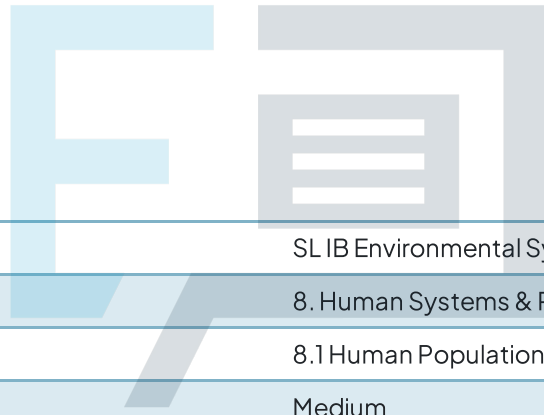




# 8.1 Human Population Dynamics

## Mark Schemes



Course	SL IB Environmental Systems & Societies (ESS)
Section	8. Human Systems & Resource Use
Topic	8.1 Human Population Dynamics
Difficulty	Medium

# Exam Papers Practice

To be used by all students preparing for  
SL IB Environmental Systems & Societies (ESS)  
Students of other boards may also find this useful

1a

### Indicative Content

Issues resulting from the human population increase include:

Any **three** from the following:

- If a population ages, pension costs will be higher; [1 mark]
- If there are more children in a population, more school buildings will be required; [1 mark]
- If there is increased consumption, climate change / global warming will continue/increase; [1 mark]
- If there are more people, there will be a greater demand for food; [1 mark]
- If there are more people, this will increase pressure on natural resources; [1 mark]
- If there are more people, there will be a strain on healthcare systems/services; [1 mark]
- If there are more people, there will be an increase in urbanisation / demand for housing; [1 mark]
- If there are more people, there will be overcrowding/congestion in urban areas; [1 mark]
- Greater space required for increasing population(s) will result in loss of biodiversity due to habitat destruction **OR** negative impacts on ecosystems / wildlife habitats; [1 mark]
- If there are more people, there will be greater pollution / waste generation; [1 mark]
- If there are more people, there will be greater pressure on energy supplies; [1 mark]
- If there are more people, there will be increased competition for jobs / opportunities; [1 mark]
- If there are more people, there will be greater potential for social unrest / conflicts over resources; [1 mark]
- If there are more people, there will be a greater demand for water / an increase in water scarcity issues; [1 mark]

1b

Indicative Content	Commentary
<p>i) The percentage of females aged 25–29 in the world in 2017 was:</p> <ul style="list-style-type: none"> <li>• 4(%); [1 mark]</li> </ul> <p>ii) The predicted percentage changes in the world population in people aged from 0 to 49 and those aged 50 and over are as follows:</p> <ul style="list-style-type: none"> <li>• The number of people aged from 0 to 49 will <u>decrease</u>; [1 mark]</li> <li>• The number of people aged 50 and over will <u>increase</u>; [1 mark]</li> </ul>	<p>To complete part (i), first ensure that you are looking at the correct bar on the graph for the age group – use a ruler or a piece of paper to help you</p> <p>Ensure that you are looking at the correct side of the graph – males are shown on the left and females on the right (usually)</p>

2

Indicative Content	Commentary
<p>Reasons why the population growth rate in Mexico is expected to decrease between the present day and 2060 could include:</p> <p>Maximum of <b>two</b> from the following:</p> <ul style="list-style-type: none"> <li>• Less births / reduction in birth rate, due to...; [1 mark]</li> <li>• Use of / access to / ability to afford contraception; [1 mark]</li> <li>• People more educated about using contraception/family planning; [1 mark]</li> <li>• More women will have careers / more women will have greater access to education; [1 mark]</li> </ul>	<p>Population growth rate is determined by both the birth rate and the death rate of a county/region</p> <p>This means that factors affecting both the birth rate and death rate need to be included in your answer in order to gain full marks for this questions</p>

<ul style="list-style-type: none"> <li>• Children are expensive; [1 mark]</li> <li>• The introduction/implementation of government policies to reduce birth rate; [1 mark]</li> </ul> <p>Maximum of <b>two</b> from the following:</p> <ul style="list-style-type: none"> <li>• More deaths / increase in death rate, due to...; [1 mark]</li> <li>• Obesity / heart disease; [1 mark]</li> <li>• Increase in violent crime / murders; [1 mark]</li> <li>• Alcohol related deaths; [1 mark]</li> <li>• Increase in transmission of certain diseases e.g. AIDS/HIV; [1 mark]</li> <li>• War / civil war; [1 mark]</li> <li>• Lack of (sufficient) hospitals; [1 mark]</li> <li>• Lack of (sufficient) sanitation / clean water; [1 mark]</li> </ul>	
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# Exam Papers Practice

Indicative Content	Commentary
<p>The rate of population growth changes as a country moves from Stage 1 to Stage 4 because:</p> <p>Any <b>four</b> from the following:</p> <ul style="list-style-type: none"> <li>• There are changes in birth rate and death rate <b>OR</b> growth occurs when the birth rate is higher than the death rate <b>OR</b> decrease occurs when the death rate is higher than the birth rate; [1 mark]</li> </ul>	<p>Identifying the general impacts of changes in birth and death rates on population growth would only gain one mark here and needs to be supported with evidence from the graph</p> <p>Your answer needs to state <b>when</b> the growth and decrease of populations occurs</p> <p>The additional marks are gained by</p>

## Exam Papers Practice

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| <ul style="list-style-type: none"> <li>• Stage 1 small changes in death rate while birth rate remains the same <b>OR</b> both death rate and birth rate stay the same <b>OR</b> high birth rate and high death rate; [1 mark]</li> <li>• Stage 2 birth rate stays the same but the death rate falls <b>OR</b> birth rate is higher than the death rate; [1 mark]</li> <li>• Stage 3 birth rate falls but death rate stays the same; [1 mark]</li> <li>• Stage 4 death rate stays the same but small changes in birth rate <b>OR</b> both birth rate and death rate stay the same <b>OR</b> low birth rate and low death rate; [1 mark]</li> </ul> | <p>stating what happens to the birth and death rates in the <b>different stages</b> of the demographic transition model shown in the figure</p> <p>To achieve full marks the answer needs to make <b>links</b> between the birth rate and death rate</p> |
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4

Indicative Content	Commentary
<p>Birth rates are still high in many LEDCs due to:</p> <p>Any <b>four</b> from the following:</p> <ul style="list-style-type: none"> <li>• Lack of / don't use / cannot afford contraception; [1 mark]</li> <li>• Lack of education about contraception / about problems of large families / about family planning; [1 mark]</li> <li>• Children needed for work / to earn money / for farming / needed to look after elderly (no pensions); [1 mark]</li> </ul>	<p>It is important in this answer to ensure that the reasons you give are for <b>LEDCs</b> and not MEDCs</p> <p>This can be answered as four separate points</p> <p>Make sure that ideas are not repeated</p> <p>For example, family planning is included in the same marking point as contraception in the mark scheme so if you include both in your answer you would only gain</p>



<ul style="list-style-type: none"><li>• Children needed to do household chores e.g. fetching wood/water / cleaning house / looking after younger children; [1 mark]</li><li>• Traditional views about large families / polygamy / families want a male child (so have more children if daughters come first); [1 mark]</li><li>• Religious/cultural views on contraception / abortion / family size; [1 mark]</li><li>• High infant mortality <b>OR</b> families have more babies so some will survive; [1 mark]</li><li>• Early marriages / teenage pregnancies; [1 mark]</li><li>• Lack of emancipation for women / women don't have careers / lack of education for women; [1 mark]</li><li>• No access to abortion; [1 mark]</li></ul>	<p>one mark</p>
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Exam Papers Practice