
AP[®] Human Geography

Sample Student Responses and Scoring Commentary

Set 1

Inside:

Free-Response Question 2

- Scoring Guidelines**
- Student Samples**
- Scoring Commentary**

Question 2: One Stimulus**7 points**

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- (A)** Using numerical data to support your answer, identify the least urbanized country in the table shown. **1 point**

Accept the following:

- A1. Afghanistan’s population is the least urban, with 25% urbanized.

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- (B)** Using the data shown in the table, explain ONE difference in urbanization patterns between Australia and Bangladesh. **1 point**

Accept one of the following:

- B1. Australia has a higher percentage of urban population than Bangladesh does, or Australia’s percent urban population is more than twice that of Bangladesh.
 - B2. Australia’s urban population growth rate is lower (e.g., 1% lower) than the urban population growth rate of Bangladesh.
 - B3. All of Australia’s urban population has access to safe drinking water, while less than half (e.g., 45%) of Bangladesh’s urban residents do.
 - B4. All of Australia’s urban population has access to electricity, whereas Bangladesh has a slightly lower percentage (e.g., 94%) with access to electricity, or 6% of the urban Bangladeshi population is without electricity.
 - B5. While there are no squatter settlements in Australian urban areas, more than half (e.g., 55%) of Bangladesh’s urban residents live in squatter settlements.
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- (C)** Describe ONE common characteristic of the built environment of squatter settlements in developing countries. **1 point**

Accept one of the following:

- C1. Squatter settlements are often self-constructed using whatever materials are available to residents at low or no cost (e.g., scrap metal, lumber, cardboard, woven straw mats, tarps, bricks, cinderblocks, tents).
 - C2. Squatter settlements typically lack zoning regulations, so may be constructed haphazardly in an unplanned way.
 - C3. Squatter settlements typically have high density compared to housing in rural areas or single-family homes in the urban areas of developing countries.
 - C4. Squatter settlements are often constructed in (marginal) locations with unfavorable or precarious physical geographical or environmental characteristics (e.g., hillsides, riverbanks, polluted areas, swampy areas).
 - C5. Squatter settlements may lack access to basic infrastructure (e.g., sewers, piped water, electricity lines) and/or may have to pay for the delivery of water or the installation of utilities.
 - C6. Squatter settlements often rely on self-constructed infrastructure (e.g., rainwater catchment systems, trash disposal, pit latrines, solar panels on roofs) that is not connected to public infrastructure.
 - C7. Squatter settlements typically lack sidewalks and have unpaved streets.
 - C8. Squatter settlements typically have informal businesses (e.g., small stores, taxi service, day care, street vendors, private communication, and transportation systems).
 - C9. Squatter settlements typically contain private homes, small businesses in the informal sector, and buildings that house social services (e.g., community health clinics, community stores, community schools).
 - C10. Squatter settlements typically contain both self-constructed or fully constructed homes with more permanent materials (e.g., brick, cement block) inhabited by longer-term residents.
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- (D)** Explain ONE positive health effect likely to result from improved access to electricity in urban areas. **1 point**

Accept one of the following:

- D1. People can use air conditioners and/or electric fans and/or heaters, thus lessening the risk of heat or cold-related illnesses.
- D2. People have improved access to refrigeration, reducing the risk of foodborne illnesses and/or preserving medicines that may need refrigeration.
- D3. With the ability to use electric cooking stoves and/or electric heaters, people are less exposed to unhealthy, indoor air pollutants from fuels (e.g., wood, kerosene, animal dung) used for cooking or heating.
- D4. There is less risk of personal injury from electric appliances than from kerosene or open fires.
- D5. With access to dependable electricity, healthcare facilities can operate more efficiently (e.g., lifesaving equipment, imaging technology, laser surgery, dialysis).
- D6. People have better access to hot water for sanitizing (e.g., hand washing, sanitizing equipment, disinfecting).
- D7. People can use electronic appliances (e.g., laptops, smartphones) to access the Internet and research health issues or solutions that make them more knowledgeable.
- D8. Home medical care can become more efficient with access to electricity (e.g., respiratory therapy, dialysis, motorized lift beds, chairs, and wheelchairs).
- D9. Street lighting may lessen the risk of personal injury (e.g., pedestrians crossing the street).

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- (E)** Explain ONE reason why individuals in less developed countries are likely to move to cities, contributing to the global trend of rural to urban migration **1 point**

Accept one of the following:

- E1. People may move to cities to find work (e.g., better and/or higher-paying work).
 - E2. People move to cities because there may be insufficient economic opportunities in rural areas due to job loss (e.g., mechanization and agribusiness), and/or increasing cost of land (e.g., rents, taxes).
 - E3. People may move to cities for educational opportunities.
 - E4. People may move to cities to access better services and/or infrastructure (e.g., health care, housing, clean water, electricity).
 - E5. People may move to cities because of enhanced social and cultural opportunities.
 - E6. People may have lost their homes in rural areas due to disasters (e.g., floods, droughts, war) and/or environmental degradation (e.g., soil erosion, water resource depletion).
 - E7. People may have lost their homes in rural areas due to infrastructure projects (e.g., dams, canals, roads).
 - E8. People may move to cities to join family members who live there.
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(F) Explain ONE likely effect of rural to urban migration on the economy of a developing country. **1 point**

Accept one of the following:

- F1. As the urban labor force grows due to rural to urban migration, urban-based manufacturing (e.g., secondary) and service (e.g., tertiary) sectors may expand.
- F2. Urban standards of living tend to be higher than rural standards of living, creating uneven development within the country.
- F3. Rural areas and/or primary sector activities may be neglected as governments, and private businesses focus investments in urban areas.
- F4. Rural economies may benefit from money that people who have moved to cities send back to their relatives in rural areas.
- F5. As migrants move to cities, higher wages may generate disposable income that stimulates further economic growth (e.g., the multiplier effect) and/or the creation of additional employment opportunities.
- F6. Agglomeration economies and/or agglomeration economies of scale may spur economic growth in a developing country due to lower production costs and higher productivity.

(G) Explain a limitation of the data shown in the table in illustrating challenges to urban sustainability. **1 point**

Accept one of the following:

- G1. There are no data on environmental components of sustainability over time (e.g., air quality, sprawl, greenhouse gas emissions, ecological footprint, waste production and treatment, vulnerability to natural hazards).
- G2. There are insufficient data on economic components of urban sustainability (e.g., the type of energy production and use [non-electric], employment or unemployment, transportation, cost of living, poverty).
- G3. There are insufficient data on social components of urban sustainability (e.g., environmental injustice, demographic characteristics such as age and race, governance, health, education, urban upgrade, or redevelopment programs).
- G4. The data in the table do not provide information on policies, projects or sustainability planning programs.
- G5. Data shown is at a national scale and does not provide for city-specific data nor variability among cities.

Total for question 2: 7 points

Important: Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1

Question 2

Question 3



Begin your response to each question at the top of a new page. Do not skip lines.

A. Labor costs determine if food processing facilities are closer to the inputs or market. Using Weber's Least Cost Theory, bulk reducing products like corn are processed in factories closer to the fields b/c it takes less money to transport processed corn, which is lighter, to the market.

B. Agribusinesses employ agricultural technology to maximize their profits in MDC's b/c machines can produce a higher yield of products than human labor, which reduces labor costs. Economies of scale contributes to the effect of higher yield on higher profit.

C. Agribusinesses locate their food processing facilities in towns and rural areas due to the cheap labor compared to inner cities. People are willing to work for less wages b/c the land value is low as well as the cost of living. For example, many workers in the midwest work in manufacturing b/c of the relatively low population density.

D. Commodity chains explain the process of globalization where many core, semi-periphery, and periphery countries may all ~~produce~~ contribute to developing ~~orange juice~~ hamburgers. Mexico may export beef to the US b/c of its abundance of secondary ~~sectors~~ processing plants, and the US may get the buns from an LDC that specializes in bread production.

Page 2

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Question 1 Question 2 Question 3



Begin your response to each question at the top of a new page. Do not skip lines.

D. (cont.) US ~~factories~~ with multinational corporations may assemble the burger in its restaurants, which are then consumed by the residents of the local area. Production is mostly in LDC's, and consumption of the burger is in the MDC.

E. Small family farms may benefit b/c they are more likely to specialize in niche markets such as organic and non-GMO products instead of competing with agribusinesses by scaling up production. Small farms will already be selling these non-GMO products, so it doesn't affect their operations, but agribusinesses will have to change their ways of production to enforce the policy.

F. Farms in these European countries are in later stages of the DTM, which means that their main industries are tertiary services. There is decreased agricultural labor available internally, so farms must attract guest workers from countries that are often still industrializing, like in North Africa.

G. Border policies significantly support the movement of workers b/c the open borders between countries reduce the time and other barriers to cross a border. This allows ~~workers~~ countries like Italy to maintain a strong agricultural force all while ~~pros~~ still developing its tertiary and quaternary services in CBD's.

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Question 1

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Question 3



Begin your response to each question at the top of a new page. Do not skip lines.

A) One way labor costs influence the location of food processing facilities is the closer to a city you are, the ^{less} ~~more~~ expensive labor costs tend to be. Food processing facilities in developed countries tend to be by larger cities because there are more people willing to work in urban areas for cheaper prices. There is more population in these areas, so it's easy to acquire more workers.

B) Large scale commercial agriculture caused a rising demand of agricultural technology in the US and Canada. These developed countries began developing technology like GMOs and pesticides in order to maximize the product to maximize profit. This increase of agricultural technology led to an enlargement of large scale commercial agriculture.

C) In order to have large scale ^{commercial} agriculture, the owners of the businesses need to find a low rent, but semi close area to process the food. Because the food is expanding to a myriad of cities, it is more efficient to locate the food processing facilities in less populated towns and cities. This way, the food can transport to the different locations as needed and the actual land to put the food processing facility is cheaper since it is in ~~the~~ a town or rural area.

D) In ~~the~~ production and consumption of a hamburger, there are a multitude of steps to follow. Using the complex commodity chain allows people to understand exactly how the hamburger is extracted by the cow, ground up into beef, sent out to stores or restaurants for people to cook and create the circular shape of a hamburger. The complex commodity chain

Page 2

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basically takes a simple item, like a hamburger, and breaks it down into multiple steps. This chain's main strength is the simplicity and straight forwardness of the system in order to find how a hamburger is produced.

E) If government bans genetically modified organisms then the large scale agricultures won't be able to produce large quantities of products as fast and ship them out to the market. Instead, people will opt for smaller, locally grown items because they are fresher from the lack of transportation time and they stay fresh long because the GMOs ~~aren't~~ around to be long-lasting.

F) Farms in countries that have a specific climate like Italy or France overproduce ~~the~~ one or a few items that their climate thrives best in. Because of the overproduction of product, seasonal workers are needed to help grow, harvest, and sell the product. There also isn't many farmers or people willing to work on the farms so other seasonal workers are brought in to help the economy.

G) Border policies limit agricultural labors from being able to complete their jobs along European countries. Many times labors will move around to different areas because of better climates, soil conditions, or pastoral no ~~restriction~~. For these reasons, agricultures may have to cross borders, but the control have limitations on the movement which harms their lifestyle and the countries' overall economy.

Page 3

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Important: Completely fill in the circle that corresponds to the question you are answering on this page.

Question 1

Question 2

Question 3



Begin your response to each question at the top of a new page. Do not skip lines.

- A.) The least urbanized country in the table shown is Afghanistan because their percent of urban population is 25%.
- B.) One difference in urbanization patterns between Australia and Bangladesh is that Australia has a higher level of urban population, but grows at a slower rate than Bangladesh.
- C.) One common characteristic of the built environment of squatter settlements in developing countries is that the percent of the urban population living in squatter settlements is ~~higher~~ ~~than the population~~ generally higher than the percent of the urban population living in squatter settlements in more developed countries.
- D.) One positive health effect likely to result from improved access to electricity in urban areas is that people can stay warm during the cold months and cool during the hot months.
- E.) One reason people in less developed countries are likely to move to cities is because there are more job opportunities in urban areas, which can give employment opportunities.
- F.) One likely effect of rural to urban migration on the economy of a developing country is that there may not be enough housing areas, which means rent prices will go up and affordable housing will be hard to find.
- G.) A limitation of the data shown in the table is that it doesn't show us the percent of people working or employed.

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Question 2

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

This question expected students to demonstrate a comprehensive understanding of various indicators of urbanization in both selected developed and developing countries using a variety of urban, social, and economic concepts. Several skills were required of the students to be able to answer the question: (1) the ability to interpret geographic data shown in a table (and to explain the limitations of that data); (2) the ability to explain the reasons behind the spatial patterns observed; (3) the ability to integrate knowledge from different units of the course (e.g., demographic, migration, economic impacts of migration); (4) to apply their understanding of urban sustainability.

In part A students were expected to identify the least urbanized country in the table, Afghanistan. This was one of the easier tasks (identify). While many students correctly identified Afghanistan as the least urbanized country, a significant number of students did not identify the correct country. Rather than basing their response on the data for “percent urban population”—a seemingly straightforward task—it appears many students “overthought” this question, tried to assess all indicators combined, and selected Bangladesh.

In part B students were expected to explain one difference in urbanization patterns between Australia (a more developed country) and Bangladesh (a less developed country). Many students were able to compare a difference between these two countries; however, some students only mentioned one of the two countries and failed to earn a point.

In part C students needed to describe one common characteristic of the built environment of squatter settlements in developing countries. In part D students were expected to explain a positive health effect likely to result from improved access to electricity.

In part E students were expected to demonstrate they understood a reason why individuals in less developed countries are likely to move to cities (e.g., rural to urban migration). Many students were able to provide explanations of push and pull factors of rural-to-urban migration.

In part F students needed to explain a likely effect of rural to urban migration on the economy of a developing country. In this part the scale shifted from the urban economy to the national economy.

Finally, in part G students needed to explain a limitation of the data shown in the table as it illustrates challenges to urban sustainability.

The seven parts of this question challenged students to interpret numerous indicators of urbanization for selected countries in the developed and developing world. Parts A, B, and G specifically required use of the data in the table, while parts C, D, E, and F did not.

Sample: 2A

Score: 7

The response to part A earned 1 point because it correctly identifies Afghanistan as the least urbanized country in the table.

Question 2 (continued)

The response to part B earned 1 point because it explains one difference in the urbanization patterns of Australia and Bangladesh in that 55% of Bangladesh’s urban residents live in squatter settlements as compared to Australia, where there is a lack of urban squatter settlements.

The response to part C earned 1 point because it describes the lack of access to basic urban infrastructure in the built environment of squatter settlements.

The response to part D earned 1 point because it correctly explains that electricity provides access to refrigeration and food storage that helps prevent health-related risks from foodborne illness.

The response to part E earned 1 point because it explains that individuals in less developed countries are likely to move to cities because there may be reduced opportunities in rural areas for agricultural workers.

The response to part F earned 1 point because it explains a likely effect of rural to urban migration would be an increased percentage of workers in the secondary and tertiary sectors leading to increased economic growth.

The response to part G earned 1 point because it correctly explains a limitation of the data on the table is that it does not show variations in cities at the local scale.

Sample: 2B

Score: 5

The response to part A earned 1 point because it correctly identifies Afghanistan as the least urbanized country in the table.

The response to part B earned 1 point because it explains one difference in the urbanization patterns between Australia and Bangladesh is that Australia has a higher percentage of urban population with a higher percentage with access to drinking water.

The response to part C did not earn a point because it does not describe a common characteristic of the built environment of squatter settlements in developing countries.

The response to part D earned 1 point because it correctly explains one positive health effect likely to result from improved access to electricity in urban areas is that electricity would eliminate open flames and make it less likely to inhale toxins.

The response to part E earned 1 point because it explains that individuals in less developed countries are likely to move to cities to have better access to clean drinking water and electricity.

The response to part F earned 1 point because it correctly explains a likely effect of rural to urban migration on the economy of a developing country is that there would be an expected increase in factory jobs and industrial production.

The response to part G did not earn a point because it does not correctly explain a limitation of the data on the table in illustrating challenges to urban sustainability.

Question 2 (continued)

Sample: 2C

Score: 3

The response to part A earned 1 point because it correctly identifies Afghanistan as the least urbanized country in the table.

The response to part B earned 1 point because it explains one difference in the urbanization patterns between Australia and Bangladesh is that Australia's urban population grows at a slower rate than Bangladesh's urban population.

The response to part C did not earn a point because it does not describe a common characteristic of the built environment of squatter settlements in developing countries.

The response to part D did not earn a point because it does not correctly explain one positive health effect likely to result from improved access to electricity in urban areas.

The response to part E earned 1 point because it explains that individuals in less developed countries are likely to move to cities because there are more job opportunities.

The response to part F did not earn a point because it does not explain a likely effect of rural to urban migration on the economy of a developing country.

The response to part G did not earn a point because it does not correctly explain a limitation of the data on the table in illustrating challenges to urban sustainability.