

2021

AP<sup>®</sup>

 CollegeBoard

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# AP<sup>®</sup> Human Geography

## Scoring Guidelines

### Set 1

**Question 1: No Stimulus****7 points**

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- (A)** Define intensive agriculture. **1 point**
- Accept one of the following:
- A1. Agriculture that requires large quantities of inputs (e.g., labor, capital, agricultural products) per unit of land.
  - A2. Agriculture that attempts to maximize yield (e.g., double-cropping, terracing) on relatively smaller amounts of land.
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- (B)** Describe the change over time in the numbers and sizes of family-run dairy farms. **1 point**
- Accept one of the following:
- B1. Every year, there are fewer family-run dairy farms as small farms go out of business or become part of larger conglomerates. At the same time, the average size of dairy farms is increasing.
  - B2. Family-run dairy farms decreased by 94,000 between 1992 and 2018 (e.g., a decrease of 93% since 1970, decreasing by 3% per year), but remaining farms increased in size to reduce production costs that consistently run more than milk prices.
  - B3. Family-run dairy farms decreased in number as more dairy products are being produced by large corporate farms (e.g., agribusinesses) instead of family-run farms.
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- (C)** Explain how economies of scale are used to maximize profitability in dairy farming. **1 point**
- Accept one of the following:
- C1. Dairy farms can reduce per unit costs by manufacturing larger volumes of milk or dairy products using mechanization, transportation, or computerized production processes that reduce the amount of labor or energy needed to produce each unit of food.
  - C2. Large dairy farms can often finance the costs of production or the price of farmland with larger loans or lower interest rates than what is available to small family farmers.
  - C3. Dairy farms have engaged in vertical integration to control multiple steps in the production process as a means of increasing profitability.
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**(D)** Explain a recent trend in the location of dairy farms with respect to consumer locations. **1 point**

Accept one of the following:

- D1. Dairies have moved farther from consumer locations as a result of improvements in transportation methods and networks.
- D2. Dairies have moved farther from consumer locations as a result of improvements in preservation and storage.
- D3. Dairies have moved farther from consumer locations as a result of conversion of agricultural land to urban and suburban land use.
- D4. Dairies have moved farther from consumer locations as a result of changes in the price of land or cost of production that lead farmers to relocate.
- D5. Dairies have moved farther from consumer locations as a result of environmental regulations.
- D6. Specialized dairies have moved or remain close to consumer locations as a result of community-supported agriculture.
- D7. Specialized dairies have moved or remain close to consumer locations as a result of eat-local or farm-to-table movements.
- D8. Specialized dairies have moved or remain close to consumer locations as a result of consumer preference for raw or unpasteurized dairy products.

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**(E)** Explain ONE way in which a complex commodity chain connects large-scale dairies to consumers. **1 point**

Accept one of the following:

- E1. Milk is manufactured into value-added dairy products (e.g., yogurt, cheese, cream, other dairy products, frozen foods), increasing the complexity of the commodity chain as more steps are needed for processing and packaging.
  - E2. Dairy solids are used in the industrial production of food ingredients or cosmetics, so more steps are needed in the commodity chain.
  - E3. Whey is used in formula for infants, in snacks, and for other purposes and is processed at a different plant, adding complexity to the commodity chain.
  - E4. Customized packaging of dairy products adds complexity as additional steps are needed in the commodity chain.
  - E5. Overproduction of milk may result in production of dairy products such as dry milk and canned milk that can be preserved much longer than fresh milk and shipped long distances and/or internationally to consumers. This adds complexity to the commodity chain.
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- (F)** Explain ONE way in which small-scale dairy farms can specialize to compete with large-scale dairies. **1 point**

Accept one of the following:

- F1. By producing and/or selling value-added dairy products (e.g., cheeses, butter, ice cream, yogurt, kefir, liquid cream, clotted cream).
  - F2. By engaging in organic dairy farming—production of dairy products and animal feed without the use of synthetic or industrially produced pesticides, fertilizers, antibiotics, and/or growth hormones (e.g., rBST, rBGH).
  - F3. By marketing and selling their dairy products as locally raised or as a way of supporting the local community (e.g., farm-to-table, eat-local movements).
  - F4. By producing and/or selling grass-fed dairy products or pasture-raised dairy products.
  - F5. By selling non-homogenized milk for real farm taste.
  - F6. By raising heirloom varieties of animals, different species (e.g., goats or sheep for milk products) or heirloom dairy products (e.g., buttermilk, sour milk) that command high prices.
  - F7. By selling non-pasteurized milk or raw milk and raw milk dairy products (e.g., soft cheeses) to appease epicurean or specific health-issue-conscious consumers (allergens) that command high prices.
  - F8. By guaranteeing and publicizing humane treatment for dairy animals.
  - F9. By providing home delivery of dairy products and related items (e.g., eggs, bakery goods).
  - F10. By engaging in agritourism.
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**(G)** Explain an environmental sustainability problem that results from the production of dairy on large-scale farms. **1 point**

Accept one of the following:

- G1. Concentrations of animal waste can result in water contamination such as of groundwater, surface water (e.g., streams, ponds, bays), or drinking water harming natural ecosystems or posing human health risks to communities downstream from the source of pollution.
- G2. Nitrous oxide or methane produced by cows are major contributors to global warming.
- G3. Degradation of ecosystems (e.g., deforestation, overgrazing) has occurred in order to increase the size of or production levels on dairy farms.
- G4. Large-scale farms may consume large amounts of fossil fuels (e.g., for the transportation, production, refrigeration, or cleaning of dairy products or to provide care for dairy cows) which contributes to pollution.
- G5. Antibiotics and concentrated feed containing artificial chemical supplements can contaminate the environment through animal waste.
- G6. Waste lagoons can be destroyed by natural disasters (e.g., floods, hurricanes) and contaminate aquifers, surface water, and drinking water.
- G7. Bank erosion causes stream sedimentation and biodiversity loss and/or aquatic ecosystem damage downstream.
- G8. Dairy farms are water intensive and can cause depletion of groundwater aquifers.
- G9. Dust containing ammonia contaminates the air in locations near large-scale dairy farms.

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**Total for question 1 7 points**

**Question 2: One Stimulus****7 points**

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**(A)** Describe the world city concept in the context of globalization. **1 point**

Accept one of the following:

- A1. World cities are engines of globalization because they are the principal nodes in the transnational exchange of either capital, knowledge, or culture.

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**(B)** Explain the importance of world cities as nodes in the hierarchical diffusion of a globalized culture. **1 point**

Accept one of the following:

- B1. World cities contain many of the world’s leading and most influential cultural and educational institutions, so they have central importance in attracting talent and disseminating culture and knowledge.
- B2. World cities’ leading financial status means there is a lot of capital to invest in and disseminate culture.
- B3. World cities attract cultural icons because of their importance in the production and dissemination of culture (e.g., actors, singers, artists).
- B4. World cities’ ethnic mix and cosmopolitan culture leads to a great diversity of cuisines and fashion.
- B5. World cities use their status to attract international sporting events and other major global cultural events which disseminates cultural ideas (e.g., through tourists, athletes, spectators, sponsors).
- B6. World cities diffuse their own national cultures at a global scale while also diffusing international cultures to the countries in which they are located.

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**(C)** Explain ONE way the Internet may interrupt the hierarchical diffusion of a globalized culture. **1 point**

Accept one of the following:

- C1. As the Internet becomes universally available, it makes remote education, remote cultural activities, and news available to people everywhere instantaneously, so globalized culture no longer diffuses hierarchically (also contagious diffusion).
  - C2. The network connectivity of the Internet means that cultural phenomena (e.g., music, fashion) can originate anywhere and be accessible anywhere else instantaneously, without the need for hierarchical diffusion.
  - C3. As the Internet improves free online tools for language translation, culture can be transmitted quickly and without barriers, eliminating the need for hierarchical diffusion through universities and other specialized institutions.
  - C4. As the Internet becomes universally available, some countries’ governments have established firewalls and/or censored the Internet within their country to prevent the diffusion of globalized culture.
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**(D)** Explain ONE difference between world cities and metacities. **1 point**

Accept one of the following:

- D1. Metacities are urban areas with over 20 million people and are ranked by population size, whereas world cities are ranked in order of their importance to the global economy.
- D2. Metacities are mostly located (all but two, Tokyo and New York) in less developed countries, whereas top-ranked world cities (except Beijing) are mostly located in more developed countries.
- D3. Metacities have grown to attain their status through rapid rural-to-urban migration from their hinterlands, whereas world cities have attained their status as nodes of the global economy through the movement and concentration of transnational finance and trade.
- D4. The populations of metacities are primarily comprised of rural-to-urban migrants in the countries where these urban areas are located, whereas world cities' populations comprise a large percentage of first- and second-generation migrants from foreign countries.
- D5. Metacities are primarily national economic and cultural centers, whereas world cities are primarily global economic and cultural hubs.

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**(E)** Using the data in the table, explain ONE limitation of the world city classification system in reflecting current patterns of global urban development. **1 point**

Accept one of the following:

- E1. Many of the cities with the largest populations in the world are not on this list, because they do not rank high in the categories used for scoring world cities.
- E2. Urbanization in the world is occurring on the largest scale and most rapidly in less developed countries, and those cities are not ranked in the top 10.
- E3. The world city classification does not reflect the largest or the most rapidly growing cities, as these are in less developed countries.
- E4. The weighting of the criteria for the world city classification system is such that important cities in the world do not appear in the top ten.

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**(F)** Using the data in the table and the scoring criteria, explain ONE reason for the difference in scores between London and Washington, D.C. **1 point**

Accept one of the following:

- F1. Washington, D.C. has little activity in the Business category compared to London, which is a global center of finance, so this probably accounts for much of the almost 30 points difference in scores.
  - F2. The Business activity category comprises 30% of the score, and London is a global business hub, whereas the political engagement category comprises 10% and Washington, D.C., is a national capital with global influence.
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**(G)** Explain ONE way economic linkages among world cities may create risks during global financial crises. **1 point**

Accept one of the following:

- G1. World cities' close financial linkages mean that economic shocks (e.g., stock market crashes) in one location can be felt rapidly in other locations.
- G2. Transnational financial services firms have locations in several world cities, so economic damage during a crisis spreads easily between these locations.
- G3. Concentration of global transportation nodes (major international airports) in world cities means pandemics can spread quickly between these cities through air travel, disrupting economic activity (e.g., in New York City).
- G4. Terrorist attacks focused on the financial centers of world cities (e.g., New York City, London) can result in closure of stock markets and cessation of economic activity, which spreads rapidly to negatively affect other world cities.

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**Total for question 2 7 points**

**Question 3: Two Stimuli****7 points**

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**(A)** Describe the concept of a supranational organization.**1 point**

Accept one of the following:

- A1. Organization comprising multiple member countries with shared objectives and cooperation in political, economic, and/or sociocultural spheres.
- A2. Organization comprising multiple member countries with common objectives and policies that are binding for each member.
- A3. Organization of multiple member countries that promotes common objectives to improve the welfare of member states and/or to represent their interests on the global stage.
- A4. Organization of multiple member countries that collaborate on security, educational, cultural, economic, environmental, and political issues that affect them individually and as a group.

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**(B)** Using the gross domestic product (GDP) data in the table, explain ONE economic benefit to a country that joins ASEAN.**1 point**

Accept one of the following:

- B1. A country joining ASEAN, with its large and rapidly growing economy, is likely to be able to improve the member country's standard of living.
  - B2. The ASEAN GDP of \$2.8 trillion, larger than India and Brazil, gives its members a competitive edge in world trade.
  - B3. An economic benefit of belonging to a group of countries with rapid GDP growth is growth of GDP per capita over time.
  - B4. Joining ASEAN benefits a new member by becoming part of an economy growing twice as fast or faster than Brazil, Japan, the United States, or the EU.
  - B5. The combined GDP of ASEAN countries grew 106% (e.g., more than doubled) in a decade, so a new member would likely benefit from participation in a region with one of the world's fastest growth rates.
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- (C)** Using the ten-year GDP growth data in the table, explain ONE way that membership in ASEAN will affect the quality of life for citizens in member states. **1 point**

Accept one of the following:

- C1. GDP per capita as well as household income will rise (e.g., an average of 10% a year, a high rate of growth).
- C2. Quality of life will improve as rapid GDP growth stimulates government spending in education, healthcare, public welfare, and infrastructure (e.g., clean water, power grids, sewers).
- C3. Rapid economic growth will provide citizens greater access to employment and to higher-paying jobs, raising household incomes.

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- (D)** Explain ONE political advantage for countries that join a supranational organization, and explain ONE political disadvantage for countries that belong to supranational organizations. **2 points**

1. Advantages. **(1 point)**

Accept one of the following:

- D1a. Increases political and military strength in the face of threats external to the organization.
- D1b. Reduces political or military tensions between member countries.
- D1c. Food security among member states reduces hunger and incidences of famine that can lead to political instability.
- D1d. Economic growth through trade and other mechanisms (e.g., open borders, free trade) can lead to greater political stability for members.
- D1e. Supranational organizations represent their members on the world stage and act in the political interests of the member countries.
- D1f. Faster or less complicated intergovernmental or diplomatic agreements on trade or foreign policy between member states.

2. Disadvantages. **(1 point)**

Accept one of the following:

- D2a. Member countries lose sovereignty and/or independence as some supranational organizational laws and policies apply to internal political issues.
  - D2b. A financial crisis in one country can spill over to other member states, creating political crises.
  - D2c. As member countries appear to lose sovereignty, nationalist and separatist movements and parties that reject supranationalism may become problems.
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**(E)** Define the concept of economy of scale. **1 point**

Accept one of the following:

- E1. As the scale of production increases, the average production cost per unit decreases.
- E2. The larger a business is, the greater competitive advantage it has as it is able to produce more with greater cost savings.
- E3. Companies that cut costs and increase production may attain economies of scale through greater efficiency.
- E4. External factors such as access to specialized labor and reduced taxes can lower production costs and help companies attain economies of scale.

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**(F)** Using the data in the table, explain how economies of scale are important to understanding ASEAN’s competitiveness with Japan and China. **1 point**

Accept one of the following:

- F1. ASEAN can combine its members’ resources (e.g., land, labor, capital) to increase production, reduce costs, and be more competitive with larger economies such as China and Japan.
- F2. ASEAN has a competitive advantage because it has lower labor costs that reduce the cost of production for basic goods (e.g., low-technology goods, low-skill goods, low-cost goods) making it more efficient and competitive with China and Japan for foreign investment.
- F3. ASEAN has a competitive disadvantage with Japan because Japan’s smaller labor force is more effective at manufacturing specialized goods (e.g., high-technology goods, high-skill goods, high-cost goods) due to its highly efficient production system.
- F4. ASEAN has a competitive disadvantage with China because China’s large workforce has become better educated and more skilled, moving production from cheaper to higher-cost and specialized goods.

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**Total for question 3 7 points**