services and medicines that are affordable for all. With the funding provided, the WHO is working towards strengthening the capacity of health systems that benefit women and children in Uganda, a poverty-stricken country where delivery of health care services has been affected by COVID-19.

- **Strategic priority 2:** promoting healthier populations

This strategic priority focuses on achieving the health outcome targets in Sustainability Development Goal (SDG) 3, which includes decreasing maternal and child mortality rates and reducing communicable diseases such as HIV, tuberculosis, malaria and other tropical diseases. 562 000 pregnant women and 500 000 newborn babies will benefit from the support provided by the project, thereby reducing maternal and child mortality rates.

6 marks

For each strategic priority:

One mark for correctly naming the strategic priority.

One mark for describing the meaning of the priority.

One mark for identifying a relevant example in the information provided.

Note: The strategic priority 'addressing health emergencies' is not relevant to this project and therefore cannot receive any marks.

- c. SDG 3 ‘Good health and wellbeing’: ensure healthy lives and promote wellbeing for all at all ages.

1 mark

One mark for identifying SDG 3.

Note: A mark may be awarded for ‘Good health and wellbeing’ only.

- d. *For example, any two of:*

- The health sector could provide resources and HIV education kits to secondary schools to increase students’ knowledge of how HIV can be prevented. If young adults remain free of HIV (SDG 3), they can continue their education and gain well-paid employment in the future. Having a decent income means that all people can be ensured access to safe, nutritious and sufficient food, contributing to the achievement of SDG 2.
- Governments in malaria-affected countries could provide funds to the health sector for the mass distribution of insecticide-treated bed nets and indoor spraying of homes. This would ensure that more people in high-risk rural communities are protected. Being free of malaria (SDG3) enables adults to continue growing and harvesting fresh foods for their families, which means children will receive essential nutrients that prevent malnourishment and stunting, thereby contributing to ending all forms of malnutrition (SDG 2).
- If the health and government sectors collaborate to increase access to reproductive health services (SDG3), women would have greater control over their fertility and, therefore, greater control of the number and timing of births. With fewer children and an increased ability to continue in paid work, family members could be ensured access to safe, nutritious and sufficient food, contributing to the achievement of SDG 2.
- If health and government sectors worked towards providing increased access to child health services, children could be fully vaccinated against communicable diseases such as measles and diarrhoeal diseases (SDG3). Children who are unaffected by these diseases would have adequate energy to regularly attend and concentrate at school. Well-educated children are more likely to access well-paid jobs in the future, increasing their access to nutritious food on a regular basis and contributing to the achievement of SDG 2.

4 marks

For each example:

One mark for describing an example of collaboration between sectors to achieve one feature of SDG 3.

One mark for linking the example with the achievement of one feature of SDG 2.

*Note: If the response in **part c.** was incorrect but a feature of SDG 3 is explained correctly in this response, full marks can be awarded.*

- e. *For example:*

With increased access to child healthcare services, a newborn’s health can be closely monitored, mothers can receive nutrition advice, and vaccines and other essential medicines can be accessed during the first years of life. A healthy child can attend school regularly, gain an education and have a greater chance of accessing meaningful, well-paid work in the future. This would give access to a decent standard of living and allow for more choices over decisions that affect their lives.

2 marks

One mark for explaining how the project could promote human development for children in Uganda.

One mark for linking to information from the stimulus material.

Note: Other examples include participating in the life of the community and leading productive and creative lives according to a person’s needs and interests.

Question 7 (9 marks)

a. *For example:*

Self-assessed health status is a person's own perception of their level of health. Factors that may influence Peter's rating could include whether he currently has, or recently had, an illness, disease or injury. He could also consider the level of stress he is experiencing at work.

2 marks

One mark for a correct description of self-assessed health status.

One mark for outlining at least two factors that may influence Peter's self-assessed health status.

Note: Other factors include energy levels, social connections, and a person's sense of belonging. For full marks to be awarded, responses must be given in full sentences as the question asks for an outline.

b. *For example:*

Private health insurance is a type of insurance where members of a private health fund pay a premium in return for payment towards health-related costs.

1 mark

One mark for providing a correct definition of private health insurance.

c. *For example, any two of:*

- The Medicare levy surcharge is an additional levy that high-income earners must pay if they do not have at least private hospital insurance cover. Because Peter works full-time in a higher paying job (due to his management position), he would be required to pay between 1% and 1.5% of his annual income. This is in addition to the standard Medicare levy surcharge of 2% of income.
- Lifetime Health Cover is particularly relevant to Peter as he is approaching 30 years of age. Individuals who are over 30 and do not have at least hospital cover must pay a 2% loading on top of the cost of the health insurance for every year they are aged over 30.
- The Private Health Insurance Rebate would reduce the cost of the private health insurance premiums Peter pays. The government will pay up to 30% of premiums depending on an individual's income. Because Peter has a high income (due to his fulltime management position), it is unlikely he would receive the full 30% rebate, but he would have some reduction in the cost.

4 marks

For each incentive:

One mark for providing a description of the incentive.

One mark for relating the benefits of the incentive to Peter.

Note: Responses do not need to include the name of the incentive, but a clear understanding must be shown.

d. *For example, any two of:*

- GP consultations
- pathology tests
- X-rays
- treatment in a public hospital
- specialist consultations

2 marks

Question 8 (10 marks)

For example:

Source 1 and 3 both refer to Coca-Cola, which is a soft drink with very high sugar content. If sugary drinks are consumed on a regular basis and the excess energy is not used by the body, an individual's body weight would increase, possibly leading to obesity. Obesity is a risk factor for type 2 diabetes, which Source 2 shows as being very high globally (422 million people), but particularly prevalent in low- and middle-income countries. Mexico is a middle-income country and, as Source 3 reports, is among the world's top consumers of sugary drinks.

Source 1 also relates to the influence of digital technologies that enable increased knowledge sharing. As a multinational company, Coca-Cola risked using a marketing strategy based on the millions of social media followers of sports star Cristiano Ronaldo. With the global spread of mobile phones and the internet, millions of children and adults across the world have access to and use social media platforms. This marketing strategy represents the desire of multinational companies to expand their markets into low- and middle-income countries to increase profits. Using social media platforms has the potential to strongly influence people's buying behaviours, especially in countries where education and health literacy levels are lower than in high-income countries. Knowledge of the risk factors of consuming high amounts of sugary drinks are less common than in high-income countries, and government strategies to reduce the intake of sugary drinks are limited.

Source 3 reports that people in the poorer rural communities of Mexico have limited access to safe water. This is partly because water supplies are contaminated by sewage, which would increase the prevalence of water-related diseases, such as cholera. As people in these areas are very poor and Coca-Cola is easier and cheaper to drink than water, they have little choice but to replace water with sugary drinks. The other reason given is climate change, which is known to affect weather patterns. In this case it is causing water shortages in areas where rainfall was once plentiful. Safe water is not only needed for drinking; it is also essential for washing and hygiene purposes, food preparation and cooking, as well as for agriculture. Unless governments provide water and sanitation infrastructure across affected communities, not only will the number of people suffering from diabetes continue to increase, but the rates of water-borne diseases and possibly malnutrition will increase as well, if crops fail due to water shortages.

It is possible that, if sports stars such as Ronaldo continue to take actions such as in Source 1, they could help raise awareness of the aggressive marketing strategies used by multinational companies to increase sales across the world among their social media followers in low- and middle-income countries. Young people in countries such as Mexico may take steps to pressure governments into improving public health infrastructure and blocking the power of multinational companies such as Coca-Cola in their country. Such action could help to reduce the number of people with diabetes both in Mexico and globally.

10 marks

Marks for this question are awarded holistically using the following points as a guide:

- One mark for how well the response has been structured.*
- Up to two marks for how well the stimulus material has been understood, connected and synthesised.*
- Up to two marks for an understanding of the link between a high intake of sugary drinks and type 2 diabetes.*
- One mark for an understanding of the implications for health and wellbeing of digital technologies that enable increased knowledge sharing.*
- One mark for an understanding of the implications for health and wellbeing of climate change.*
- Up to three marks for an understanding of factors that contribute to variations in health status and burden of disease: poverty; global marketing of processed foods (represented by the marketing of sugary drinks); access to safe water and sanitation.*

Note: For a response to be awarded full marks, examples from all three sources should be included.

Question 9 (4 marks)

a. *For example, any two of:*

- The social model of health aims to prevent ill health by focusing on the broader determinants of health such as factors related to the physical environment, socioeconomic status, gender, culture and ethnicity.
- The social model of health is more cost effective than the biomedical model as it focuses on education and health promotion initiatives to prevent, rather than diagnose and treat, ill health.
- The social model of health focuses on the health of populations and vulnerable population groups rather than individuals.
- The social model of health is more sustainable as health knowledge can be passed on from the current generation to future generations.
- The social model of health creates an environment where health is viewed as a shared responsibility rather than solely the responsibility of the health sector. The underlying causes of ill health are more likely to be addressed when more sectors become actively involved in prevention.
- The social model of health acts to reduce pressure on the health care system in relation to both wait lists and costs by preventing conditions from occurring in the first place.

2 marks

For each strength:

One mark for an outline of a strength of the social model of health.

Note: Each response must be in sentence form as the question asks for an outline.

b. *For example:*

The biomedical model of health involves the use of medical technology to research, diagnose and treat health conditions. For example, a vaccine to prevent cervical cancer has been developed. If young women are vaccinated, they are less likely to develop cervical cancer later in life. This has achieved increased life expectancy for women in Australia.

2 marks

One mark for explaining how one example of the biomedical model of health could be used to either research, diagnose or treat at least one health condition.

One mark for linking this research, diagnosis, or treatment to improvements in health status in Australia.

Question 10 (2 marks)

For example:

Examples of housing policy and practice that came about as part of 'old' public health included regulations to improve building standards, ventilation and the general safety of structures. Improved building standards meant people were less likely to be injured because of faults in the construction of houses. Improved ventilation meant there were fewer respiratory infections caused by damp and mould in poor-quality housing.

2 marks

One mark for identifying examples of policy and practice related to improving housing conditions as part of 'old' public health.

One mark for linking at least one example to one dimension of health and wellbeing.

Question 11 (9 marks)

a. *For example, any two of:*

- **Action area:** create supportive environments

This refers to an environment that promotes health and wellbeing by being safe, stimulating and enjoyable. It helps individuals practise healthy behaviours. The NSW Aboriginal Land Council (NSWALC) provided supplies of disposable masks and hand sanitisers. This would help prevent the spread of COVID-19 in the community.

- **Action area:** strengthen community action

This refers to developing partnerships between individuals, the community and groups within the community that allow them to work together towards promoting health and wellbeing. The NSW State Government, NSWALC, NSW Police and the Dharriwaa Elders Group are working together to support the Aboriginal communities during the COVID outbreak.

- **Action area:** build healthy public policy

This refers to policies and decisions being made by governments and organisations that would promote health and wellbeing. The involvement of the NSW State Government and NSW Police, as well as NSWALC, indicates that each of these organisations have developed and implemented policies related to the actions taken.

6 marks

For each action area:

One mark for identifying one relevant action area.

One mark for a correct description of the action area.

One mark for identifying one example of how the action area is reflected in the information provided.

b. *For example, any three of:*

- The initiatives would be effective as they are designed to assist a significant number of Aboriginal peoples. This is a vulnerable population group that requires specific support to prevent infections during the COVID-19 outbreak.
- The initiatives involve community members such as the Dharriwaa Elders Group assisting with the delivery of fresh fruit and vegetables to vulnerable members of the community.
- The initiatives are culturally appropriate as the Dharriwaa Elders Group were also checking in and conducting welfare checks with the community. This would generate a sense of trust and belonging within the community.
- The initiatives include the action area of the Ottawa Charter: create supportive environments. By providing fresh food deliveries, face masks, hand sanitisers, checking in and conducting welfare checks with community, they encourage community members to be well-nourished and to remain resilient during the COVID-19 outbreak.
- The initiatives include collaboration between various stakeholders in the actions taken. These include the NSWALC, NSW State government, LALCs and NSW police and the Dharriwaa Elders Group working together to provide support during the COVID-19 outbreak.
- The initiatives address the specific needs, including the health needs, of Aboriginal communities during the COVID-19 outbreak. Aboriginal peoples experience poorer health status than non-Aboriginal peoples, due to, for example, the failings of Closing the Gap and health issues stemming and resulting from The Stolen Generations years, with higher prevalence of chronic conditions such as heart and kidney disease and type 2 diabetes. As a result, they are more vulnerable during an outbreak of highly infectious diseases such as COVID-19.
- The initiatives are provided and funded by government and Aboriginal Land Council groups. This ensures sufficient funding is provided for the support that is needed throughout the COVID-19 outbreak.

3 marks

*Three marks for explaining three points related to the effectiveness of programs.
Note: For full marks to be awarded, at least one reference to a dimension of health and wellbeing in the overall response is required.*

Question 12 (13 marks)

a. *For example:*

- Building resilience: humanitarian assistance, disaster risk reduction and social protection
- Education and health

2 marks

*One mark for each correctly named priority (two required).
Note: These are the only relevant priorities for this response.*

b. *For example, any two of:*

- The assistance provided was focused on results and responded to the needs of the Fijian people following the damage caused by Tropical Cyclone (TC) Winston. Immediate needs included emergency relief aid supplies such as shelter, water, food, hygiene items, emergency health care and access to education. \$4 million was allocated to support the education sector, which represents a focus on the needs of future generations.
- Australia's education support was in partnership with UNICEF, Save the Children Australia and Save the Children Fiji. Partnerships between organisations take advantage of the different strengths of each organisation and ensure more efficient use of resources.
- The Australian Government worked with school management and communities throughout the rebuilding process to ensure each school's individual needs were met. This process of consultation supports the long-term needs of communities, giving them a sense of ownership of the new education facilities.

4 marks

For each feature of effective aid:

One mark for describing the feature of effective aid.

One mark for identifying an example in the information provided.

Note: A mark is not awarded for naming the feature of effective aid only; a description is needed.

c. *For example:*

Type of aid: non-government organisation (NGO) aid

Explanation: The Australian Government works with NGOs such as Save the Children because they have expertise in delivering aid through small, community-based projects in regions that are often difficult for official aid to reach. NGOs can often foster community participation on projects as they are more likely to develop strong connections to local communities.

3 marks

One mark for correctly naming non-government organisation (full name needed).

Two marks for either outlining two reasons as to why the Australian Government works with NGOs or one well-explained reason.

d. *For example:*

The project addresses SDG 4 by having a strong focus on supporting children's access to education. Immediately after TC Winston, temporary learning centres and education materials were provided, which supported Australia's ongoing bilateral education program in Fiji. This could address SDG 4 by providing children with high quality education at all levels. The strong focus on maintaining access to education would reinforce the importance of education to the communities.

2 marks

Two marks for linking examples of aid from the project to the meaning of SDG 4.

e. *For example:*

Flooding and damage to water systems that occurred during TC Winston could lead to local water supplies becoming contaminated with harmful bacteria and causing outbreaks of water-related diseases such as cholera. Providing emergency supplies of water would help to prevent such outbreaks. The focus on education supports children's access to knowledge and skills that could lead to accessing a decent standard of living in the future.

2 marks

One mark for linking information from the project to one dimension of health and wellbeing.

One mark for linking information from the project to one capability of human development.

Question 13 (2 marks)

For example, any two of:

- Dairy products are a major source of calcium, which is used in the development of bone tissue to prevent it from becoming porous in old age, therefore preventing osteoporosis.
- Dairy products are a rich source of calcium, which is used to strengthen hard tissue such as teeth. It can therefore assist in the prevention of dental caries (tooth decay).
- It has been shown that people who have a high intake of dairy products are less susceptible to colorectal cancer.
- The consumption of optimal amounts of milk and milk products over a long period of time can reduce the risk of developing heart disease, hypertension and stroke.

2 marks

One mark for each relevant example of how dairy products can improve health and wellbeing.

Question 14 (9 marks)

a. *For example:*

Low-income country: Chad

Justification: Chad has a very low Human Development Index (HDI) of 0.398 and a very high under-five mortality rate (U5MR) of 113.8 per 1000.

2 marks

One mark for identifying Chad as a low-income country.

One mark for using appropriate data from the table to justify the choice.

b. *For example:*

Almost 100% of Australia's population uses basic sanitation services compared to only 35.26% of Namibia's population. This could explain the difference in U5MR between Australia (3.6 per 1000) and Namibia (42.36 per 1000). If water is contaminated by human waste, it can cause communicable diseases such as cholera and typhoid. Because children under the age of five have underdeveloped immunity, they are more likely to die if infected with these diseases. Actions to improve public health include providing adequate sanitation systems. This action would therefore reduce U5MR in Namibia and bring the rate closer to that of Australia.

3 marks

One mark for comparing the population using basic sanitation services percentages of Australia and Namibia.

One mark for linking this to the differences in health status shown in the table.

One mark for explaining the link between access to basic sanitation and health status.

Note: Responses must include data to be awarded full marks.

c. *For example, any two of:*

- The HDI is a tool used to measure and rank the level of social and economic development of a country.
- The HDI is based on four indicators: life expectancy at birth, Gross National Income per capita, expected years of schooling and the mean years of schooling.
- The HDI is used to rank a country's level of development. A single statistic between 0 and 1 is given to a country, with a higher level of development receiving a score closer to 1.

2 marks

Two marks for two relevant points that describe the HDI.

Note: One mark could relate to either the indicators or the dimensions of the HDI.

d. *For example, any two of:*

- The HDI is based on averages. Therefore, it does not capture any inequalities that exist within a country, which include, for example, inequalities between population groups and geographical locations.
- There are several key aspects of human development not measured by the HDI, which include, for example, gender equality, freedom of speech, levels of discrimination and variations in access to basic resources.
- Survey data is not included in the HDI; therefore, people do not have the capacity to express their feelings about the quality of their lives and issues facing their communities.
- It is a challenging task to collect data in many countries and the reliability of data collected may be questionable. This makes comparisons between countries difficult if different parameters are used when collecting and analysing data in different countries.

2 marks

One mark for each of two correct limitations of the HDI.