Answer Key: Section I (Multiple-Choice Questions)

1. C  
2. E  
3. D  
4. B  
5. D  
6. B  
7. D  
8. A  
9. C  
10. E  
11. C  
12. A  
13. E  
14. E  
15. D  
16. A  
17. C  
18. C  
19. B  
20. C  
21. D  
22. E  
23. E  
24. E  
25. C  
26. B  
27. D  
28. C  
29. D  
30. D  
31. B  
32. A  
33. B  
34. B  
35. A  
36. D  
37. B  
38. E  
39. B  
40. D  
41. C  
42. D  
43. B  
44. A  
45. A  
46. C  
47. B  
48. C  
49. D  
50. B  
51. C  
52. B  
53. D  
54. A  
55. A  
56. D  
57. D  
58. A  
59. B  
60. C  
61. E  
62. D  
63. E  
64. B  
65. D  
66. C  
67. C  
68. A  
69. C  
70. A  
71. B  
72. C  
73. A  
74. C  
75. C
Explanations for Section I (Multiple-Choice Questions)

1. C—Human geography is concerned with both the physical and cultural environments and how humans function and interact with them. Choices A, D, and E exclude the cultural environment. Choice B excludes the physical environment.

2. E—Scientific study was not a reason for the earliest cities that evolved 4000 to 6000 years ago in culture hearths where sedentary agriculture began to be practiced. They served as centers for religious worship (A), trade and commerce (B), military activities and protection (C), and for the production of commodities requiring additional workers and inputs (D).

3. D—Aspirin production workers labor in manufacturing, which is a part of the value-added secondary economic sector. Computer programmers (A) and government workers (B) are employed in the quaternary sector of the economy. High-level decision makers (C) comprise the quinary sector, and farming (E) and all agricultural activities are primary.

4. B—A general increase in births in the destination country is the most likely result of an influx of young migrants. Increases in the aging cohorts (A) will not occur for some time. The death rate (C) would be expected to decline—rather than rise—as a result of an influx of young migrants. The host country’s carrying capacity, or the number of people an area can sustainably support, will not change. An excess of deaths over births (E) would not be expected to be a result of an influx of a large young migrant population.

5. D—The birth rate of a country is greatly and directly influenced by the population policies implemented by its government (A), by the customs and family size expectations of its population (B), and by the age and sex composition of its inhabitants (C and E). The economic policies (D) of its government have only a very indirect and variable influence on the country’s birth rate.

6. B—Situation is the relative location of a place in relation to neighboring places. Site (A) is the absolute location of a place and is usually described in physical terms using water bodies, mountains, plains, etc. Absolute location (C) is another term meaning “site.” Function (D) in human geography refers to the purpose of a region or place in relation to another region or place. Geographical (E) refers to the scientific study of the Earth’s history from its beginning up until now.

7. D—Most people do not move from rural areas into cities to seek a safer environment in which to raise their families or live. Urban crime rates exceed rural crime rates globally; people are aware of this and base their decisions accordingly. Potential employment opportunities (A) are the hope of most rural-to-urban migrants, but while jobs used to be more available in most cities, this is increasingly not always true. Better healthcare (B), generally available in urban areas, and the potential for a better education (C) are reasons why many migrants seek city life for their families. In some cultures, such as the Latin American culture, social and cultural traditions favor life in an urban environment over a rural one.

8. A—A basic assumption of this model says high birth and death rates will drop to lower levels over time as the country develops economically. It traces changes in fertility and mortality that occur as industrialization (not agricultural development) takes place (B). Thus it shows how population growth and economic development (not social development) are linked (E). Thomas Malthus’s Essay on the Principles of Population states the world’s population is growing faster than the food supply (D); his predictions did not take into account the declining birth rates of the demographic transition model. The demographic transition model has four stages (not six), with some demographers adding a fifth stage to show a continuing drop in the crude birth rate (CBR) seen in the aging populations of wealthier countries (E).

9. C—Environmental determinism is the belief that our environment influences and controls our actions, lifestyle, and culture. Environmental perception
A is the theory that people of different cultures look at their environments in different ways. Possibilism (B) is the theory that humans have a choice in how they think, act, and live within a range of available possibilities given to them by their physical environment. Environmentalism (D) is the movement to preserve and protect the physical environment from pollution and misuse by humans. A culture system (E) is a group of culture complexes that form the common identity of a group.

10. E—Russia is the largest country in terms of territory (6,591,027 square miles). Canada is the second-largest country in the world in land area. The United States (A) is third largest. China is fourth (C), Brazil fifth (B), and Australia the sixth largest (D).

11. C—Physiological density is total population divided by arable land (area in a country that can be farmed). Crude density (A), arithmetic density (B), and population density (E) all refer to the number of people per unit of land. The rate of natural increase (D) is the birth rate minus the death rate for a population in a year's time.

12. A—Land in the CBD (central business district) of a city is very expensive (receives the highest bid rent) because it is the hub of the mass transit lines and is the center of the economic and social functions of the city. All public transportation routes lead to it, giving it the highest accessibility and maximum interaction potential.

13. E—A nation-state is a state or political territory with only one nation of people within its borders. Iceland and Japan are examples of nation-states because, for the most part, they contain a single nation and are homogenous. A state (A) is a political entity that occupies a definite territory with borders and full sovereignty. The United States and Thailand are examples of states. A country (B) is synonymous with a state. A nation (C) is a group of people with a common culture and history who occupy an area. A political state (D) is another term for a state.

14. E—While some believe there was a pre-Columbian transfer of knowledge to the Americas, the majority of scientists and anthropologists believe the Egyptian pyramids and the Mayan temple pyramids were developed independently and not by diffusion of ideas. The other answer choices describe different types of diffusion of ideas.

15. D—Forced migration is the involuntary historic movement of people who have no decision-making involvement in the process. Between 1519 and 1867 nearly 11 million African slaves were brought to the Americas from the countries of West Africa. The other answer choices are all forms of voluntary migration in which the immigrant makes the decision to move; most migrations are voluntary.

16. A—The country that surrounds another country would view the enclosed country as an enclave. Examples include the Vatican City, an enclave in Italy. An enclave (B) is a part of one country that is separated from the main part. Alaska is an enclave of the United States. A colony (C) is a territory under the control of another political state. An edge city (D) is a new urban complex outside the city center that consists of a large node of office buildings and commercial operations with more workers than residents. A unitary state (E) is a country with a strong central government, such as France.

17. C—The carrying capacity of land is the number of inhabitants an area of land can sustainably support given the prevailing technology. It has no direct correlation to living conditions (A) or social development (D), but is related to the level of economic development. Generally, developing countries (B) and traditional societies (E) have low carrying capacities.

18. C—Culture hearths such as the Indus River Valley of Pakistan, the Nile River Valley of Egypt, West Africa, and Mesopotamia were birthplaces of major cultures. Culture basins (A) are basins or repositories of culture. Cultural convergence (B) refers to the tendency for cultures to become more alike as they share technologies. A culture complex (D) is a set of traits or practices that revolves around a basic activity in a culture, such as food preparation. Cultural divergence (E) is the trend for two cultures to become more different over time.
19. **B**—The Hispanic minority group is the fastest growing minority in the United States today. Over 50 percent of US population growth since 2000 has been due to Hispanics and the majority of that growth is based on higher birth rates, not immigration.

20. **C**—Using the rank size rule, the fourth-largest city will be one-fourth the size of the largest city; therefore, 200,000 × \( \frac{1}{4} = 50,000 \).

21. **D**—The cultural landscape is also called the “built environment” and visibly displays human interaction with the environment. Folk culture (A) refers to the collection of culture traits of traditional societies, such as the Old Order Amish or the Hutterites. Carrying capacity (B) is the number of people a piece of land can sustainably support without ecological damage. Environmental determinism (C) is the belief that our environment influences and controls our actions, lifestyle, and culture. The physical environment (E) is the sum of everything around us in the natural world.

22. **E**—Current research shows a majority of migrants today are young singles with the sex varying by individual case. Migrants rarely represent an accurate or representative slice of either the country they leave (A) or the country to which they are migrating (B). Migrants contribute to both the age (D) and sex (C) of their destination country in an unbalanced and irregular way.

23. **E**—The threat of severe environmental destruction caused by increasing urban populations has been overestimated by the gloomy UN prediction that megacities would bring catastrophic conditions on the Earth by the year 2015. The other choices correctly describe global urbanization.

24. **E**—Subsistence economies usually produce only enough for their population to consume with little left over to trade. Free market (A) and commercial (B) economics both refer to an economic system based on supply and demand. Planned (C) and command (D) economics both refer to an economy in which the central government makes most of the production and supply decisions.

25. **C**—Buddhists do not use pyramids in their religion but instead make use of temple pagodas and shrines to various gods, especially Buddha, “the Enlightened One.” They also worship at the bodhi tree. Those who practice Shinto (A) are basically animists and worship their ancestors at shrines. Muslims (B) worship in mosques, and Jews (D) worship in temples. Christians (E) of all denominations and branches worship in churches.

26. **B**—The dependency ratio is the measure of the number of economic dependents, old and young, that each 100 people in their productive years must support. The population pyramid represents a population’s age and sex composition but not its economic composition (A). It does not show the ethnic composition (C), population density (D), or carrying capacity (E). The carrying capacity of a country refers to the relationship between the number of residents and the area they occupy.

27. **D**—Culture traits are things that are learned by people of a certain culture. The French learn to speak French, members of certain culture groups learn to weave baskets, and some culture groups share a belief in ancestral spirits. Mentifacts (A) are the main categories of culture’s values and beliefs, such as religion, language, folklore, etc. Artifacts (B) are material parts of a culture, such as houses, clothing, tools, etc. A culture hearth (C) is a location where a distinct and advanced culture originated, such as the Indus River Valley or the Nile River Valley. Dialects (E) are variations of a language such as the pronunciation of the word “started.” New Englanders pronounce it as “stahted” and Southerners say “stot.”

28. **C**—Ethnocentrism is the practice of judging other cultures by the standards of one’s own culture. Ethnicity (A) is identity in a group of people with common ancestry and culture. Assimilation (B) is the process in which people lose cultural traits as they acquire new ones from a host culture. Acculturation (D) refers to the process of adopting new cultural traits while retaining one’s own cultural identity and traits. Egocentrism (E) is the view that you are the most important person in your world.
29. D—Biofuels like ethanol and methanol are made from biological materials that can be reproduced. Renewable resources (A) are natural resources that can be replenished. Fossil fuels (B) are fuels made from coal and petroleum—both non-renewable resources since they require thousands of years to be created naturally from decaying organic matter. Agricultural fuels (C) are fuels like gasoline and diesel used to run farm machinery. Farm produce (E) are any goods grown or produced on a farm.

30. D—There has been no lack of warfare in Europe since 1860—two world wars and several revolutions and a number of regional armed conflicts have ensued! After 1860, improved sanitation (A) and cleaner drinking water (B) became common in Europe’s larger cities. People developed partial immunity to diseases once deadly and widespread in Europe (C). Improvements in the agricultural sector coupled with new food crops, such as the potato, stretched food supplies and increased the overall health of the population.

31. B—While some cultural traits such as religious beliefs or food preferences determine production decisions, language does not. The physical environment (A) controls economic activity by limiting the type and availability of natural resources at a population’s disposal. A government’s decisions (C) to encourage (through tariffs and subsidies) or discourage economic activities (by limiting production, for example) greatly influence economic activities. The technology (D) available to a society also guides economic activities of a population. Market conditions of supply and demand (E), whether in a free market or government-controlled economy, strongly influence economic production.

32. A—A formal or uniform region is one that is consistent in one physical or cultural characteristic, such as production of corn. Northwest Airlines (B) and the retailing district of Chicago (D) are functional, or nodal, regions of interdependency and have a core and a periphery. Dixie (C) and the Midwest (E) are vernacular, or perceptual, regions based on the way people perceive or feel about them.

33. B—High-density apartment complexes, along with retailing centers, malls, and light industries are typically located along high-volume transportation routes. Big box retail stores like Target and Walmart (A) are usually located on the outskirts of the city in suburban areas along major highway transportation corridors. Skyscraper office complexes (C) and major hotels are usually located in the fringes of the CBD. A scrap yard (D) would probably be found beside a railroad or other cargo route. An industrial plant (E) would probably be located near a waterfront, railroad, or other cargo route for easy shipment of both raw materials and finished products.

34. B—Thailand is a good example of a corrupt state, or one which is mainly compact but has a long, narrow extension or peninsula. Uruguay (A), Laos (C), Zimbabwe (D), and Poland (E) are all compact states—states with a rounded, or circular, shape.

35. A—The use of seed agriculture, the plow, and draft animals allowed humans to greatly expand food production, and these innovations occurred during the First Agricultural Revolution. Each of the succeeding agricultural revolutions (B, C, D, and E) was marked by improved methods and factors that led to increased food supplies.

36. D—Nova Scotia is largely populated by immigrants of British descent, and the overwhelming majority of new immigrants to the province are from the United Kingdom. The other answer choices are all correct in associating the province with a large ethnic immigrant population living in the province.

37. B—The representative fraction given at the top of the diagram tells us that 24,000 units on the Earth’s surface are represented by one unit on the map. In other words, 24,000 feet on the Earth’s surface would be one foot on the map. The other answer choices all incorrectly interpret the relationship depicted in the diagram.

38. E—Wool would be raised farthest from an urban market since sheep ranching requires lots of grazing land but has lower transportation costs than dairying (B), corn farming (C), or raising more perishable crops such as fruits and vegetables (A and D).
B—Nationalism is a strong identification with one's country and what it stands for. National anthems, flags, national holidays, memorials, and even national sports teams all cement one's loyalty to a sovereign state and are strong centripetal forces in a country. Irrationalism (A) is the claim by a country's government that an ethnic minority living in another country belongs to the homeland country. Strong irrationalist unrest led to a war when Serbia stirred the fires of irrationalism in Croatia among the ethnic Serb minority living there in the 1980s and 1990s. Supranationalism (C) is the current global trend for many countries to join organizations for a common goal or good. The United Nations is a well-known supranational organization. Regionalism (D) often develops when a minority group forms a majority in one region of a country and identifies more closely with its group than with the country. War (E) is not promoted by a flag or national symbol. Such iconography may stir nationalism in times of war, but these items do not encourage or promote war in themselves.

40. D—While disease is a factor in the general health of a country's population, it is not an important influence on the birth rate. Religious beliefs (A), the age and sex composition of its population (B and E), and the population policies of the country (C) are the strongest influences on a country's birth rate.

41. C—Agrifood is not a new or single corporate entity but rather a system (A) that involves a complex set of interrelationships to organize food production (B). It is a global enterprise (D) that is driven in large part by the global fast food industry (E), which requires low-priced farm products to be competitive and profitable.

42. D—More than half of the world's population is concentrated on only 5 percent of the world's land area and two-thirds lives on only 10 percent of the land area. The world's population, in fact, is very unevenly distributed (A) with some parts of the world uninhabited and others very densely populated. The area between 60 degrees and 80 degrees north of the equator is sparsely inhabited because of a very cold climate (B). Over half the world's population lives north of the equator (C). The world's population drastically decreases in numbers with increases in elevation because of increasingly unfavorable living conditions (E).

43. B—There are a number of large Christ the Redeemer (Cristo Rey) statues in South America usually placed on hillsides above cities. There is one in the United States and another in Europe, but the majority are found in South America and are a testament to the widespread Roman Catholic faith on that continent.

44. A—Megalopolis refers to an almost 600-mile-long conurbation stretching from southern Maine to southern Virginia. Several cities and their industrial and market-oriented businesses make up this conurbation. Megacity (B) is a term created in the 1970s to apply to very large cities with a population of 10 million or more that many thought would overwhelm the world's resources. Supercity (C) is the term given to Auckland, New Zealand, by its residents as the city boundaries continue to extend into the neighboring hinterlands, swallowing nearby towns and smaller cities. There is no such term as oligopolis (D), and a triceratops (E) is a species of extinct dinosaur.

45. A—A compact state would have lower transportation and communication costs within the state, leading to more efficient transportation and communication systems. This can lead to greater cohesion among its population. A prorupt state (B) is mainly compact with a narrow extension protruding out of it. An elongated state (C) is long and narrow like Chile or Norway. A fragmented state (D) is composed of more than one disconnected piece of territory. Examples include island states such as Indonesia and the Philippines, as well as states like Italy with regions on both the mainland and on islands. All these shapes of states can be expected to have less efficient transportation and communication systems than a compact state.

46. C—Both Hindu and Buddhist faiths cremate their dead and do not bury the deceased in graveyards or cemeteries. Christians (A), Jews (B), Muslims (D), and most animists (E) make use of graveyards and cemeteries for burial of their dead.
47. B—Agglomeration is a process in which businesses cluster together to take advantage of infrastructure or markets. These three stores would likely locate near one another to attract shoppers who might also be interested in their goods. Deglomeration (C) refers to the spreading out of businesses because of overcrowding and other negatives. Purchasing power parity (A) refers to a formula used to compare the value of a product in various countries. Urban heat islands (D) refer to the increase in temperatures found in urban areas because of increased pavement, population density, and industrial activity. Concentric zones (E) are neighboring zones radiating outward in rings. The concentric zone model was developed to explain the urban housing patterns in American cities in the 1920s.

48. C—Linguistic differences are not generally enough to stimulate a heated boundary dispute. Boundary disputes between countries are usually over resources (A), territories they both claim (B), the interpretation of the legal documents that define the boundary between the two (D), or exclusive economic zones (EEZs) offshore (E).

49. D—A central place function with a high range and high threshold would need a specialized group of customers and workers for its services. A cancer treatment clinic provides a special service to certain sick patients who would be willing to travel a great distance to receive their treatment. The other answer choices list services that would have a lower threshold population since they do not require as large a population in order to support their supply of services in their local community.

50. B—Possibilism is the theory that humans have a choice in how they think, act, and live within a range of available possibilities given to them by their physical environment. Environmental perception (A) is the theory that people of different cultures look at their environments in different ways. Environmental determinism (C) is the belief that our environment influences and controls our actions, lifestyle, and culture. Environmentalism (D) is the movement to preserve and protect the physical environment from pollution and misuse by humans. A culture system (E) is a group of culture complexes that form the common identity of a group.

51. C—The conflict in Kashmir is irredentist, therefore territorial in nature, as the Muslim majority in this Indian-controlled territory long to become part of Pakistan. Fertile ground (A) is a resource issue, land use (B), and immigration (E) are functional issues of contention on some borders, and document interpretation (D) is a boundary disagreement based on differing interpretations of how the boundary was defined in writing.

52. B—Artifacts are the material elements of a culture, such as tools, dishes, knives, toys, etc. Tools (A) do not include all the artifacts of a culture, such as toys. Mentifacts (C) are the core elements of a culture and remain relatively constant, evolving only very slowly over time. These include language, religion, and traditions. Sociofacts (D) are the connections between people in a culture and include religious, political, and educational institutions, as well as family and community linkages. The built environment (E) is the material culture of a group, including buildings, roads, and whatever humans have constructed in their environment.

53. D—Little Italy is an urban ethnic community whose residents define themselves as Italian. Answer choices A, B, and E are formal regions defined by a political boundary (New Hampshire and Texas) or a cultural feature (Christianity). The urban working and shopping zone of Pittsburgh (C) is a functional region with a core and a periphery.

54. A—The concentric zone model depicts the city as a set of rings radiating out from the CBD and was developed to explain the social patterns of American cities in the 1920s. The central place model (B) was developed by German geographer Walter Christaller in 1933 to explain the patterns and distributions of settlements as they are interconnected with their surrounding hinterlands. The urban realms model (C) is an economic model that states an urban resident’s life is mainly lived in one realm within the urban environment. The sector model (D) views urban housing like spokes radiating from a central hub. It states that new housing for the wealthy extends outward on its original axis from the city as it grows, middle-income housing extends in the same way next to
higher-income sectors, and lower-income housing fills in the gaps. The *multiple-nuclei model* (E) states that large cities spread out from several nodes of growth, not just one.

55. **A**—Suburbs are often characterized by “sprawl” or a tendency to spread over time. Central city (B) refers to the central business district (CBD) that is found at the heart of every city. A conurbation (C) is a contiguous urban area that has grown to consume what were once separate cities. Many suburbs contain shopping and other facilities as well as homes (D). Suburbs are generally on the outskirts of metropolitan areas and are well integrated with them (E).

56. **D**—The large-scale agribusinesses that dominate truck farming are highly mechanized. Machinery is used to plant, irrigate, and harvest the crop. Truck farming is big business in California, Florida, and in southeastern states such as Georgia (A). Produce grown on truck farms is often shipped to areas where these crops cannot be grown as easily, if at all (B). Large-scale commercialized farms employ migrant workers who are less costly (C). Perishable fruit and vegetable crops are common crops of truck farming (E).

57. **D**—Paris, France, is not a forward-thrust capital. All the other answer choices list forward-thrust capitals located on a frontier as a magnet for development or on a contested border as a stance of power.

58. **A**—Basic jobs in a city’s economy generate income for the city by producing goods or services for “export” out of the city. Non-basic jobs (B) provide services to the city’s workers and do not usually generate “new” income for the city. White-collar jobs (C) are desk jobs or clerical jobs that require more mental and less physical activity than blue-collar (E), or physical jobs. Suburban (D) refers to the residential communities surrounding American cities and not to an economic sector.

59. **B**—A sense of place is the feelings of attachment we have to a specific location. Placelessness (A) refers to the absence of distinct characteristics that might make a location special or unique. Location (C) is a description of where a place is. The cultural landscape (D) defines the Earth’s surface as modified by human hands. Connectivity (E) refers to the tangible (highway systems) and intangible (radio waves) ways that places are connected.

60. **C**—A charter group is the first ethnic group to arrive and start the first effective settlement in a new area. They establish the recognized cultural norms that groups arriving later must follow. The French came to Quebec, Canada, during the seventeenth century to establish a fur trade with the Native Americans and to spread the Catholic faith. Today 75 percent of Quebec’s population is of French lineage. Quebec maintains a distinctive Francophone identity distinct from the rest of Canada.

61. **E**—The *multiple-nuclei model* states that large cities spread out from several nodes of growth, not just one. The central place model (B) was developed by German geographer Walter Christaller in 1933 to explain the patterns and distributions of settlements as they are interconnected with their surrounding hinterlands. The concentric zone model (B) depicts the city as a set of rings radiating out from the CBD and was developed to explain the social patterns of American cities in the 1920s. The urban realms model (C) is an economic model that states an urban resident’s life is mainly lived in one realm within the urban environment. The sector model (D) views urban housing like spokes radiating from a central hub (the CBD). It states that new housing for the wealthy extends outward on its original axis from the city as it grows, middle-income housing extends in the same way next to the higher-income sector, and lower-income housing fills in the gaps.

62. **D**—Primary activities such as mining, agriculture, fishing, forestry, and quarrying, involve humans harvesting crops or removing materials from the earth. Pottery production (A), electronic assembly (B), and hydroelectric production (C) are secondary activities that add value to the original material. Internet sales (E) and other retail and wholesale activities involving the business, financial, professional, or clerical sectors are tertiary activities.
63. E—Doubling time is calculated by dividing the country’s growth rate (as a percent) into 70. These calculations should never be relied on to accurately predict the future size of a population. Birth rates (A), death rates (B), migration (C), and age structure (D) are all important factors affecting the growth of a population.

64. B—Vietnam practices the Mahayana, the most dominant form of Buddhism. Buddhism diffused to Vietnam during the second century B.C. from India, China, and Central Asia. The other answer choices list countries with only very small minorities of Buddhists. Brazil (A) is a Roman Catholic country. France (C) is nominally Roman Catholic, although in reality it is a very secular country (recent polls show most French seldom attend church). About 80 percent of the Russian population (D) belongs to the Russian Orthodox church, but the Muslim population is rapidly increasing and Islam is Russia’s second largest religion. Iran (E) is a Shi’ite Muslim country.

65. D—you would expect to see a steel mill near a railroad yard for cargo reception and product transport. The other choices would not typically be found near a railroad yard.

66. C—The eastern coastal region of China has a population density of over 400 per square kilometer—twice the density of the second-highest which is the central region. The arid basins and deserts of western China (A) and the high, cold mountains of the Tibetan Plateau (E) have very low population densities of less than 10 people per kilometer. Regions B and D represent regions of intermediate population densities.

67. C—The Special Economic Zones (SEZs) of China’s east coast enjoy relaxed trade laws that stimulate China’s economy.

68. A—Latitude and longitude are the exact location of a place on the Earth’s surface in degrees, minutes, and seconds and represent its absolute location. Relative location (B) refers to where a place is in relation to other places. Distance (C) is the space between two points on the Earth’s surface, and situation (D) is the relative location of a place in terms of its physical and cultural features. Scale (E) is the frame of reference for studying something. It is also the size of a unit on a map as a ratio to the same number of units on the Earth’s surface.

69. C—Total fertility rates of 2.1 to 2.3 are required to replace a country’s population and have been declining steadily in both European (A) and Asian (B) countries over the last decades. The total fertility rate reflects the cultural values of a country and the reproductive behaviors of its women. It does not directly reflect either biological constraints (D) or the level of industrialization (E).

70. A—The development of biofuels has not caused a decrease in the use of fossil fuels as hoped; worldwide consumption of fossil fuels continues to grow, although at a slower pace than it would if biofuels had not been developed. However, the development of biofuels has caused a rise in global food prices as some farmland that used to grow food now produces crops for biofuels (B). In some parts of the world, the transfer of farmland to the production of crops for biofuels has also resulted in the conversion of small farms to large monoculture plantations (C), violence (D), and the eviction of small farmers (E).

71. B—Increased investment in sanitation and government healthcare programs and has worked to decrease the spread of infectious diseases like pneumonia and malaria. The other factors have all contributed to the global spread of infectious disease by increasing contact between people throughout the world.

72. C—A nation is a group of people with a common culture and history who occupy an area. A state (A) is a political entity that occupies a definite territory with borders and full sovereignty. A country (B) is synonymous with a state. A political state is another term for a state (D). A nation-state (E) is a state with only one nation of people within its borders.

73. A—An isogloss is the geographic boundary limit for a linguistic trait. An example is the geographic boundary between the US region where the word “hoagie” is used and the word “grinder” is used. Dialects (B) are different spoken regional versions
of the same language. They usually vary in pronunciation, rhythm, and speed. A toponym (C) is a place name such as Cropp's Corners or Oil City. Vernacular (D) refers to the local, nonstandard language spoken in a place. Creole (E) is a language that began as a pidgin language and graduated to a permanent language.

74. C—Scale is the relationship between the size of an element on the map and the same element on the Earth's surface. A mental map (A) refers to the images in one's mind about an area. A projection (B) is the method used to represent the Earth's curved surface on a flat piece of paper (map). Density (D) is defined as the quantity of something per unit on a map. A model (E) is a simplified representation of reality and is used often in human geography to study cause-and-effect relationships.

75. C—Sales jobs are a tertiary economic activity. All the other answer choices list "white collar" and professional jobs in the quaternary sector.

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**Explanations for Section II (Free-Response Questions)**

**Question 1 (8 points total)**

1A. (2 points)
The total fertility rate is the average number of children a woman in her childbearing years would be expected to have if she bore them at the current year's rate.

1B. (2 points)
East Asia and the Pacific's total fertility rate declined 3.3 percentage points and Latin America's declined 2.9 percentage points. They are the only regions on the chart to see a drop of over 50 percent in their total fertility rates between 1970 and 2004.

1C. (4 points)
*Note: Your answer should focus on one region only. The discussion below includes both regions to provide an explanation for whichever region you chose.*

China decreased drastically from 1970 to 2004, and similar drastic drops in Brazil and other states in both regions reflect a change in cultural values in both regions. In both regions, having fewer children has become acceptable and desirable as economic development continues. Japan's decreasing fertility rate is caused by women deciding not to marry or postponing marriage for career. Japan is offering government incentives to couples to marry, and children receive their high school education free to help with child-rearing expenses. Studies also show that as women are educated, fertility rates fall in some regions. The availability of contraceptives and organized family planning programs has also been shown to influence total fertility rates. Peru showed a decrease in the 1960s in the middle- and upper-income levels because of economic progress and paradoxically again showed a decrease in 1970 among lower-income Andean agrarian people as the economic depression hit Peru.

Economically, this trend of smaller families and fewer children will mean that fewer workers will be entering the workforce in the future, perhaps causing labor shortages. In the long run, retirement ages may rise, taxes increase, and retirement benefits may be reduced since there will be fewer workers to support an aging population. Socially, smaller families may mean a breakdown in the family structure because more mothers will enter the workforce. The increased pressure put on a dwindling labor force may also raise crime rates or require opening borders to immigration to supplement the labor force.