Question 1: No Stimulus — 7 points

(A) **Define the concept of RNI.** — **1 point**

Accept one of the following:

- A1. The difference between the crude birth rate and crude death rate.
- A2. The difference between the crude birth rate and crude death rate, expressed as a percentage or as thousands per population.
- A3. The number of live births and the number of deaths divided by the population per thousand population.
- A4. The difference between the crude birth rate and crude death rate over a particular time period (e.g., a year).
- A5. The annual percent change in population, not including immigration or emigration.

(B) **Describe how a country may have a negative RNI.** — **1 point**

Accept one of the following:

- B1. A country can have a negative RNI if the death rate is higher than the birth rate in a given year.
- B2. A country can have a negative RNI if the number of deaths exceeds the number of live births in a given year.

(C) **Compare ONE difference between RNI and the total fertility rate as indicators of population change.** — **1 point**

Accept one of the following:

- C1. RNI is the annual percent growth rate of a population (not including immigration or emigration), while the total fertility rate (TFR) estimates the number of children that may be born to women of birthing age or aged 15–45.
- C2. RNI includes both crude birth and death rates, while TFR is a measurement of the number of children likely to be born to a woman and does not involve any mortality measures.
- C3. RNI is an annual statistic for a specific year, while the TFR is an estimate at a specific point in time (e.g., snapshot).
- C4. An RNI of 0.0 is a zero-growth population, while a TFR of 2.1 is a population that is replacing itself but will not grow in numbers over time.
- C5. RNI can predict future population growth based upon the demographic transition, while TFR can predict future population growth by comparison to the replacement rate (TFR=2.1).

(D) **Explain ONE reason why RNI in urban areas may vary significantly from RNI in rural areas in the same country.** — **1 point**

Accept one of the following:

- D1. Urban populations tend to have fewer children than rural populations due to the reduced need for agricultural labor.
- D2. The cost of living in urban areas (e.g., housing, schools) tends to be higher than in rural areas, and this may incentivize women to have fewer children women leading to a lower RNI.
- D3. Women in urban areas tend to have greater access to health care, health education, and/or family planning resources, which reduces the probability of having or the propensity to have children (fecundity).
- D4. Women in urban communities commonly work outside of the home, having less time to care for children.
- D5. Families in urban housing tend to have less space to house children.
- D6. Women in urban areas tend to have higher levels of education, which reduces the probability of having children, the propensity to have children (fecundity), and/or delays the age at which women have children.
- D7. Women in urban areas tend to have more political power, which reduces the probability of having children, the propensity to have children (fecundity), or delays the age at which women have children.
- D8. Women in urban areas tend to have greater financial stability, which reduces the probability of having children, the propensity to have children (fecundity), or delays the age at which women have children.
- D9. The higher level of access to health care in cities reduces infant and/or child mortality rates, which reduces the need for families to have additional children.
- D10. People in rural areas may lack access to or may not be able to afford contraception and family planning due to increased levels of poverty, or lack of health services.
- D11. People in rural areas may hold on to traditional cultural values that do not support limiting birth rates, resulting in higher rates of natural increase in rural areas.
- D12. People in rural areas may need more children to work or help with labor-intensive agricultural work, resulting in higher rates of natural increase in rural areas.
- D13. Women in rural areas may lack access to or may not be able to afford education, limiting opportunities outside the home, and resulting in higher rates of natural increase.
- D14. Women in rural areas may have less access to health care which may increase infant mortality rates and/or child mortality rates, and/or increase the need or desire for families to have additional children.

(E) **Explain why there are often differences in doubling times between less developed countries and more developed countries.** **1 point**

Accept one of the following:

- E1. Doubling times may vary because less developed countries (LDCs) have higher rates of natural increase than more developed countries (MDCs).
- E2. Doubling times may vary because MDCs have lower rates of natural increase than LDCs.
- E3. LDCs have social or economic conditions that may result in high population growth rates or high fertility rates (e.g., domestic role of women in society, low age of marriage, highly agricultural society, high levels of religious adherence, and/or high infant mortality rates, low availability of healthcare and/or family planning) that reduce the amount of time needed for a population to double in size, as compared to many MDCs, which do not have these social or economic conditions.
- E4. MDCs have social and economic conditions that can result in low population growth rates and/or low fertility rates (e.g., equitable roles of women in society, marriage at a later age, service and technology-based economy, highly urbanized society, low levels of religious adherence, and/or low infant mortality rates, high accessibility to healthcare and/or family planning) that increase the amount of time needed for a population to double in size, as compared to many LDCs where these social and economic conditions do not exist.
- E5. MDCs tend to have lower birth rates or lower total fertility rates than LDCs, which, combined with low death rates and/or a lower RNI, result in a longer doubling time in MDCs.
- E6. LDCs tend to have higher RNIs than MDCs, resulting in a shorter doubling time in LDCs.
- E7. LDCs tend to have higher birth rates or higher fertility rates than MDCs, which, combined with lower death rates and/or a higher RNI, result in a shorter doubling time in LDCs.
- E8. MDCs tend to have lower RNI than LDCs, resulting in a longer doubling time in MDCs.

(F) **Explain ONE reason ethnonationalism might lead a government to promote pronatalist policies.** **1 point**

Accept one of the following:

- F1. A government might promote pronatalist policies because children can be seen as a symbol of national pride and/or a centripetal force (cultural cohesion).
- F2. A government might promote pronatalist policies because increases in population of a national, ethnic, culture group, or nation-state can improve social cohesion or social relations.
- F3. A government might promote pronatalist policies because increased birth rates can bolster the desire for territorial expansion, economic growth, irredentism, or militancy (e.g., increased size of the military, social status gained through military service).
- F4. The government of a theocratic state might promote pronatalist policies based on religious doctrine.
- F5. Some governments may promote pronatalist policies aimed at the majority (e.g., dominant) culture (e.g., ethnic) group to increase the political power of the majority and/or decrease the power of minority groups.
- F6. A government with restrictive immigration laws or policies may promote pronatalist policies to reverse a declining total population.

(G) **Explain the degree to which a unitary government may be more effective than a federal government in enforcing antinatalist policies.** **1 point**

Accept one of the following:

Statement or indication of a moderate or high degree

AND

- G1. A unitary government could more easily enact countrywide family planning policies or laws that restrict reproduction (e.g., high penalties, criminalization, financial disincentives, use of informants and/or secret police to identify violators).
- G2. A unitary government may have an effective, specialized, and/or centralized national public health care system and/or national health insurance system (e.g., provide family planning services more effectively and/or at lower cost).
- G3. A unitary government may have a more efficient system to deliver incentives directly to participating citizens (e.g., have fewer levels of governance where money could be siphoned off for other public programs or be stolen through corruption).
- G4. A federal government may have regional variations in law or policy that could result in less effective programs in some areas (e.g., variations in the delivery of healthcare, access to family planning services, the enforcement of federal policies to control population or reduce fertility rates).

OR

Statement or indication of a low or moderate degree

AND

- G5. There may be little to no difference between the effectiveness of unitary governments and federal governments to deliver an antinatalist policy if there is an inadequate, inaccessible, and/or unaffordable healthcare system (e.g., developing effective family planning programs or policies, access to family planning services).
- G6. There may be little to no difference between the effectiveness of unitary governments and federal governments to deliver an antinatalist policy if there is an adequate, accessible, and/or affordable healthcare system.
- G7. There may be little to no difference between the effectiveness of unitary governments and federal governments to deliver an antinatalist policy if the government lacks enforcement capabilities or lacks the ability to fund and/or deliver incentives to participating citizens.

Total for question 1: 7 points