

# 2013 AP<sup>®</sup> HUMAN GEOGRAPHY FREE-RESPONSE QUESTIONS

## HUMAN GEOGRAPHY

### SECTION II

Time—75 minutes

Percent of total score—50

**Directions:** You have 75 minutes to answer all three of the following questions. It is recommended that you spend approximately one-third of your time (25 minutes) on each question. It is suggested that you take up to 5 minutes of this time to plan and outline each answer. While a formal essay is not required, it is not enough to answer a question by merely listing facts. Illustrate your answers with substantive geographic examples where appropriate. Be sure that you number each of your answers, including individual parts, in this booklet as the questions are numbered below.

1. The high-tech centers of Silicon Valley in California and the Research Triangle in North Carolina developed in the past 40 years.
  - A. Discuss the following three factors that contributed to the rise of such industrial regions.
    1. Investment capital
    2. Labor
    3. Government
  - B. Define the concept of agglomeration and explain its role in the continuing expansion of such regions.

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POPULATION AGE 65 OR OLDER IN 2000 AND 2050 (in percent)

Country	Population Age 65 or Older, 2000 (percent)	Population Age 65 or Older, 2050 (percent)	Change in Proportion 65 Years or Older (percent)
Belgium	17	28	65
Denmark	15	24	59
Japan	17	32	86
Russian Federation	13	25	100
Ukraine	14	27	91
United Kingdom	16	25	56

2. The average age of the population in selected developed countries listed in the table above has been increasing.
- A. Identify and explain two reasons that the average population age is increasing in developed countries.
  - B. Identify and explain one social consequence and one economic consequence that countries face as their populations age.
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3. Over the past 150 years, railroad and highway systems influenced patterns of urban growth in the United States.
- A. Identify and explain one way that railroads affected the size and one way that railroads affected the form of cities in the United States between 1870 and 1920.
  - B. Identify and explain two ways that the Interstate Highway System affected cities in the United States between 1950 and today.

**STOP****END OF EXAM**

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## 2013 SCORING GUIDELINES

### Question 1

The high-tech centers of Silicon Valley in California and the Research Triangle in North Carolina have developed in the past 40 years.

#### Part A (6 points total)

Discuss the following three factors that contributed to the rise of such industrial regions: investment capital, labor, and government.

Investment Capital (2 points)	
Source (1 point)	Target (1 point)
<ul style="list-style-type: none"> <li>Investors taking risks</li> <li>Wealthy technology pioneers or individuals</li> <li>Companies, firms, businesses</li> <li>Banks (lenders)</li> <li>Venture capitalists</li> <li>Entrepreneurs</li> <li>University investment</li> </ul>	<ul style="list-style-type: none"> <li>To develop technologies and/or innovations</li> <li>New computing hardware. (e.g., iPads, iPods, PCs)</li> <li>Communications technology (e.g., smart phones, telecommunications)</li> <li>Robotics</li> <li>Data storage (e.g., cloud)</li> <li>Programming (e.g., gaming)</li> <li>Software (e.g., apps)</li> <li>Pharmaceuticals</li> <li>Biotechnology</li> <li>Materials science (e.g., electronics, medical, energy)</li> </ul>

Labor (2 points)	
Pool (1 point)	Outcome (1 point)
<ul style="list-style-type: none"> <li>University/professionally educated</li> <li>Skilled labor (e.g., high or technical)</li> <li>Highly specialized (e.g., trained labor)</li> <li>Scientists</li> <li>Engineers</li> <li>Creative, innovative, or inventive people</li> </ul>	Developing: <ul style="list-style-type: none"> <li>knowledge</li> <li>ideas</li> <li>technologies</li> <li>products</li> <li>companies</li> </ul>

Government (2 points)
<ul style="list-style-type: none"> <li>Federal/state funding for research and development</li> <li>Locating federal and state agencies in high-tech centers</li> <li>Zoning to promote high-tech and research facilities (<b>Note:</b> no credit for just the term zoning)</li> <li>Government funding for transportation, communication or utility infrastructure</li> <li>State/local economic development (e.g., tax reduction, tax holidays, subsidies)</li> <li>Government subcontracting to local high-tech firms</li> </ul>

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## 2013 SCORING GUIDELINES

### Question 1 (continued)

#### Part B (2 points total)

Define the concept of agglomeration and explain its role in the continuing expansion of such regions.

Agglomeration	
Definition (1 point)	Role in Regional Expansion (1 point)
The clustering of similar or related firms in close proximity to one another <b>Note:</b> no credit for merger or consolidation of companies	<ul style="list-style-type: none"><li>• Urbanization links to or location on the edge of existing cities providing operating cost advantages</li><li>• Attracting similar companies to share a specialized or educated local labor pool/infrastructure</li><li>• Multiplier effects of attracting business services, personal services or labor</li></ul>