Outcome 1: Students should be able to analyse factors contributing to variations in health status between Australia and developing countries and develop an understanding of human development and sustainability concepts.

Task: Test

- The task will be marked out of 50 and contributes 50% of the marks allocated for this outcome.

- You have 60 minutes to complete the task. No notes or materials other than the data provided may be accessed during this time.

- Answer in the spaces provided.
QUESTION 1 (3 marks)

Define the following terms.

a. Human Development. 2 marks

b. Sustainability. 1 mark

QUESTION 2 (3 marks)

The World Health Organisation has divided each of its member states into the mortality strata.

a. Explain the Mortality Strata. 2 marks
Chad is a country in Africa that is classified as Strata D according to the World Health Organisation’s mortality strata system.

b. Outline why Chad is classified as Strata D? 1 mark

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**QUESTION 3** (16 marks)

*Analyse the table below and answer Questions 3a – 3e.*

**Table 1: Health Status indicators of Australia and developing countries.**

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>LIFE EXPECTANCY (Years - 2012)</th>
<th>U5MR (/1000)</th>
<th>MATERNAL MORTALITY (/100,000)</th>
<th>ANTENATAL CARE COVERAGE (%)</th>
<th>GNI (Per Capita $)</th>
<th>ACCESS TO CLEAN DRINKING WATER (%)</th>
<th>HDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRALIA</td>
<td>82</td>
<td>5</td>
<td>7</td>
<td>98</td>
<td>41045</td>
<td>100</td>
<td>.933</td>
</tr>
<tr>
<td>NIGER</td>
<td>58</td>
<td>114</td>
<td>590</td>
<td>46</td>
<td>869</td>
<td>52</td>
<td>.337</td>
</tr>
<tr>
<td>MOZAMBIQUE</td>
<td>50</td>
<td>90</td>
<td>490</td>
<td>92</td>
<td>967</td>
<td>49</td>
<td>.393</td>
</tr>
<tr>
<td>SOUTH AFRICA</td>
<td>57</td>
<td>45</td>
<td>300</td>
<td>97</td>
<td>11787</td>
<td>95</td>
<td>.658</td>
</tr>
</tbody>
</table>

*Source: United Nations Development Programme, Human Development Report, 2014*
a. Using the data in Table 1, compare the health status of Australia to that of two developing countries listed. 4 marks

b. The United Nations classifies their countries using the Human Development Index (HDI). Outline the HDI and explain how it is calculated. 4 marks

c. Analyse the HDI values in Table 1 and identify the level of human development Australia and South Africa would be classified under. 2 marks

Australia: ________________________________

South Africa: ________________________________
d. Using the data from Table 1, identify the relationship between GNI per capita and HDI. 2 marks


e. Using information from Table 1, explain how access to antenatal healthcare might account for the difference in life expectancy between Australia and a developing country. 4 marks


QUESTION 4 (4 marks)

Read the case study and answer Question 4a and b.

More than 1.5 billion people live in countries affected by conflict. Syria, South Sudan, Central Africa Republic are just some of the countries where people are highly vulnerable and suffer serious violent conflict.


a. Explain how peace and political instability may influence the health status in developing countries such as Syria. 2 marks

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b. Identify and discuss the impact of another factor (other than peace/political stability) that might impact the human development of people who live in conflict affected regions. 2 marks

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QUESTION 5 (4 marks)

Consider the following table to answer Question 5

Table 2: Health Status indicators of Australia and developing countries.

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>HIV PREVALENCE MALE 15-24 (%)</th>
<th>HIV PREVALENCE FEMALE 15-24 (%)</th>
<th>ADULT MORTALITY RATE MALE (/1000)</th>
<th>ADULT MORTALITY RATE FEMALE (/1000)</th>
<th>ADULT LITERACY RATE 15 YEARS + (%)</th>
<th>OBESITY RATE (% 20 YEARS OR OLDER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRALIA</td>
<td>N/A</td>
<td>N/A</td>
<td>80</td>
<td>46</td>
<td>N/A</td>
<td>25</td>
</tr>
<tr>
<td>BOTSWANA</td>
<td>4</td>
<td>7</td>
<td>301</td>
<td>237</td>
<td>85</td>
<td>14</td>
</tr>
<tr>
<td>MALAWI</td>
<td>3</td>
<td>5</td>
<td>384</td>
<td>347</td>
<td>61</td>
<td>4.5</td>
</tr>
<tr>
<td>SWAZILAND</td>
<td>10</td>
<td>20</td>
<td>558</td>
<td>504</td>
<td>88</td>
<td>23</td>
</tr>
</tbody>
</table>


Using data in the table above, identify a similarity and a difference in the key health status indicators between Australia and a developing country listed. 4 marks
**QUESTION 6 (4 marks)**

*Read the case study and answer Question 6a and b.*

Cancer is a leading cause of death worldwide, accounting for 8.2 million deaths in 2012. About 30% of cancer deaths are due to behavioural and dietary factors; including high tobacco and alcohol use. More than 60% of world’s total new annual cases occur in developing regions (Africa, Asia and Central and South America) and these regions account for 70% of the world’s cancer deaths


a. Explain what is meant by global marketing. 2 marks

b. Explain how the global marketing of tobacco and or alcohol in developing countries could have helped contribute to 70% of the world’s cancer deaths. 2 marks
QUESTION 7 (4 marks)

Read the case study and answer Question 7.

Non-Communicable diseases (NCDs), also known as chronic diseases, are not passed from person to person. NCDs kill more than 36 million people each year with 80% of NCD deaths (29 million) occurring in low and middle-income countries.


Identify two factors and explain how they may contribute to low and middle-income countries experiencing higher rates of NCD mortality compared to high-income countries.

FACTOR 1: 2 marks

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FACTOR 2: 2 marks

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QUESTION 8 (4 marks)

Consider the following table to answer Question 8

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>LIFE EXPECTANCY (Years) 2012</th>
<th>INFANT MORTALITY (/1000 live births) 2011</th>
<th>Gross National Income (Per person PPP* $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUSTRALIA</td>
<td>82</td>
<td>4</td>
<td>41045</td>
</tr>
<tr>
<td>INDONESIA</td>
<td>71</td>
<td>26</td>
<td>8970</td>
</tr>
<tr>
<td>MEXICO</td>
<td>78</td>
<td>14</td>
<td>15854</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>66</td>
<td>69</td>
<td>4651</td>
</tr>
</tbody>
</table>


From the data provided above, identify the countries that would have the lowest and highest Human Development Index and justify your choices.

Highest HDI: _______________________________________________ 2 marks

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Lowest HDI: _______________________________________________ 2 marks

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QUESTION 9 (8 marks)

Read the case study and answer Question 9a and b.

Mobile phones help people with diabetes to manage fasting and feasting during Ramadan.

Mariama Diallo, aged in her sixties, was diagnosed with diabetes ten years ago. Although she is very strict about following a healthy lifestyle, Mariama is always on the look out for information and advice to help her manage her condition.

"Drink one litre of water every morning before you begin fasting."
"Take care not to overeat and watch out for foods high in sugar such as dates."
"Ask your doctor to adapt the dose and timing of your diabetes medication before you fast."

Throughout the month of Ramadan, Mariama will receive text messages like the statements above on her mobile phone to help guide her through the month of daytime fasting and evening feasts, which can be particularly challenging for people with diabetes. These health messages are the first phase of “mDiabetes”, a new project that has been launched in Senegal just in time for the month of Ramadan. Members of the country’s diabetic patient association, health professionals and the general public are being encouraged to sign up to receive these free text messages that aim to increase awareness and help people with diabetes to avoid complications triggered by fasting and feasting. MDiabetes is the first project established for a French-speaking country under “Be He@lthy Be mobile”, a joint global initiative by WHO and the International Telecommunication Union (ITU). The initiative supports countries to set up large-scale projects that use mobile technology, in particular text messaging and apps, to control, prevent and manage non-communicable diseases such as diabetes, cancer and heart disease. Launched in 2013, the initiative is also working on an mCessation for tobacco programme in Costa Rica, an mCervical cancer programme in Zambia and has plans to roll out mHypertension and mWellness programmes in other countries.

Diabetes numbers on the rise

Diabetes is fast becoming one of the major causes of premature illness and death worldwide. WHO estimates that 347 million people worldwide have diabetes, 90% of whom have type 2 diabetes, which is largely caused by excess body weight and physical inactivity.

In countries like Senegal, rapid urbanization and changing lifestyles have resulted in a massive increase in obesity particularly in young people, many of whom are at high risk of developing type 2 diabetes. Based on an estimation that 4-6% of people in Senegal have diabetes, at least 400 000 Senegalese people are living with the disease but only 60 000 of them have been diagnosed and are following treatment in the health system.

Many people do not know that they have diabetes as they are unaware of the causes and symptoms of diabetes, and often have limited access to health services, particularly in rural areas. Lack of access to diagnosis and management of diabetes can have serious consequences including heart disease, stroke, blindness, kidney failure and severe foot sores that may require amputation. Every year during Ramadan the health authorities in Senegal witness a peak in the urgent hospitalization of people with uncontrolled diabetes. “Ramadan is a period of high sugar consumption,” says Mr. Baye Oumar Guèye, national secretary of the Senegalese Diabetic Support Association and a diabetic himself. “mDiabetes is an essential and welcome initiative that allows people with diabetes to observe the holy month of Ramadan while avoiding the risk of complications.”

Mobile phones in every home

For the past decade, the lack of a stable internet and phone network in developing countries has hampered the use of eHealth to improve access to health care. “A rapid explosion in mobile technology, particularly in Africa, is finally making several kinds of eHealth initiatives possible,” says Mr. Hani Eskandar, ICT applications coordinator at the International Telecommunication Union. In Senegal, 83% of the population has a mobile telephone and 40% of these are smartphones, which are capable of receiving images and videos. mDiabetes is the first initiative to take advantage of such widespread mobile technology to reach millions of Senegalese people with health information and expand access to expertise and care. The project is a key part of the national plan to fight non-communicable diseases. It also includes a training module for health workers and will allow for remote consultations and monitoring of patients in rural areas.
The pilot project is expected to trigger more eHealth initiatives in Senegal and serve as a model for other countries in their fight against non-communicable diseases. And for the thousands of Senegalese people like Mariama who are living with diabetes, it is hoped that mDiabetes will help them to manage their disease better and improve their quality of life. “I really appreciate this programme and plan to get the most out of it,” she says.


**a. Using the elements of sustainable programs, evaluate the sustainability of the Senegal MDiabetes program.**  
4 marks

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**b. Explain how the MDiabetes program could promote Health and Human Development of the Senegal population.**

**Impact on Health:**  
2 marks

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Impact on Human Development: 2 marks

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END OF TEST PAPER