2013   Health and Human Development GA 3: Examination

GENERAL COMMENTS

Most students attempted all questions on the 2013 Health and Human Development examination and provided a good level of depth and detail in their responses, although some students appeared to find the examination difficult.

Many students had a good understanding of the key health definitions and subject content that was examined, but many students found it difficult to apply the content to new situations. This is a skill that students should practise throughout the year.

In general, students were able to read and interpret information from the stimulus material provided. Students are encouraged to carefully analyse graphs to ensure they are clear about the information being presented. In Question 4a. many students misread the information presented.

Students are reminded to read the questions carefully and answer them fully, particularly when they are asked to specifically link the answer to content or data. In Section A, Questions 4a and 10a. and in Section B, Questions 6c., 6d. and 7a. students were required to make explicit links to information, or data. However, many students provided a general response without making the necessary specific links.

The key knowledge of the *VCE Health and Human Development Study Design* has been updated to reflect changes that have occurred in various organisations, and in government policy, and it is important for students to be aware of this. Many students used an old version of the Human Development Index (HDI) indicators in Section A, Question 5. Students should also note that the *Australian Dietary Guidelines* and *Australian Guide to Healthy Eating* have been updated. In the 2013 examination students could refer to the previous or updated versions of these frameworks. However, in 2014, students will be expected to use the current versions.

Students are reminded to indicate clearly if their response is continued on the back pages of the Answer Book and ensure their handwriting is legible.

SPECIFIC INFORMATION

Note: Student responses reproduced in this report have not been corrected for grammar, spelling or factual information.

This report provides sample answers or an indication of what answers may have included. Unless otherwise stated, these are not intended to be exemplary or complete responses.

The statistics in this report may be subject to rounding errors resulting in a total less than 100 per cent.

Section A

Questions 1a. and 1b.

Marks	0	1	2	3	Average
%	8	16	30	46	2.2

Question 1a.
Health status is an individual's or population's level of health, taking into account various aspects such as life expectancy, amount of disability and levels of disease risk factors.

Health status is a key health term in the study design and the majority of students were able to accurately define the term.

Question 1b.
Students were expected to show an understanding of the difference between the two key health terms of mortality and morbidity. While the majority of students were able to demonstrate their understanding, many students confused these two terms.

The following is an example of a good answer.

Mortality relates to the number of deaths in a population at any given time, whereas morbidity relates to ill health in an individual or level of ill health in a population or group at a given time.

Questions 2a. and 2b.

Marks	0	1	2	3	4	Average
%	8	18	23	27	24	**2.5**

Question 2a.
Students were awarded one mark for each example of a social and behavioural determinant, provided it was relevant to the differences in health status experienced by those living in rural and remote communities.

Possible examples included
- social determinants: unemployment/employment, socioeconomic status, occupation, social isolation/connection, food security/insecurity, access to health services
- behavioural determinants: smoking, alcohol consumption, dietary or vegetable intake, physical activity.

Question 2b.
While students answered this question well, some provided a general overview of the difference in the determinant for those living in rural and remote communities, rather than linking the determinant to poorer health status.

The following is an example of a good response.

Tobacco Smoking: People in rural and remote areas have higher smoking rates than those living in major cities. As a result, rural and remote people have higher rates of lung, throat and mouth cancers and mortality due to these cancers, and so a poorer health status than those living in major cities.

Question 3

Marks	0	1	2	Average
%	42	36	22	**0.8**

This question was not well answered. Many students were unable to identify a major food source of iodine and its function in the body in relation to health.

The following table shows examples of possible answers.

	Major food source	Major function as a determinant of health
Iodine	Seafood/fish Iodised table salt Vegetables grown in iodine-rich soils Eggs Iodine-fortified bread Seaweed (kelp) Milk and milk products	Development of essential thyroid hormones in particular thyroxine Efficient functioning of the thyroid gland that assists in regulating metabolism Helps prevent goitre by ensuring the thyroid gland is functioning correctly

Questions 4a. and 4b.

Marks	0	1	2	3	Average
%	4	31	46	19	**1.8**

Question 4a.
This question was generally well answered, although some students did not read the graph accurately.

The following is an example of a good response.

From 25-75+ age groups, there is an increase in the percentage of people who eat the recommended daily intake of fruits and vegetables. From the 25-34 group, almost 45% eat recommended fruit and 5% eat recommended vegetables. This increases to 65% for fruit and 10% roughly for vegetables in the 75+ age group.

Question 4b.
While most students were able to identify a relevant food source for iron, many students could not identify a food source for folate.

Examples of food sources of folate include liver, vegemite, nuts, fruit such as oranges and strawberries, legumes, mushrooms, spinach, asparagus and folate-fortified food such as bread, breakfast cereal and fruit juices.

Examples of food sources of iron include red meat, turkey, chicken, fish, eggs, nuts, peanut butter, wholemeal bread, dried apricots, brown rice and tofu.

Question 5

Marks	0	1	2	3	4	Average
%	36	17	23	10	14	**1.5**

Students needed to select any of the two indicators of the Human Development Index (HDI) and outline how each one could lead to variations in the HDI between Australia and a developing country.

Students should note that only the current indicators were relevant to this question, and they needed to show the relationship between the indicators selected and variations to the HDI, which many students failed to do.

Possible answers included
- life expectancy at birth: Australia has a high HDI, which would suggest that Australian's life expectancy is higher than that of people living in a developing country and this would contribute to a lower HDI
- gross national income per capita (average income): Australia has a high income per capita, meaning it has more money available to spend on healthcare services leading to a high HDI compared to a developing country with a low gross national income contributing to a low HDI
- mean years of schooling: Australia has a high number of students completing more years of schooling compared to a developing country. Education gives opportunity for employment and improved health, leading to a higher HDI for Australia
- expected years of schooling: Australia has compulsory attendance at school until the age of 16 years. A developing country may have children completing primary schooling, but not compulsory attendance at school, and fewer children go on to complete their secondary education.

The following is an example of a good response.

(Standard of living) Gross National Income per capita (GNI) –individuals in developing [countries] have a considerably lower GNI than Australia, so are less likely to afford nutritious food and access to health. They are therefore more likely to become malnourished ...than Australia causing a variation in the HDI.

Life expectancy at birth – developing countries have a lower life expectancy relative to Australia. This is due to poverty and high rates of communicable diseases – which relates to GNI as well, and ability to attend school leading to variation in HDI with Australia.

Question 6

Marks	0	1	2	Average
%	21	24	55	**1.6**

This question was well answered, with many students able to provide one key difference between the biomedical and social model of health.

The following is an example of a good response.

The biomedical model has a focus on the treatment and management of disability and disease, using services from healthcare professionals (eg surgery) whereas the social model focuses on addressing the broader determinants of health-social, economic and environmental-to improve health.

Question 7a. and 7b.

Marks	0	1	2	3	Average
%	38	28	19	15	**1.1**

Most students were able to identify one priority of VicHealth that was evident in the SunSmart program, but students struggled to describe how the SunSmart program helps achieve VicHealth's mission.

Question 7a.
The VicHealth priority evident was reducing harm from UV exposure.

Question 7b.
The following is an example of a good response.

VicHealth aims to change the physical, economic, cultural and social environments to improve health, which is evident through the integration of the 'SunSmart schools program', which has primary schools encouraging and educating students about sun safety – which also works to strengthen their skills and understanding.

Question 8

Marks	0	1	2	Average
%	41	34	25	**0.9**

Some students were able to provide two examples of how Medicare differs from private health insurance, but many students were unable to demonstrate the differences.

Possible answers include the following.

- Medicare is compulsory for all Australian citizens, whereas private health insurance is optional.
- The cost of Medicare is met by the Federal Government. Private health insurance is paid for by individuals according to the level of coverage they wish to purchase.
- Medicare covers essential health services such as GPs, specialists and public hospitals, while private health insurance can be purchased for health services not covered by Medicare; for example, dentists, physiotherapists and chiropractors.
- Medicare does not allow a patient the choice of private hospital treatment, whereas private health insurance can, depending on the level of cover purchased.
- Medicare does not cover the cost of elective surgery, whereas private health insurance can, depending on the level of cover purchased.

Question 9

Marks	0	1	2	Average
%	32	18	50	**1.2**

Many students were able to provide the United Nations (UN) definition of sustainability, which is 'Meeting the needs of the present without compromising the ability of future generations to meet their own needs'.

Questions 10a. and 10b.

Marks	0	1	2	3	Average
%	33	20	33	14	**1.3**

Question 10a.
Many students were able to use the data from the graph relating to under-five mortality rates to accurately describe the progress being made towards achieving Millennium Development Goal 4. However, many students failed to take note of the need to use data from the graph in their answers.

The following is an example of a good response.

Between 1990 and 2010, developed regions have seen a decrease in under five mortality from 15 deaths per 1000 live births to 7 deaths per 1000 live births and is likely to meet its target by 2015.

Between 1990 and 2010, developing regions have seen a decrease in under five mortality from 97 deaths per l000 live births to 63 deaths per 1000 live births and is unlikely to meet its target by 2015.

Question 10b.
While some students were able to provide one reason why Millennium Development Goal 4 is important, many students were unable to provide a clear reason. This is a key knowledge point in the study design.

An example of a good response is below.

Most of the mortality associated with children can be prevented by having access to adequate food and water and an immunisation scheme (many children die from measles and tuberculosis).

Questions 11a. and 11b.

Marks	0	1	2	3	Average
%	6	39	35	20	**1.7**

Question 11a.
The majority of students were able to identify bilateral or emergency (humanitarian) aid as being the aid not mentioned in the announcement.

Question 11b.
Many students were able to provide an example of multilateral aid, but some students found it difficult to explain what multilateral aid is.

The following is an example of a good response.

Aid provided to large organisations such as the World Bank and United Nations to address global issues and large scale projects such as global warming, food security, AIDS and malaria prevention and control and emergency relief.

Questions 12a. and 12b.

Marks	0	1	2	3	4	Average
%	59	14	10	10	6	**0.9**

Many students were unable to accurately list two ways the UN promotes world peace and security, which meant they were unable to answer part b. of the question. In part b., some students were able to directly link their example to improvements in health status, although many students explained their example without linking to improvements in health status.

Examples of good response are provided below.

Example 1

12a.
Disarmament – preventing disputes from escalating

12b.
Through disarmament, it prevents disputes from escalating into large scale conflicts. Conflict can cause many communities to become displaced, forced to live in refugee camps, where food, safe sanitisation and water is limited. They are thus more likely to catch communicable diseases such as diarrhoea and cholera, reducing their life expectancy. Therefore by preventing conflict, individuals can remain in their homes and thus less likely to die from communicable diseases-improving health status.

Example 2

12a.
Peace building - Attempt to find the most peaceful solution when addressing conflict.

Help rebuild infrastructure and improve the physical environment to provide security to communities.

12b.
As the UN attempts to find the most peaceful solution when addressing conflict, members of state are expected to abide, which reduces the impact of conflict reducing amount of injuries which could improve life expectancy.

Section B

Question 1a.

Marks	0	1	2	Average
%	6	24	70	**1.7**

The majority of students were able to accurately identify two examples of information that must appear on food labels in Australia and New Zealand according to legislation.

Possible answers included
- accurate weights and measures
- packaged food must provide a list of ingredients and food additives, including any potential allergens
- a nutrition information panel (that outlines the level of key nutrients in the product)
- date marking (best before, production date, use by date)
- country of origin data
- contact details for the manufacturer or importer

Question 1b.

Marks	0	1	2	Average
%	18	45	37	**1.2**

Many students were able to explain how the information on food labels could assist in promoting healthy eating although some students found it difficult to link the examples chosen to how they promote healthy eating.

An example of a high-quality response is below.

By detailing information such as the nutritional quantities, individuals are able to make appropriate decisions on what they are eating, as they are aware of what nutrients they are consuming, so can make appropriate healthy food choices.

Question 1c.

Marks	0	1	2	Average
%	46	36	18	**0.7**

Students were able to use examples from the new or previous versions of the *Australian Dietary Guidelines* to answer this question, but many struggled to provide two ways the dietary guidelines could assist in promoting healthy eating.

Examples of good responses are below.

- *Encourages a wide variety of foods from the five different food groups to obtain adequate nutrients.*
- *Warns Australians to limit saturated fats and total fat intake to prevent lifestyle diseases, such as obesity and cardiovascular disease.*
- *They advise people to limit their intake of foods high in saturated fat, added sugar & salt, & also limit intake of alcohol.*

Question 1d.

Marks	0	1	2	Average
%	61	16	23	**0.6**

This question was not well answered.

High-quality responses included those below.

Through its canteen advisory service for schools & workplaces. This assists canteens to prepare & sell foods that are balanced & nutritional, and thus develop meal & menu plans that are nutrient dense that are not high in fat, sugar or salt, but contain a variety of nutritious foods, such as fresh fruit & vegetables, lean meat, low fat dairy & promote consumption of water, rather than processed & packaged meals & snacks, therefore promoting healthy eating.

Nutrition Australia devised the Healthy Living Pyramid to reduce the risk of lifestyle-related illnesses. The bottom of the pyramid is the 'eat most' section containing breads, cereals, legumes, vegetables and fruits. The middle section is the 'eat moderately' containing eggs, meat etc. The top section is the 'eat in small amounts', food high in fat and sugar. The pyramid encourages a balanced diet along with drinking plenty of water and exercise.

Question 2a.

Marks	0	1	2	Average
%	17	32	51	**1.4**

The majority of students were able to outline two ways in which the Men's Shed initiative could improve men's health.

An example of a good response is below.

The initiative allows men in local communities to socialise with one another and from new friendships (social health). The initiative allows men to learn new skills such as restoring old furniture, increasing their self-esteem and confidence (mental health).

Question 2b.

Marks	0	1	2	3	4	Average
%	41	8	15	17	20	**1.7**

Many students found this question difficult because they didn't know the principles of the social model of health. In some cases, students who accurately identified the principles found it difficult to make explicit how they were evident in the Men's Shed initiative.

Examples of high-quality responses for different principles are below.

Empowers individuals and communities by providing the opportunities for men to learn new skills such as wood working and restoring old furniture, increasing their knowledge. The focus on men's health wellbeing would also empower all men.

Addresses the broader determinants of health by looking at the social environment, allowing men to socialise with other men in the local community to improve their health and well-being.

Intersectorial collaboration-the Federal Government funds the Australian Men's Shed Association, which also gains the support and involvement of local communities so they are working together to improve men's health.

Question 3a.

Marks	0	1	2	Average
%	59	38	4	**0.5**

Many students found this question difficult.

Possible answers included (two of)
- eliminating malaria will decrease the burden of disease and contribute to improved health and sustainable human development
- eliminating malaria will help reduce the level of poverty. People will be able to work and earn money that contributes to the opportunities for the individual to access health care and food improving individual health
- reducing illness from malaria will contribute to increased wealth of the province as people will be able to work, earn an income and contribute productively to their community.

Question 3b.

Marks	0	1	2	3	4	Average
%	38	4	11	19	28	**2**

Students who knew the elements of sustainability generally scored quite well for this question, but many students were unable to apply aspects of the malaria program to elements of sustainability.

High-quality responses included those below.

Affordable: AusAID provides free treated mosquito nets, insecticides, and eliminates mosquito breeding grounds, hence the community does not have to pay, so is thus affordable.

Appropriate: Where malaria is a significant cause of death in developing regions, this malaria program is meeting the communities needs-it is also uses local drama performances for educating the community-which is culturally appropriate.

Equitable-there is a focus on women to form a 'mother's union' to share the prevention message with the community, preventing women from being marginalised and also empowering them to take control of their lives (also appropriate).

Question 3c.

Marks	0	1	2	3	Average
%	62	8	13	17	**0.9**

Many students were unable to identify one of the objectives of AusAID and, therefore, had difficulty applying it to the malaria program.

Examples of good responses are below.

Objective: To reduce poverty and achieve sustainable development in line with Australia's national interest.
Explanation: As the Isabel Province in the Solomon Islands is a neighbour to Australia, it is within Australia's interests to provide aid to them. By providing preventative measures, people are able to lead productive lives and generate incomes to reduce their poverty, and contribute to economic growth of Isabel Province, ensuring sustainable development.

Objective: Help to achieve the Millennium Development Goals in developing countries.
Explanation: This program in Isabel Province contributes to this objective as it is targeting MDG6: Combat HIV/AIDS, malaria & other diseases, by aiming halt & begin to reverse the spread of malaria in developing countries. It does this by providing mosquito nets, spraying households with insecticides, eliminating mosquito breeding ground & improving diagnosis of malaria, in order to reduce the rates of mortality and morbidity associated with malaria.

Question 4a.

Marks	0	1	2	Average
%	38	46	16	**0.8**

Students are expected to be able to outline the purpose of each of the Millennium Development Goals. While some students were able to do so, many students were unable to accurately provide an outline of the two components of the purpose.

The purpose is to reduce the number of deaths of women that occur as a result of pregnancy and childbirth, and to increase access to reproductive services by providing women with the appropriate information and care to promote health prior to, during and following childbirth.

Question 4b.

Marks	0	1	2	3	Average
%	26	37	26	10	**1.2**

Overall, students were able to describe a program to improve maternal health, although they needed to ensure that enough detail about the program was provided and the program was specifically linked to improving the maternal health of women in a developing country. The question also asked students for a program that could be implemented by a non-government organisation. AusAID is not a non-government organisation.

An example of a high-quality response is below.

World Vision Australia may provide funds to build health care centres in close proximity to communities with health care professionals and trained nurses. The healthcare centre provides free check ups to all women and also provides education on hygine and nutrition importance which is taught to women in regular classes, once women are taught they are then qualified to run the classes and teach other women.

Question 4c.

Marks	0	1	2	3	4	Average
%	39	18	22	11	10	**1.4**

Students who had described an appropriate program in part b. were better prepared to describe how the program could promote sustainable human development. Many students found this explanation quite difficult.

Examples of good responses are provided below.

By providing and developing the infrastructure to provide a medical centre it can be used by both present and future generations. The women have access to regular check ups which reduces the likelihood of complications. They are also provided with education on hygiene practices which decreases communicable disease improving standard of living. The education allows people to take better care of themselves, enhancing capabilities thus decreasing risks associated with pregnancy and improving maternal health.

If women can prevent complications such as haemorrhaging and obstetric fistula, through having access to a child and maternal health clinic and birth attendance, women are no longer suffering from or disability-so can lead productive, creative lives and develop to their potential, as well as being able to participate in the life of the community, thus contributing to human development. The program ensures sustainability, as women can receive knowledge from the program and pass it on to other members of the community and future generations, so it is socially sustainable. It is also economically sustainable as they can gain employment in the absence of disability-so can contribute to taxes and fund infrastructure in their community-meeting the needs of future and current generations.

Question 5a.

Marks	0	1	Average
%	26	74	**0.8**

The lower the socio-economic status of the population, the higher the death rates per 100 000 for both males and females.

Question 5b.

Marks	0	1	2	Average
%	57	21	21	**0.7**

Students who were able to identify a relevant biological determinant were able to answer this question well; however, many students did not provide a biological determinant.

Possible answers included those below.
- Body weight: overweight and obesity is higher among the lower SES compared to the higher SES. Obesity can lead to other conditions, such as cardiovascular disease and diabetes mellitus. These diseases may lead to mortality, increasing the number of deaths in the low SES compared to the high SES.
- Blood pressure: those from a lower SES are more likely to experience higher rates of hypertension than those in higher SES. Hypertension contributes to higher rates of cardiovascular disease. Cardiovascular disease is the leading cause of premature death in Australia.
- Glucose regulation: those from a lower SES are more likely to experience high glucose intolerance levels that are a precursor to type 2 diabetes, therefore increasing the burden of disease associated with this. Type 2 diabetes also increases the risk of cardiovascular disease in this population group.

- Birth weight: women from low SES are more likely to give birth to children with a low birth weight. This increases the risk of diseases such as cardiovascular disease, type 2 diabetes later in life and contributes to higher infant mortality rates.

Question 5c.

Marks	0	1	2	Average
%	28	13	59	**1.3**

The majority of students were able to outline the difference between incidence and prevalence.

Prevalence refers to the proportion of a population affected by a disease or condition at a particular time, whereas incidence is the rate at which new cases occur in a population during a specific time period (for example, per year).

Question 6a.

Marks	0	1	2	Average
%	20	46	33	**1.2**

Students were generally able to outline key features of asthma.

Possible responses included those below.
- Asthma is a chronic inflammatory condition or narrowing of the airways.
- It is characterised by episodes of wheezing, breathlessness and chest tightness.
- Common triggers for asthma include exercise, dust, pet hair and tobacco smoke.
- There is no cure for asthma, but it can be controlled or managed through the use of inhalers.

Question 6b.

Marks	0	1	2	Average
%	33	43	24	**0.9**

Overall, students were able to provide two reasons why asthma was identified as a National Health Priority Area.

Possible answers included those below.
- Asthma is a major burden of disease in Australia (particularly among young people).
- It is the leading cause of hospitalisation for children.
- Asthma costs the healthcare system a significant amount of money each year, mainly through hospitalisation.
- While asthma itself cannot be prevented, asthma attacks and their severity can be effectively managed and this improves quality of life and health system costs.

Question 6c.

Marks	0	1	2	Average
%	52	25	23	**0.7**

Some students failed to link the responsibility of the Federal and State Governments to asthma, which was an essential part of the question.

The following examples provide a range of options that could have been selected.

Federal Government
- key policy and guidelines around asthma management and control
- funding of asthma services provided by medical practitioners through Medicare Australia
- provides grants to states and territories and non-government organisations to run asthma programs
- regulates the safety of drugs used to manage asthma
- makes decisions about asthma medications that could be included under the Pharmaceutical Benefits Scheme
- monitors trends and provide reports on asthma to assist policy formation and implementation of relevant strategies

State Government
- funding public hospitals when someone suffers an asthma attack and needs to attend emergency departments or to be admitted to hospital
- implementation of public health policy relevant to asthma

- legislation around banning smoking in public places, which reduces the onset of an asthma episode
- provision of an ambulance service (not funding of) to transport an asthma sufferer to hospital

Question 6d.

Marks	0	1	2	Average
%	47	30	23	**0.8**

It is important students have an understanding of the different types of costs to the community associated with diseases and are able to apply these appropriately. While many students were able to do this, others did not make the specific link to asthma or provided examples that were costs to the individual.

Indirect
- People with asthma are significantly more likely to take days off work, school or study than people without asthma – which reduces productivity.

Intangible
- Family members and friends experience distress when an asthma sufferer experiences an asthma attack.
- The grief experienced by friends and family if an asthma sufferer dies as a result of an asthma attack.
- Anxiety caused to the family and the community if a child has an asthma attack.

Question 6e.

Marks	0	1	2	3	Average
%	43	27	21	10	**1**

The ability to describe programs relevant to each of the National Health Priority Areas is important key knowledge in Unit 3, Outcome 1. Students described a range of relevant asthma programs, but they need to be reminded to provide sufficient detail when describing programs.

Examples of good responses are provided below.

Asthma Friendly Schools-Asthma Foundation

To become an asthma friendly school a school must meet a range of criterias such as proving an area with low levels of allergens and the school must have qualified teachers to deal with asthma attacks which enables a reduction in the severity if a child suffers an asthma attack. The program also raises awareness about the chronic condition by providing information posters and leaflets in schools, increasing knowledge of risk factors improving the environment for asthma suffers to reduce the amount of asthma attacks thus reducing burden of disease.

National Asthma Action Plan (NAAP): This plan aims to increase awareness about asthma in the community, by providing support & advice to asthma sufferers, but also by implementing asthma action plans in schools & workplaces to equip staff with the appropriate information in the event of an individual's asthma attack, or severe asthma symptoms. 'Asthma Friendly schools' will ensure that there are staff available to provide the appropriate care to someone with asthma, including what to do in an emergency or how to use a puffer inhaler, in line with the regulations laid out by NAAP.

Question 7a.

Marks	0	1	2	3	4	Average
%	29	20	27	11	13	**1.6**

In this question students needed to make specific reference to the information in the table that related to access to healthcare and explicitly refer to the differences in life expectancy between Australia and Swaziland.

An example of a good response is provided below.

In Australia, people have great access to skilled health personnel (99% of births attended). As a result, there is a reduced risk of pregnancy complications and maternal mortality. Australians also have access to many doctors (29.9 per 10,000), so when they are feeling ill, are able to be effectively treated. These factors allow Australia to have a high life expectancy at 82 years. In Swaziland, people have less access to skilled health personnel (74% of births attended) and so have a higher risk of pregnancy complications and increased maternal mortality. In Swaziland, there is reduced access to doctors (1.6 per 10,000 population) and so less people are likely to be effectively treated from curable diseases such as malaria and tuberculosis. As a result, Swaziland has a much lower life expectancy than Australia at 49 years.

Question 7b.

Marks	0	1	2	Average
%	41	41	17	**0.8**

Many students were able to provide an accurate explanation of the term food security. Possible answers included
- food security exists when all people, at all times, have access to sufficient, safe and nutritious food to meet their dietary needs for an active and healthy life
- the state in which all persons obtain nutritionally adequate, culturally appropriate and safe food regularly through local non-emergency sources.

Question 7c.

Marks	0	1	2	3	4	5	6	Average
%	17	11	17	20	17	10	6	**2.7**

Students needed to use specific examples from the Mealie Meal project and use these to show how the concepts of health, human development and sustainability interrelate. Many students chose to use specific examples from the project and related them to health, human development and sustainability in a separate way, without showing how they interrelated. Full marks were awarded to students who were able to use the examples to show the interrelationships between the three concepts.

The following is a possible answer.

The program promotes the health of orphaned children and their families by providing them with emergency meals. The families are encouraged to grow their own backyard garden, as well as raise and sell chickens or pigs. In doing this the health of the families and individuals is improved as they have greater access to nutritious home-grown food, preventing malnutrition. They are provided with an income from selling the chickens and pigs, which means they are able to pay for healthcare and education, enhancing their capabilities to develop to their full potential. Also, teaching families about agriculture and animal rearing for income can empower them. It allows individuals to lead productive, creative lives according to their needs and interests. The participants of the program can pass on their acquired knowledge and skills to the next generation to help ensure the program continues, and the future generations can continue to grow nutritious foods and sell animals to promote their own health and human development.

The following is an example of a high-scoring response.

By providing monthly emergency food supplements, 'go-go' led families are able to remain food secure, reducing their risk of malnutrition and increase their immunity to fight off diseases such as measles and tuberculosis. Food security is further established through the encouragement to grow own backyard gardens. By receiving help from agricultural specialists and being provided with tools and seeds to grow gardens, people are able to achieve a decent standard of living and lead productive, creative lives in accord with their needs and interests. The education on how to develop these gardens is given to other members of the community and can be passed down from generation to generation, ensuring social sustainability. By providing income generating activities such as selling chickens or pigs, families are able to contribute to the economic growth of the country, allowing the needs of future generations to be met through economic sustainability. This generated income could help all of the orphaned children to get an education to enhance high income earning employment opportunities in the future to break the poverty cycles, develop to their full potential and allow these children to make decisions affecting their lives.