

HEALTH AND HUMAN DEVELOPMENT

Units 3 – Written examination



2020 Trial Examination

SOLUTIONS

Question 1 (10 marks)

- a. Students must refer to the graph and identify one trend in relation to life expectancy.

Sample Response:

From 1991 to 2015 Life Expectancy for both males and females has increased over time.

Or

From 1991 to 2015 Life Expectancy for females has been consistently higher than males, but both have increased over time.

Or

From 1991 to 2015 Life Expectancy for females has been consistently higher than males.

1 mark

- b. Students must outline two ways each of the following contributed to the trend identified in part a. Students are awarded two marks each for two reasons for each public health model.

Sample response:

Old public health.

Life expectancy has improved because:

The old public health system introduced policy and practice around sanitation (1 mark) to reduce deaths from diseases related to hygiene (1 mark).

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The old public health system introduced vaccines (1 mark) to reduce deaths from communicable diseases such as polio and tuberculosis (1 mark).

Or

The old Public health system improved work conditions (1 mark) to reduce deaths from the number of work related injuries (1 mark).

Or

The Old Public health system reduced deaths from respiratory diseases (1 mark) by improving ventilation standards on housing and pollution controls on factories (1 mark).

4 marks

New Public Health

Life expectancy has improved because:

The New Public Health System focused on health promotion (1 mark) to reduce deaths from preventable diseases such as cardiovascular diseases and cancers due to lifestyle factors (1 mark).

The New Public Health System continued to introduce vaccines (1 mark) to reduce deaths from diseases such as flu and chicken pox (1 mark).

Or

The New Public Health System has continued to develop medical technologies such as screening for diseases such as breast cancer to reduce deaths.

Or

The New Public Health System has introduced new technologies such as nanotechnologies and robotics to reduce deaths from and treat diseases.

4 marks

c. Students must outline one advantage of the Biomedical Model of Health.

Sample response:

The Biomedical Model of Health involves diagnosing and treating illness which has the advantage of treating and curing diseases, improving life expectancy.

1 mark

Question 2 (6 marks)

a. Students must briefly explain what is meant by spiritual health and wellbeing.

Sample response:

Spiritual health and wellbeing relates to an individual's ideas, beliefs, values and ethics (1 mark). It can include a sense of belonging and a person's place in the world (1 mark).

(Response could also include the concepts of hope, peace and a guiding sense of meaning or value).

2 marks

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- b.** Students must describe the interrelationship between spiritual health and wellbeing and one other dimension of health and wellbeing. Students will only gain marks if they relate one spiritual to another dimension and the other dimension back to spiritual. Otherwise '0' marks are awarded.

Sample response:

If someone has a belief in a religion and joins a religious group, then they may improve their social health and wellbeing by developing a network of friends in this group (1 mark). By having positive relationships with these friends and heightening their social health and wellbeing, then they may perceive that they have a sense of belonging in the world (1 mark).

2 marks

- c.** Students must briefly explain a benefit of optimal emotional health and wellbeing for individuals. One mark is awarded for the benefit and a further mark for clarification of the benefit with an example.

Sample response:

If someone has optimal health and wellbeing, a balance of all dimensions of health and wellbeing, then they are more likely to work, earn an income (1 mark) and be able to afford the basic resources of food, shelter, health care and an education (1 mark)

2 marks

Question 3 (8 marks)

- a.** Students must describe 'a stable ecosystem' and 'sustainable resources' for two marks each.

Sample response.

A stable ecosystem:

Occurs when balance is achieved between the environment and the species that live in an environment (1 mark). Stability indicates that all living things are having their needs for food, water, shelter and reproduction met without causing detrimental effects to the natural environment (1 mark).

Sustainable resources:

Relate to ensuring that the resources used to promote health and wellbeing in the present are available for future generations, so they too can experience a good quality of life (1 mark). Resources required for energy production, food and water supply, employment, housing and healthcare are examples of materials that must be sustainable if current standards of health and wellbeing are to be maintained (1 mark).

4 marks

- b. Students must select either a stable ecosystem or sustainable resources and explain why it is a prerequisite for health at a national level or a global level for two marks each.

Sample response: Sustainable resources.

By maintaining and replacing environmental resources used to produce energy production, water and food supply, then they will be available for future generations (1 mark). Food and water are necessary for a population to survive, and without survival the population would not be able to work and contribute to the nation's economic productivity now or in the future (1 mark). Energy production is essential for the many processes our society relies on such as transport and industry, heating and cooling of homes (1 mark). If we do not produce energy in a sustainable way through solar or wind generation, and use precious environmental resources such as fossil fuels which produce carbon emissions, then global warming and the impacts of climate change may impact global communities (1 mark).

4 marks

Question 4 (12 marks)

In Australia we have the government organisation initiatives of the Australian Dietary Guidelines, and The Australian Guide to Health Eating, but we also have the non-government initiatives of Nutrition Australia to improve dietary intake.

Using your knowledge of these three organisations' initiatives, and using your understanding of dietary change, draw conclusions about the impact of dietary initiatives on the health and wellbeing of Australians, and the challenges faced by organisations that are focused on bringing about dietary change in Australia

Students should have 2 – 4 points referring to each of the highlighted areas in the question. When teaching how to respond to similar questions, breaking down the question to draft the extended response is a useful tool

For example:

- Refer to knowledge of three orgs initiatives ✓✓✓
- Refer to understanding of dietary change ✓✓✓
- Refer to dimensions of health and wellbeing, and/or optimal health and wellbeing ✓✓✓
- Refer to the challenges of dietary change ✓✓✓

Sample response:

'The Australian Dietary Guidelines' is a federal government initiative to improve dietary intake in response to tackling dietary related diseases such as obesity and diabetes (1 mark). It has a set of guidelines to encourage people change their diets if need be, to have a balanced diet of all the five food groups, be physically active, avoid unhealthy energy dense food high in salt, keep food safely and it encourages breastfeeding (1 mark). The Australian Guide to Healthy Eating is a visual tool, which reflects these guidelines in the form of a plate which has proportions of wedges representing the five food groups reflecting a balanced diet (1 mark), to make it easier for Australians to understand how to make dietary change (1 mark). Nutrition Australia is a non-government organisation with a number of services such as a

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healthy eating advisory board and a website with health choice recipes (1 mark). It provides resources for food services such as hospitals to make sure food delivery is in line with dietary recommendations (1 mark). These initiatives all aim to reduce the prevalence of dietary related diseases, often related to obesity such as diabetes and cardiovascular disease, (by including a balanced nutritious diet rather than energy dense processed foods), improving physical health and wellbeing (1 mark). If people are not subjected to the stressors such as worry and costs of treatments of these diseases, then their mental health and wellbeing will improve (1 mark). Optimal health and wellbeing should be ensured by reducing disease, the physical, emotional, mental, social and spiritual costs associated with being unwell (1 mark). Unfortunately, despite these initiatives, there are challenges for these organisations to have individuals take note and follow the recommendations and resources provided to improve dietary intake. There are so many marketing techniques such as celebrity endorsements of energy dense food (1 mark), the consumer being unable to have the willpower to resist these foods when they are competing with the healthier options (1 mark) and there is the question of the ability to afford the more nutritious options. There is the possibility that some of the healthier clean (raw food, which is unprocessed such as fruit and vegetables) can be less affordable than energy dense processed foods, particularly in remote regions (1 mark). Therefore, dietary change as a result of these initiatives should be possible through the education and provision of the initiatives, but there a number of challenges that can make these changes difficult for the organisations and the consumers.

12 marks

Question 5 (16 marks)

- a. Students must identify the three leading causes of death for Aboriginal and Torres Strait Islanders, which has increased over time.

The top three leading causes of death for Aboriginal and Torres Strait Islanders from 2008 to 2017 are:

1. Chronic Lower Respiratory diseases
2. Malignant neoplasm of trachea, bronchus and lung
3. Intentional self-harm suicide.

3 marks

- b. For each leading cause of death in part a, students must outline one biological, one sociocultural and one environmental factor, that may have impacted this increase.
Students cannot use the same factor twice.

Sample response:

Cause of death: Chronic lower respiratory diseases.

Environmental factor: **Second hand smoke** (1 mark) - Aboriginal and Torres Strait Islanders are more likely to be exposed to **environmental or passive smoking** because of higher smoking rates increasing the likelihood of respiratory diseases (1 mark).

Cause of death: Malignant neoplasm of trachea:

Sociocultural factor: **Lack of access to Education** (1 mark): Indigenous and Torres Strait islanders are more likely to be uneducated around the dangers of tobacco use because of low school retention rates, and more likely to develop neoplasms (cancers) related to smoking (1 mark).

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Cause of death: Intentional self-harm suicide:

Sociocultural factor: **Unemployment** (1 mark): Indigenous and Torres Strait Islanders have higher rates of unemployment which has been linked to higher rates of depression and consequently suicide (1 mark).

3 marks

- c. Students must describe a program addressing indigenous initiatives that may assist in reducing the number of deaths from one of the causes identified in 5a). For students to be awarded three marks they need to address three strategies used in the program. No marks are awarded for including the name of the program.

Sample response:

Aboriginal Quitline:

Aboriginal quit line offers a telephone counselling service to help Indigenous Australians to quit smoking (1 mark). It helps them to quit in a culturally appropriate way by employing aboriginal workers. (1 mark). Counsellors also provide links to local support groups if needed. (1 mark).

3 marks

- d. Students must identify and outline two of the Ottawa Charter action areas that are addressed in the program described in part c.

Creates a supportive environment (1 mark) by providing a counselling service for them to access to help quit smoking (1 mark).

Develops personal skills (1 mark) by educating individuals through this counselling program around the dangers of smoking. (1 mark).

4 marks

- e. Students must evaluate the effectiveness of this program. Four marks are awarded for four areas of effectiveness.

Sample response:

Culturally appropriate: it is effective because it relates to aboriginal cultures (1 mark).

It is effective because it has reduced smoking rates overall by having a telephone service to refer to and media campaigns on television (1 mark), and by having government laws that ban smoking in public places it makes it more difficult to smoke because of restricted areas (1 mark).

Or another mark could awarded for... It is also funded by the government which means no cost to the individual (1 mark).

3 marks

Question 6 (10 marks)

- a. Students must explain how Medicare and Private Health Insurance promote access to health care in Australia.

Sample response:

Medicare is a universal health scheme available to all Australian residents and those in countries with a reciprocal agreement, offering free or low cost medical treatment for a number of essential medical services such as GPs, specialists, and public hospitals (1 mark). It therefore enables **access** for all Australians, despite their socioeconomic status, to have affordable health care subsidised by all taxable income earners (1 mark).

Private health insurance allows individuals to pay a premium to join a health insurance scheme, that allows extra benefits that Medicare may not offer such as Ambulance, and stays in private hospitals (1 mark). This allows **access** to services such as Ambulance transport, private hospital stays and dental services not covered by Medicare (1 mark).

4 marks

- b. Students must describe two aspects of the Pharmaceutical Benefits Scheme (PBS).

Sample response:

The Pharmaceutical Benefits Scheme (PBS) provides essential subsidised medicines to people who need them, regardless of their ability to pay (1 mark). It also reduces the cost of essential medicines for those on a health care card. (1 mark)

2 marks

- c. Students must explain two ways that the Pharmaceutical Benefits Scheme promotes health in Australia for two marks each and must include references to sustainability and equity in their response.

Sample response:

The PBS promotes health in Australia by allowing access to treating diseases through medicine and making it available for all Australians (1 mark). This enables **equity** (1 mark) as all Australians can access these medicines despite their socioeconomic status.

The PBS is funded by the Australian government and regularly reviewed as to what medicines can be listed on the PBS (1 mark). This allows for **sustainability**, as it is funded by the government and is constantly undergoing review of what medicines need to be added and extra funding is added when needed (1 mark).

4 marks

2 + 4 + 4 = 10 marks.

Question 7 (9 marks)

The Ottawa Charter is increasingly used to guide the development of health promotion activities in Australia in relation to a range of issues including smoking, road safety and skin cancer.

- a. Students must select one of smoking, road safety and skin cancer and explain why it has been targeted by health promotion in Australia.

Sample response: Smoking.

Smoking has been targeted because it contributes significantly to Australia's burden of disease (1 mark). It also contributes to a number of major preventable illnesses such as cancer, cardiovascular disease, asthma and other respiratory conditions (1 mark). *Or* It incurs enormous costs to Australia's health care system (1 mark).

2 marks

- b. Students must briefly describe an example of health promotion policy and or/ legislation and explain how it could promote or has promoted health in relation to their selected issue.

Sample response:

Government legislation has been introduced to deter people from smoking including adding high taxes on cigarettes, banning the display of cigarettes in stores and having health warnings on packages (1 mark). This has been very effective in lowering the rates of tobacco use in Australia, whereby rates of smokers have lowered significantly over the last few decades. There is conjecture that marginalised groups are still ignoring health promotion messages, and have the highest smoking rates (1 mark). Physical health and wellbeing has improved for many by lowering smoking related illnesses, and lowering the stress in individuals around developing major chronic conditions, improves mental health and wellbeing (1 mark).

3 marks

- c. Identify and explain two areas of the Ottawa Charter that are reflected in this program.

Build Health Public Policy (1 mark) has been addressed here as the government developed legislation around smoking bans in public areas, taxes on cigarettes and banning advertising of cigarettes (1 mark). **Develop Personal Skills** (1 mark) has been addressed also because the warnings on cigarettes packages educates individuals of the dangers of smoking (1 mark).

4 marks

Question 8 (12 marks)

- a. Describe 'health promotion'.

Sample response:

Health promotion is the process of enabling people to increase control over their health and its determinants, and thereby improve their health.

2 marks

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- b. Students must briefly explain why Indigenous Australian kids may be the target of health promotion.

Sample response:

Indigenous people have much higher rates of factors such as poor dietary intake, lack of physical activity, higher smoking rates and higher substance abuse leading to higher rates of obesity, diabetes, kidney disease, cancers and injuries (1 mark). By educating the territory kids this would aim to decrease these rates and improve the health of the child and into their future (1 mark).

2 marks

- c. Students must briefly explain two initiatives described in the case study above that could improve Indigenous health and wellbeing for two marks each.

Sample response:

The program is run by health professionals which means that the kids will be educated properly (1 mark) and improve their mental health and wellbeing, by improving the brain's capacity for learning (1 mark).

The program is run at school and offers fun games (1 mark) so will improve fitness levels of territory kids therefore improving physical health and wellbeing (1 mark).

4 marks

- d. Students must identify two strategies in the 'Healthy Territory Kids' program and explain how they reflect the Ottawa Charter for Health Promotion for two marks each.

Sample response:

The government funds this program (1 mark) which reflects **Building Healthy Public Policy** (1 mark).

The program provides a lot of education around nutrition and physical activity (1 mark) which **Develops Personal Skills** (1 mark).

4 marks

Question 9 (9 marks)

- a. Students must identify two major food sources that contain fibre.

Sample responses:

Fruit, vegetables or whole grain cereals.

2 marks

- b.** Students must use the example of a low dietary intake of fibre, to show a flow on effect from one impact on health and wellbeing, and how it leads to three other areas of health and wellbeing.

Sample response:

A low dietary intake of fibre can lead to diseases such as obesity and colorectal cancer impacting physical health and wellbeing (1 mark). If a person suffers from obesity they may then develop self-esteem issues and become depressed and isolate themselves. (mental health and wellbeing) (1 mark) If they isolate themselves, it may reduce their opportunities for them to develop a network of family and friends impacting their social health and wellbeing. (1 mark) They may be then less likely to feel a part of society, losing their sense of purpose and belonging, affecting their spiritual health and wellbeing. (1 mark)

4 marks

- c.** Students must identify one condition related to low dietary fibre for one mark and then outline an impact on health status for a second mark and burden of disease for a third mark

Sample Response:

Low dietary fibre can lead to colorectal cancer (one mark). This can increase mortality rates from colorectal cancer (one mark) impacting health status and increase the number of DALYs, a measurement of Burden of Disease, from cancer in Australia (one mark).

3 marks

Question 10 (8 marks)

The leading cause for males in 2017 was coronary heart disease. The density of the male population varies across the country. For example, in *Remote and very remote* areas, there are 113 males for every 100 females (ABS 2018b), compared with 97 males for every 100 females in *Major cities*.

<https://www.aihw.gov.au/reports/men-women/male-health/contents/who-are-australias-males>

- a.** Students must identify and explain one sociocultural and one biological factor that may impact this health outcome for two marks each.

Sample response:

Biological: Genetically males have higher rates of heart conditions (1 mark). For example, more boys are born with heart conditions than girls (1 mark).

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Sociocultural: Geographical location (1 mark). The density of males in remote areas is higher and so they may not have access to health care (1 mark).

4 marks

- b.** Students must use their knowledge, to describe one other difference in the health status of males compared to females.

Sample response:

Males have higher rates of hospitalization from injuries compared to females (1 mark). This may be because they tend to be involved in more risk taking behaviors such as drunk driving (1 mark).

2 marks

- c.** Students must explain how improving optimal male health and wellbeing acts as a resource nationally.

Sample response:

If males have optimal health and wellbeing, they are more likely to be employed (1 mark). This allows them to earn an income, pay taxes to the government and improve the economic productivity of the nation (1 mark).

2 marks