

# Chapter 6

## Economic Growth

### 1 The Basics of Economic Growth

- 1) The best definition for economic growth is
- A) a sustained expansion of production possibilities measured as the increase in real GDP over a given period.
  - B) a sustained expansion of production possibilities measured as the increase in nominal GDP over a given period.
  - C) a sustained expansion of consumption goods over a given period.
  - D) a sustained expansion of production goods over a given period.

Answer: A

Topic: Long-Term Growth Trends

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 2) Economic growth is measured by
- A) changes in real GDP.
  - B) changes in nominal GDP.
  - C) changes in the employment rate.
  - D) All of the above are used to measure economic growth.

Answer: A

Topic: Long-Term Growth Trends

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 3) We are interested in long-term growth primarily because it brings
- A) higher price levels.
  - B) lower price levels.
  - C) higher standards of living.
  - D) trade wars with our trading partners.

Answer: C

Topic: Long-Term Growth Trends

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 4) If a nation's population grows, then,
- A) growth in real GDP per person will be less than the growth of real GDP.
  - B) there can be no economic growth.
  - C) growth in real GDP per person will be greater than the growth of real GDP.
  - D) there must be an increase in real GDP per person.

Answer: A

Topic: Long-Term Growth Trends

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) In 2008, Armenia had a real GDP of \$4.21 billion and a population of 2.98 million. In 2009, real GDP was \$4.59 billion and population was 2.97 million. What was Armenia's economic growth rate from 2008 to 2009?

A) 0.38 percent  
B) 9.0 percent  
C) 3.8 percent  
D) 8.3 percent

Answer: B

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 6) In 2008, Armenia had a real GDP of approximately \$4.21 billion and a population of 2.98 million. In 2009, real GDP was \$4.59 billion and population was 2.97 million. From 2008 to 2009, Armenia's standard of living \_\_\_\_\_.

A) increased  
B) decreased  
C) did not change  
D) might have increased, decreased, or remained unchanged but more information is needed to determine which.

Answer: A

Topic: Economic Growth Rate

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 7) In 2008, Armenia had a real GDP of approximately \$4.21 billion and a population of 2.98 million. In 2009, real GDP was \$4.59 billion and population was 2.97 million. Armenia's real GDP per person in 2009 was

A) \$1,545  
B) \$380  
C) \$1,413  
D) \$132

Answer: A

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 8) During 2011, the country of Economia had a real GDP of \$115 billion and the population was 0.9 billion. In 2010, real GDP was 105 billion and the population was 0.85 billion. In 2011, real GDP per person was
- A) \$128
  - B) \$124
  - C) \$135
  - D) \$117

Answer: A

Topic: Economic Growth Rate

Skill: Analytical

Question history: Modified 10th edition

AACSB: Analytical Skills

- 9) During 2011, the country of Economia had a real GDP of \$115 billion and the population was 0.9 billion. In 2010, real GDP was 105 billion and the population was 0.85 billion. In 2010, real GDP per person was
- A) \$128
  - B) \$124
  - C) \$135
  - D) \$117

Answer: B

Topic: Economic Growth Rate

Skill: Analytical

Question history: Modified 10th edition

AACSB: Analytical Skills

- 10) Suppose real GDP for a country is \$13 trillion in 2007, \$14 trillion in 2008, \$15 trillion in 2009, and \$16 trillion in 2010. Over this time period, the real GDP growth rate is
- A) increasing.
  - B) decreasing.
  - C) constant.
  - D) negative.

Answer: B

Topic: Economic Growth Rate

Skill: Analytical

Question history: New 10th edition

AACSB: Analytical Skills

- 11) Suppose that in 2009 a country has a population of 1 million and real GDP of \$1 billion. In 2010, the population is 1.1 million and the real GDP is \$1.1 billion. The real GDP per person growth rate is
- A) \$1000.
  - B) positive.
  - C) negative.
  - D) zero.

Answer: D

Topic: Economic Growth Rate

Skill: Analytical

Question history: New 10th edition

AACSB: Analytical Skills

- 12) During 2009, the country of Economica had a real GDP of \$115 billion and the population was 0.9 billion. In 2008, real GDP was 105 billion and the population was 0.85 billion. Economica's growth rate of real GDP per person is
- A) 3.23 percent
  - B) 5 percent
  - C) 5.88 percent
  - D) 9.52 percent

Answer: A

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 13) Suppose a nation's population grows by 2 percent and, at the same time, its GDP grows by 5 percent. Approximately how fast will real GDP per person increase?
- A) 3 percent per year
  - B) 2 percent per year
  - C) 5
  - D) 10 percent per year

Answer: A

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 14) Which of the following is used to calculate the standard of living?
- A) real GDP/population
  - B)  $((\text{real GDP in the current year} - \text{real GDP in previous year}) / \text{real GDP in previous year}) \times 100$
  - C) the one-third rule
  - D) real GDP/aggregate hours

Answer: A

Topic: Economic Growth Rate

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 15) The Rule of 70 is used to
- A) estimate how much of an economy's growth rate is due to increases in capital per hour of labor
  - B) calculate the standard of living
  - C) calculate the economy's growth rate
  - D) estimate how long it will take the level of any variable to double

Answer: D

Topic: Rule of 70

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 16) Using the Rule of 70, if the country of Flowerdom's current growth rate of real GDP per person was 7 percent a year, how long would it take the country's real GDP per person to double?
- A) 1 year
  - B) 2 years
  - C) 10 years
  - D) 49 years

Answer: C

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 17) Using the Rule of 70, if the country of Flowerdom's current growth rate of real GDP per person was 10 percent a year, how long would it take the country's real GDP per person to double?
- A) 0.7 years
  - B) 1 year
  - C) 7 years
  - D) 10 years

Answer: C

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 18) Slowdonia's current growth rate of real GDP per person is 2 percent a year. How long will it take to double real GDP per person?
- A) half a year
  - B) approximately 10 years
  - C) 28.6 years
  - D) 35 years

Answer: D

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 19) Slowdonia's current growth rate of real GDP per person is 1 percent a year. Approximately how long will it take to double real GDP per person?
- A) 10 year 2
  - B) 35 years
  - C) 70 years
  - D) 100 years

Answer: C

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

20) If real GDP per person is growing at 4 percent per year, approximately how many years will it take to double?

- A) 17.5
- B) 25
- C) 4
- D) 8

Answer: A

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

21) Suppose a country is producing \$20 million of real GDP. If the economy grows at 10 percent per year, approximately how many years will it take for real GDP to grow to \$80 million?

- A) 14
- B) 7
- C) 4
- D) 30

Answer: A

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

22) Real GDP per person in the country of Flip is \$10,000, and the growth rate is 10 percent a year. Real GDP per person in the country of Flap is \$20,000 and the growth rate is 5 percent a year. When will real GDP per person be greater in Flip than in Flap?

- A) in 2 years
- B) in 15 years
- C) never
- D) in 10 years

Answer: B

Topic: Rule of 70

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

## 2 Economic Growth Trends

1) Over the last 100 years, the average U.S. growth rate in real GDP per person was about

- A) 2 percent per year.
- B) 6 percent per year.
- C) 12.5 percent per year.
- D) 1 percent per year.

Answer: A

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 2) Over the past 100 years, real GDP per person in the United States has grown at an average of \_\_\_\_\_ percent a year.

A) 1  
B) 2  
C) 3  
D) 4

Answer: B

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 3) The growth rate of real GDP per person in the United States has
- A) averaged approximately 2 percent per year over the past century.
  - B) has consistently been 2 percent per decade over the past century.
  - C) has been the highest in the world over the past 5 decades.
  - D) has increased every year over the past century.

Answer: A

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: New 10th edition

AACSB: Reflective Thinking

- 4) Over the past 100 years real GDP per person in the United States, on average, has
- A) decreased by about 5 percent per year.
  - B) increased by about 2 percent per year.
  - C) increased by about 5 percent per year.
  - D) increased by about 10 percent per year.

Answer: B

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) Over the past 100 years, in the United States the average growth rate of \_\_\_\_\_ grew at a faster rate than \_\_\_\_\_.
- A) real GDP; nominal GDP
  - B) the population; real GDP
  - C) real GDP; the population
  - D) inflation; real GDP

Answer: C

Topic: Long-Term Economic Growth in the United States

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 6) Over the past four decades,
- A) the growth rate of real GDP per person in the United States has been increasing.
  - B) U.S. real GDP per person has fallen below that of the other rich industrial countries.
  - C) U.S. real GDP per person has increased.
  - D) Both answers A and C are correct.

Answer: C

Topic: Long-Term Economic Growth in the United States

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 7) The historical record for the United States for the past 100 years shows
- A) growth in real GDP per person during most years.
  - B) economic growth for about half the years and economic decline for the other half.
  - C) growth until 1970 and then a period of constant per person real GDP.
  - D) continuous economic growth, although at different rates, throughout the entire century.

Answer: A

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 8) Which of the following was a period of below-average economic growth in the United States?
- A) the 1920s
  - B) the 1960s
  - C) the 1930s
  - D) all of the above

Answer: C

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 9) Which of the following statements are correct?
- I. The average economic growth rate in real GDP per person in the United States over the last century was 5 percent per year.
  - II. The United States has the highest economic growth rate of any nation.
- A) I only
  - B) II only
  - C) both I and II
  - D) neither I nor II

Answer: D

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



- 10) The historical record for the United States since 1910 shows
- A) mostly positive economic growth, though the Great Depression caused actual GDP to dip well below potential GDP.
  - B) economic growth for about half the years and economic decline for the other half.
  - C) growth until 1970 and then a period of constant per person real GDP.
  - D) continuous economic growth for each year, although at different rates, throughout the entire century.

Answer: A

Topic: Long-Term Economic Growth in the United States

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 11) Which of the following statements regarding U.S. economic growth is NOT correct?
- A) Over the past 100 years, on the average real GDP per person grew 2 percent a year.
  - B) The average annual growth rate of real GDP per person in the United States was rapid during World War II.
  - C) In the 1930s, real GDP fell well below its trend.
  - D) The growth rate of real GDP per person accelerated between 1973 to 1984.

Answer: D

Topic: Long-Term Economic Growth in the United States

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 12) In 2010, of the following which nations had the highest level of real GDP per person?
- A) Japan.
  - B) Europe Big 4.
  - C) Canada.
  - D) China.

Answer: C

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 13) In 2010, of the following \_\_\_\_\_ had the highest real GDP per person.
- A) Japan
  - B) Canada
  - C) the Europe Big 4 countries
  - D) the United States

Answer: D

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 14) During the later half of the 20th century, which of the following had the lowest level of real GDP per person?

- A) Africa
- B) Central and South America
- C) United States
- D) Central Europe

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 15) During the 1990s, which of the following experienced the slowest rate of growth in real GDP per person?

- A) Japan
- B) The big 4 nations of Europe
- C) United States
- D) Canada

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 16) Countries or regions in which real GDP per person has not grown as fast as in the United States since 1960 include

- A) Japan.
- B) countries in Africa.
- C) Hong Kong.
- D) Canada.

Answer: B

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 17) Which of the following statements about world growth during the last half of the 20th century is correct?

- A) In every decade, Japan has experienced faster growth than the United States.
- B) Growth rates in South American countries have exceeded those in North America.
- C) Real GDP per person in Hong Kong and Singapore are approaching or surpassing that in the United States.
- D) Due to rapid growth, real GDP per person in China is now about 50 percent of that in the United States.

Answer: C

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 18) Since 1960, which of the following countries had average growth rates in real GDP per person higher than that of the United States?

- A) Singapore
- B) Hong Kong
- C) South Korea
- D) All of the above answers are correct.

Answer: D

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 19) Of the following Asian countries, which has the lowest level of real GDP per person?

- A) China
- B) Korea
- C) Singapore
- D) Hong Kong

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 20) The gap between real GDP per person in Africa and real GDP per person in the United States has been

- A) increasing.
- B) decreasing.
- C) remaining fairly constant.
- D) there is no gap in real GDP per person between Africa and the United States.

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 21) Over the past fifty years, there has been substantial closure of the gap in real GDP per person between which of the following groups of countries?

- A) the United States and Central and South America
- B) Africa and Western Europe
- C) Central and South America and Africa
- D) the United States and Japan

Answer: D

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

22) Between which pair of countries or continents listed below has real GDP per person converged the most since 1960?

- A) Canada and Japan
- B) United States and Africa
- C) United States and South America
- D) Canada and South America

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

23) If a rich country grows at a faster rate than a poor one, then

- A) the gap in their standard of living will widen over time.
- B) the gap in their standard of living will close over time.
- C) the difference in their living standards will not change over time.
- D) whether or not the living standards gap widens or closes over time depends on the absolute size of the relative growth rates.

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

24) Convergence of the income gap has been most dramatic between

- A) Hong Kong and the United States.
- B) the Central European countries and the United States.
- C) Africa and the United States.
- D) South America and the United States.

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

25) The gaps between the United States and the Asian countries of Honk Kong, Singapore, Korea and China have been

- A) decreasing
- B) increasing
- C) remaining fairly constant
- D) there are no gaps between these Asian countries and the United States

Answer: A

Topic: Real GDP Growth in the World Economy

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 26) By measuring \_\_\_\_\_ we can see that the economies of Hong Kong and Singapore are catching up to the economies of North America but that the economies of Central and South America are not.
- A) inflation per person
  - B) real GDP per person
  - C) the population
  - D) real GDP

Answer: B

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

### 3 How Potential GDP Grows

- 1) Moving along the aggregate production function shows the relationship between \_\_\_\_\_, holding all else constant.
- A) capital input and real GDP
  - B) labor input and real GDP
  - C) labor input, capital input and real GDP
  - D) technology and real GDP

Answer: B

Topic: Aggregate Production Function

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 2) The aggregate production function shows how \_\_\_\_\_ varies with \_\_\_\_\_.
- A) leisure time; labor
  - B) labor; leisure time
  - C) real GDP; labor
  - D) labor; capital

Answer: C

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 3) An aggregate production function shows the relationship between \_\_\_\_\_.
- A) real GDP and leisure.
  - B) real GDP and the quantity of labor employed.
  - C) leisure and unemployment.
  - D) real GDP and unemployment.

Answer: B

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 4) The aggregate production function describes the relationship between
- A) real GDP and the quantity of labor employed.
  - B) real GDP and the price level.
  - C) the rate of growth of real GDP and inflation.
  - D) real GDP and the unemployment rate.

Answer: A

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) A movement along the aggregate production function is the result of a change in
- A) the quantity of labor
  - B) technology
  - C) capital
  - D) interest rates

Answer: A

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 6) Along the aggregate production function, as the quantity of labor rises, real GDP
- A) rises
  - B) falls
  - C) stays the same
  - D) may fall, rise, or stay the same

Answer: A

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 7) The aggregate production function shows that an economy increases its real GDP in the short run by
- A) developing new technologies.
  - B) increasing its physical capital stock.
  - C) using more labor.
  - D) exploring for new deposits of natural resources.

Answer: C

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 8) Moving along the aggregate production function, all of the following are held constant EXCEPT
- A) labor
  - B) capital
  - C) human capital
  - D) technology

Answer: A

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 9) An increase in labor hours will lead to
- A) a shift of the aggregate production function but no movement along it.
  - B) a movement along the aggregate production function but no shift in it.
  - C) both a movement along and a shift in the aggregate production function.
  - D) neither a movement along nor a shift in the aggregate production function.

Answer: B

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 10) The aggregate production function is graphed as
- A) a downward sloping curve.
  - B) an upward sloping straight line.
  - C) an upward sloping line that becomes flatter as the quantity of labor increases.
  - D) an upward sloping line that becomes steeper as the quantity of labor increases.

Answer: C

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 11) The aggregate production function
- A) measures the productivity of labor as leisure decreases.
  - B) increases only with increases in productivity.
  - C) shows that real GDP can increase because of increased productivity as well as increased labor hours.
  - D) cannot show the impacts of productivity improvements.

Answer: C

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 12) The aggregate production function relating real GDP to labor hours
- A) has a constant slope.
  - B) has a negative slope.
  - C) has a positive slope and becomes steeper as employment increases.
  - D) has a positive slope and becomes less steep as employment increases.

Answer: D

Topic: Aggregate Production Function, Diminishing Returns

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 13) The curvature of the production function shows that as employment increases, the productivity of labor
- A) remains positive and increases.
  - B) remains positive but decreases.
  - C) decreases and becomes negative.
  - D) remains constant.

Answer: B

Topic: Aggregate Production Function, Diminishing Returns

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 14) The decreasing slope of a production function reflects
- A) diminishing returns.
  - B) rising unemployment.
  - C) decreasing costs.
  - D) increasing aggregate demand.

Answer: A

Topic: Aggregate Production Function, Diminishing Returns

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 15) As labor increases, there is a
- A) shift of the aggregate production function, but no movement along it.
  - B) movement along the aggregate production function, but no shift in it.
  - C) movement along the aggregate production function and real GDP will increase less with each additional increase in labor.
  - D) movement along the aggregate production function and real GDP will decrease less with each additional increase in labor.

Answer: C

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking



- 16) According to the law of diminishing returns, an additional unit of
- A) capital produces more output than an additional unit of labor.
  - B) labor decreases output.
  - C) labor produces more output than the previous unit.
  - D) labor produces less output than the previous unit.

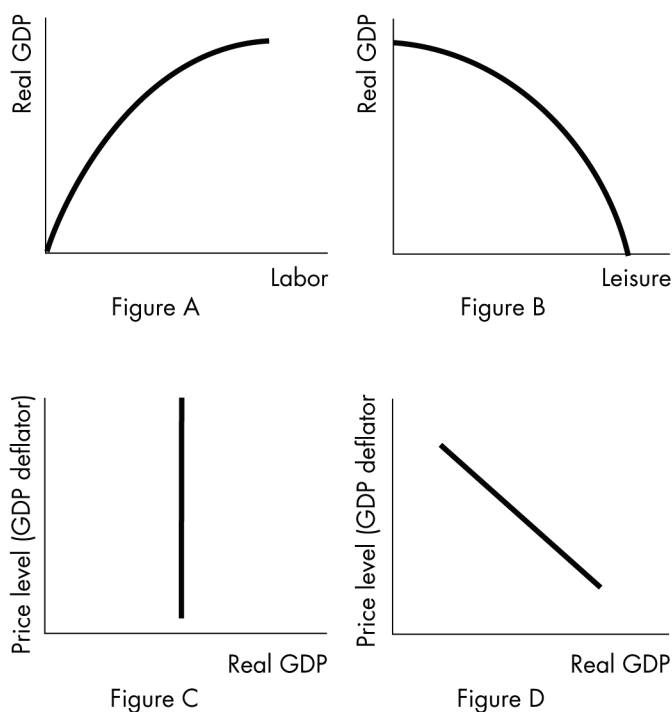
Answer: D

Topic: Law of Diminishing Returns

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



- 17) In the illustration above, which figure shows an aggregate production function?
- A) Figure A
  - B) Figure B
  - C) Figure C
  - D) Figure D

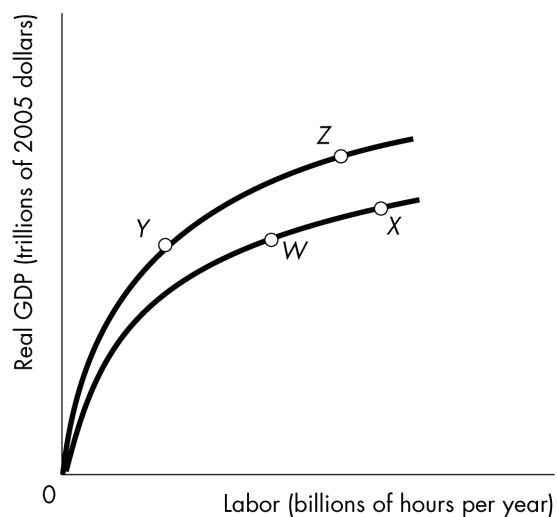
Answer: A

Topic: Aggregate Production Function

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Communication



- 18) The country of Kemper is on its aggregate production function at point *W* in the above figure. The government of Kemper passes a law that makes 4 years of college mandatory for all citizens. After all citizens have their education, the economy will
- A) move to point such as *Y*.
  - B) remain at point *W*.
  - C) move to point such as *X*.
  - D) move to point such as *Z*.

Answer: D

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 19) The country of Kemper is on its aggregate production function at point *W* in the above figure. If the population increases with no change in capital or technology, the economy will
- A) move to point such as *Y*.
  - B) remain at point *W*.
  - C) move to point such as *X*.
  - D) move to point such as *Z*.

Answer: C

Topic: Aggregate Production Function

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 20) The real wage rate measures the
- A) quantity of goods and services that an hour of work will buy.
  - B) average weekly earnings in dollars of a worker.
  - C) dollar value of an hour of work.
  - D) dollar value of what a worker could earn in another job.

Answer: A

Topic: Real Wage Rate

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 21) Which of the following is TRUE regarding the real wage rate? The real wage rate
- I. is always greater than the money wage.
  - II. measures the quantity of goods and services an hour's work can buy.
- A) only I
  - B) only II
  - C) both I and II
  - D) neither I nor II

Answer: B

Topic: Real Wage Rate

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 22) The real wage rate equals
- A)  $(\text{money wage rate})/(\text{price level})$ .
  - B)  $(\text{price level})/(\text{money wage rate})$ .
  - C)  $(\text{money wage rate}) \times (\text{price level})$ .
  - D)  $(\text{money wage}) + (\text{number of hours worked})/(\text{price level})$ .

Answer: A

Topic: Real Wage Rate

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 23) The relationship between the labor employed by a firm and the real wage rate is shown by the
- A) supply of labor curve.
  - B) supply of jobs curve.
  - C) demand for jobs curve.
  - D) demand for labor curve.

Answer: D

Topic: Demand for Labor

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 24) The quantity of labor demanded depends on the
- A) money wage rate not the real wage rate.
  - B) real wage rate not the money wage rate.
  - C) price of output not the money wage rate nor the real wage rate.
  - D) money wage rate AND the real wage rate.

Answer: B

Topic: Demand for Labor

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 25) Because the productivity of labor decreases as the quantity of labor employed increases,
- A) the quantity of labor a firm demands increases as the real wage rate decreases.
  - B) the quantity of labor a firm demands increases as the money wage rate decreases.
  - C) the labor demand curve shifts right as the real wage rate decreases.
  - D) the aggregate production function shifts upward as the real wage rate decreases.

Answer: A

Topic: Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 26) Which of the following is TRUE regarding the labor market?
- I. The labor supply curve slopes upward because firms maximize profits as they hire more workers.
  - II. If the real wage rate falls, the quantity of labor firms demand increases.
  - III. The demand for labor curve slopes downward because as the real wage rate falls, workers demand to work fewer hours.
- A) I and II
  - B) I and III
  - C) II only
  - D) I, II and III

Answer: C

Topic: Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 27) Which of the following statements are TRUE regarding the demand for labor?
- I. The quantity of labor demanded depends on the real wage rate.
  - II. If the money wage rate increases and the price level remains the same, the quantity of labor demanded decreases.
- A) I only
  - B) II only
  - C) I and II
  - D) neither I nor II

Answer: C

Topic: Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 28) If the price level falls by 5 percent and workers' money wage rates remain constant, firms'
- A) quantity of labor demanded will decrease.
  - B) quantity of labor demanded will increase.
  - C) supply of jobs will increase.
  - D) None of the above answers are correct.

Answer: A

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 29) If the price level rises by 5 percent and workers' money wage rates remain constant, firms'
- A) quantity of labor demanded will decrease.
  - B) quantity of labor demanded will increase.
  - C) supply of jobs will decrease.
  - D) None of the above answers are correct.

Answer: B

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 30) Suppose there is a rise in the price level, but no change in the money wage rate. As a result, the quantity of labor demanded
- A) increases.
  - B) decreases.
  - C) does not change because there is no change in the real wage rate.
  - D) decreases only if the money wage rate also decreases.

Answer: A

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 31) Suppose there is a rise in the real wage rate. As a result, the quantity of labor demanded
- A) increases.
  - B) decreases.
  - C) does not change because there is no change in the money wage rate.
  - D) increases only if the price level also decreases.

Answer: B

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 32) Suppose the money wage rate and the price level both fall by 5 percent. As a result,
- A) the quantity of labor demanded increases.
  - B) the quantity of labor demanded decreases.
  - C) the quantity of labor demanded does not change because there is no change in the real wage.
  - D) people are worse off and there is more unemployment.

Answer: C

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 33) If the price level rises by 3 percent and workers' money wage rates increase by 2 percent, then the
- A) quantity of labor demanded will decrease.
  - B) quantity of labor demanded will increase.
  - C) quantity of labor demanded does not change because there is no change in the real wage rate.
  - D) real wage rate increases.

Answer: B

Topic: Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 34) If the price level rises by 3 percent and workers' money wages increase by 3 percent, then the
- A) quantity of labor demand will decrease.
  - B) quantity of labor demand will increase.
  - C) quantity of labor demanded does not change because there is no change in the real wage rate.
  - D) Any of the above could occur depending on the magnitude on the dollar increase in the price level versus the dollar increase in the wage rate.

Answer: C

Topic: Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 35) The demand for labor curve is
- A) upward sloping at potential GDP and downward sloping elsewhere.
  - B) vertical at potential GDP.
  - C) downward sloping.
  - D) upward sloping because firms demand labor.

Answer: C

Topic: Demand for Labor Curve

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 36) The labor demand curve slopes downward because
- A) the firm maximizes profits by hiring more labor when the real wage rate rises.
  - B) workers supply more hours of work when the real wage rate rises.
  - C) the firm maximizes profits by hiring more labor when the real wage rate falls.
  - D) workers supply fewer hours of work when the real wage rate rises.

Answer: C

Topic: Demand for Labor Curve

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 37) If the price level increases, but workers' money wage rates remain constant, which of the following is TRUE?
- I. The quantity of labor demanded will increase.
  - II. The real wage rate will decrease.
  - III. The demand for labor curve shifts rightward.
- A) I only
  - B) I and II
  - C) II and III
  - D) I, II and III

Answer: B

Topic: Demand for Labor Curve

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 38) The quantity of labor supplied depends on the
- A) money wage rate not the real wage rate.
  - B) real wage rate not the money wage rate.
  - C) price of output not the money wage rate nor the real wage rate.
  - D) level of profits.

Answer: B

Topic: Supply of Labor

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 39) People base their labor supply on the \_\_\_\_\_ because they care about \_\_\_\_\_.
- A) real wage; what their earnings will buy
  - B) real wage; the equality of money wages and the price level
  - C) money wage; a surplus of labor
  - D) money wage; the amount of labor firms demand

Answer: A

Topic: Supply of Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 40) If workers' money wage rates increase by 5 percent and the price level remains constant, workers'
- A) quantity of labor supplied will decrease.
  - B) quantity of labor supplied will increase.
  - C) quantity of labor supplied will not change.
  - D) demand for jobs will decrease.

Answer: B

Topic: Supply of Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 41) If the price level rises by 4 percent and workers' money wage rates increase by 2 percent, then the
- A) quantity of labor supplied decreases.
  - B) quantity of labor supplied increases.
  - C) quantity of labor supplied does not change because there is no change in the real wage rate.
  - D) the supply curve of labor shifts rightward.

Answer: A

Topic: Supply of Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 42) If the price level rises by 2 percent and workers' money wages increase by 2 percent, then the
- A) quantity of labor supply decreases.
  - B) quantity of labor supply increases.
  - C) quantity of labor supplied does not change because there is no change in the real wage rate.
  - D) More information about the dollar change in the price level and money wage rate are needed to answer the question.

Answer: C

Topic: Supply of Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 43) If the price level rises by 3 percent and workers' money wage rate increase by 1 percent, then the
- A) quantity of labor supplied decreases.
  - B) quantity of labor supplied increases.
  - C) quantity of labor supplied does not change because there is no change in the real wage rate.
  - D) real wage rate increases.

Answer: A

Topic: Supply of Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



- 44) The labor force participation rate
- A) does not change when the real wage rate changes.
  - B) decreases as the real wage rate rises.
  - C) increases as the real wage rate increases.
  - D) has an inverse effect of the supply of labor.

Answer: C

Topic: Supply of Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 45) The supply of labor curve
- A) has a negative slope.
  - B) is independent of the wage rate.
  - C) shows how much labor workers are willing to supply at various real wage rates.
  - D) is usually vertical.

Answer: C

Topic: Supply of Labor Curve

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 46) The supply of labor curve is
- A) vertical at potential GDP.
  - B) upward sloping.
  - C) downward sloping.
  - D) horizontal at the equilibrium wage rate.

Answer: B

Topic: Supply of Labor Curve

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 47) Which of the following statements is correct?
- A) When the real wage increases, the labor supply curve shifts rightward.
  - B) When the real wage increases, the labor supply curve shifts leftward.
  - C) When the real wage decreases, the labor supply curve shifts leftward.
  - D) None of the above statements are correct.

Answer: D

Topic: Supply of Labor Curve

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 48) As the real wage rate increases, the
- A) quantity of labor supplied increases.
  - B) supply of labor curve shifts rightward.
  - C) supply of labor curve shifts leftward.
  - D) quantity of labor supplied increases and the supply of labor shifts rightward.

Answer: A

Topic: Supply of Labor Curve

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 49) If the price level increases and workers' money wage rates remain constant, which of the following will occur?
- I. The quantity of labor supplied will decrease.
  - II. The real wage rate will decrease.
  - III. The labor supply curve will shift rightward.
- A) I only
  - B) I and II
  - C) II and III
  - D) I, II and III

Answer: B

Topic: Supply of Labor Curve

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 50) Greater labor force participation for households at higher real wage rate is one reason that
- A) the demand for labor curve is upward sloping.
  - B) the demand for labor curve is downward sloping.
  - C) the supply of labor curve is upward sloping.
  - D) the supply of labor curve is downward sloping.

Answer: C

Topic: Supply of Labor Curve

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 51) If the money wage rate rises relative to the price level, firms \_\_\_\_\_ the quantity of labor they demand and workers \_\_\_\_\_ the quantity of labor they supply.
- A) increase; increase
  - B) increase; decrease
  - C) decrease; increase
  - D) decrease; decrease

Answer: C

Topic: Demand for Labor and Supply of Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 52) If the price level rises relative to the money wage rate, firms \_\_\_\_\_ the quantity of labor they demand and workers \_\_\_\_\_ the quantity of labor they supply.
- A) increase; increase
  - B) increase; decrease
  - C) decrease; increase
  - D) decrease; decrease

Answer: B

Topic: Demand for Labor and Supply of Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 53) If the real wage rate is such that the quantity of labor supplied equals the quantity of labor demanded,
- A) a full-employment equilibrium occurs.
  - B) real GDP equals potential GDP.
  - C) the opportunity cost effect of not working equals the income effect.
  - D) Both answers A and B are correct.

Answer: D

Topic: Labor Market Equilibrium

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 54) If at the prevailing real wage rate, the quantity of labor supplied exceeds the quantity demanded,
- A) there is a shortage of labor.
  - B) the real wage rate will rise to restore equilibrium.
  - C) the real wage rate is greater than the equilibrium real wage rate.
  - D) None of the above answers is correct.

Answer: C

Topic: Labor Market Equilibrium

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 55) If the real wage rate is such that the quantity of labor supplied is greater than the quantity of labor demanded,
- A) the economy is at full employment.
  - B) real GDP will not equal potential GDP.
  - C) job search decreases.
  - D) labor resources are allocated efficiently.

Answer: B

Topic: Labor Market Equilibrium

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 56) If the real wage rate is such that the quantity of labor supplied by workers is less than the quantity of labor demanded by firms,
- A) the economy is at full employment.
  - B) there is a shortage of labor.
  - C) the real wage rate will decrease.
  - D) real GDP equals potential GDP since firms make the decision on how many workers to hire.

Answer: B

Topic: Labor Market Equilibrium

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 57) At the full-employment equilibrium in the labor market,
- A) there is no unemployment.
  - B) there are no job vacancies.
  - C) there is neither a shortage nor a surplus of labor.
  - D) the money wage rate equals the real wage rate.

Answer: C

Topic: Labor Market Equilibrium

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 58) Equilibrium in the labor market
- A) cannot occur if the production function is shifting upward.
  - B) can happen only when real GDP exceeds potential GDP.
  - C) means that resources are allocated inefficiently
  - D) occurs when actual GDP is equal to potential GDP

Answer: D

Topic: Labor Market Equilibrium

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 59) When the quantity of labor demanded exceeds the quantity of labor supplied, the real wage rate
- A) rises to eliminate the labor-market shortage.
  - B) falls to eliminate the labor-market surplus.
  - C) rises to eliminate the labor-market surplus.
  - D) falls to eliminate the labor-market shortage.

Answer: A

Topic: Labor Market Equilibrium

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 60) If the labor market is in equilibrium and then the labor supply curve shifts rightward,
- A) there will be a shortage of labor at the original equilibrium wage rate.
  - B) there will be a surplus of labor at the original equilibrium wage rate.
  - C) the equilibrium wage rate will rise.
  - D) there will be a surplus of jobs at the new equilibrium.

Answer: B

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 61) In the labor market, an increase in labor productivity \_\_\_\_\_ the real wage rate and \_\_\_\_\_ the level of employment.
- A) raises; increases
  - B) raises; decreases
  - C) lowers; increases
  - D) lowers; decreases

Answer: A

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

Real wage rate (2005 dollars per hour)	Quantity of labor demanded (billions of hours per year)	Quantity of labor supplied (billions of hours per year)
15	70	10
20	60	20
25	50	30
30	40	40
35	30	50

- 62) The table above shows the labor market for the country of Pickett. When the labor market is in equilibrium, the real wage rate is \_\_\_\_\_ and \_\_\_\_\_ of labor a year are employed.
- A) any value less than \$25 an hour; any value greater than 40 billion hours
  - B) any value greater than \$30 an hour; any value more than 40 billion hours
  - C) any value greater than or equal to \$25 an hour; any value less than 40 billion hours
  - D) \$30 an hour; 40 billion hours

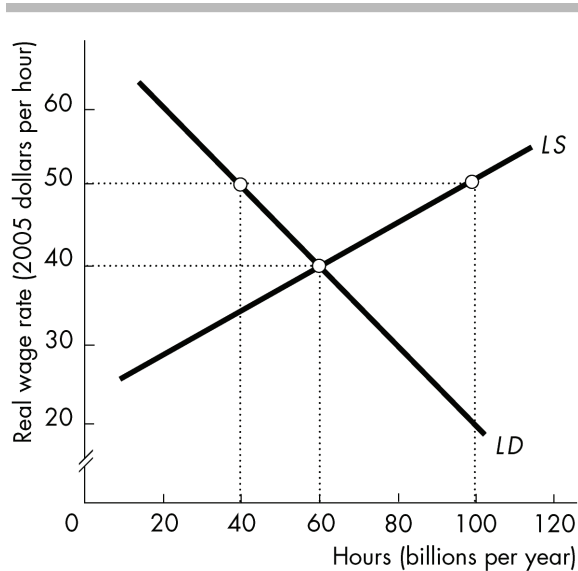
Answer: D

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



- 63) In the above figure, at the real wage rate of \$50
- A) there is a surplus of 100 billion hours per year.
  - B) there is a shortage of 100 billion hours per year.
  - C) there is a surplus of 60 billion hours per year.
  - D) there is shortage of 20 billion hours per year.

Answer: C

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 64) In the above figure, what is the full-employment real wage rate and quantity of hours per year?
- A) \$40 and 60 billion hours per year
  - B) \$50 and 100 billion hours per year
  - C) \$35 and 100 billion hours per year
  - D) \$50 and 40 billion hours per year

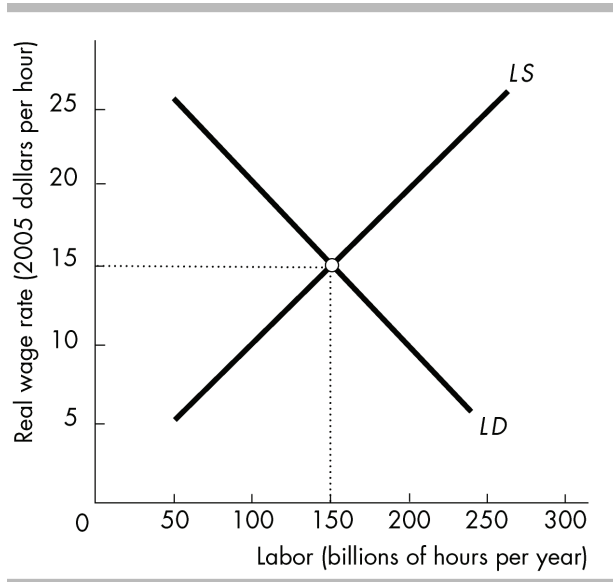
Answer: A

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



- 65) In the above figure, at a wage rate of \$20 per hour,
- A) there is a shortage of labor.
  - B) there is a surplus of labor.
  - C) the labor supply curve will shift rightward.
  - D) the labor demand curve will shift rightward.

Answer: B

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 66) In the figure, when the real wage rate is \$10 an hour, \_\_\_\_\_.
- A) a shortage of labor exists and the real wage rate will rise
  - B) the demand for labor will increase
  - C) the demand for labor will decrease
  - D) a surplus of labor exists and the real wage rate will fall

Answer: A

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 67) In the above figure, the equilibrium real wage rate is
- A) \$10 per hour.
  - B) \$15 per hour.
  - C) \$20 per hour.
  - D) none of the above

Answer: B

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 68) In the above figure, the equilibrium level of labor is
- A) 100 billion hours.
  - B) 150 billion hours.
  - C) 200 billion hours.
  - D) none of the above

Answer: B

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 69) In the above figure, if the real wage is \$20 per hour, a labor
- A) shortage will occur and the real wage will rise.
  - B) shortage will occur and the real wage will fall.
  - C) surplus will occur and the real wage will rise.
  - D) surplus will occur and the real wage will fall.

Answer: D

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 70) In the above figure, if the real wage is \$10 per hour, a labor
- A) shortage will occur and the real wage will rise.
  - B) shortage will occur and the real wage will fall.
  - C) surplus will occur and the real wage will rise.
  - D) surplus will occur and the real wage will fall.

Answer: A

Topic: Labor Market Equilibrium

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



71) Full employment corresponds to

- A) equilibrium in the labor market, with real GDP being equal to potential GDP.
- B) labor demand being greater than labor supply and real GDP being equal to potential GDP.
- C) being at the point where the marginal product of labor equals zero.
- D) equilibrium in the labor market, and real GDP exceeding potential GDP.

Answer: A

Topic: The Labor Market and Full Employment

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

Real wage rate (2005 dollars per hour)	Quantity of labor demanded (billions of hours per year)	Quantity of labor supplied (billions of hours per year)
15	70	10
20	60	20
25	50	30
30	40	40
35	30	50

Real GDP (trillions of 2005 dollars per year)	Quantity of labor (billions of hours per year)
3	20
9	30
14	40
18	50
21	60

72) The tables above show the labor market and the production function schedule for the country of Pickett. Potential GDP is \_\_\_\_\_.

- A) \$40 trillion
- B) \$6 trillion
- C) \$14 trillion
- D) \$25 trillion

Answer: C

Topic: Labor Market and Full Employment

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 73) The tables above show the labor market and the production function schedule for the country of Pickett. An increase in population changes the labor supply by 20 billion hours at each real wage rate. Potential GDP \_\_\_\_\_.  
A) does not change  
B) decreases to \$3 trillion  
C) increases to \$50 trillion  
D) increases to \$18 trillion

Answer: D

Topic: Labor Market and Full Employment

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 74) Real GDP grows when  
I. the quantities of the factors of production grow  
II. persistent advances in technology make factors of production increasingly productive  
III. human capital grows  
A) Only I.  
B) Both I and III.  
C) Only II.  
D) I, II, and III.

Answer: D

Topic: Economic Growth Rate

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 75) If the labor and capital grow more quickly, then real GDP will  
A) not grow fast enough.  
B) grow more quickly.  
C) grow more slowly.  
D) stay fixed at potential GDP.

Answer: B

Topic: Economic Growth Rate

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 76) The real wage rate will fall if the  
A) labor supply curve shifts rightward and the labor demand curve does not shift.  
B) labor supply curve shifts leftward and the labor demand curve does not shift.  
C) labor demand curve shifts rightward and the labor supply curve does not shift.  
D) labor demand curve shifts rightward more than the labor supply curve shifts rightward.

Answer: A

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 77) An increase in a nation's population results in
- A) an upward shift in the production function.
  - B) a movement along the production function.
  - C) a leftward shift in the labor supply curve.
  - D) Both answers A and C are correct.

Answer: B

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 78) An increase in a nation's population results in
- A) a rightward shift in the labor demand curve.
  - B) a movement along the nation's production function.
  - C) a decrease in the full-employment quantity of labor.
  - D) an upward shift of the nation's production function.

Answer: B

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 79) An increase in the population and hence the supply of labor causes a
- A) shortage of labor at the original real wage rate and the real wage rate will fall.
  - B) surplus of labor at the original real wage rate and the real wage rate will rise.
  - C) surplus of labor at the original real wage rate and the real wage rate will fall.
  - D) shortage of labor at the original real wage rate and the real wage rate will rise.

Answer: C

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 80) Employment and (total) potential GDP increase if the
- A) labor supply curve shifts rightward and the labor demand curve does not shift.
  - B) labor demand curve shifts leftward more than the labor supply curve shifts rightward.
  - C) labor demand curve shifts leftward and the labor supply curve does not shift.
  - D) None of the above answers are correct.

Answer: A

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

81) When the population increases with no change in labor productivity, employment \_\_\_\_\_ and potential GDP \_\_\_\_\_.

- A) decreases; decreases
- B) increases; increases
- C) decreases; increases
- D) increases; decreases

Answer: B

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

82) If the population increases, then potential GDP \_\_\_\_\_ and employment \_\_\_\_\_.

- A) increases; increases
- B) increases; decreases
- C) decreases; increases
- D) decreases; decreases

Answer: A

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

83) An increase in the working-age population results in a

- A) rightward shift of demand for labor curve and an increase in potential GDP.
- B) rightward shift of the demand for labor curve and no change in potential GDP.
- C) rightward shift of the supply of labor curve and an increase in potential GDP.
- D) leftward shift of the supply of labor curve and a decrease in potential GDP.

Answer: C

Topic: Labor Market Equilibrium with an Increase in Population

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

84) Potential GDP per labor hour can increase due to

- A) increases in labor productivity.
- B) increases in the quantity of money.
- C) increases in population.
- D) decreases in the quantity of capital.

Answer: A

Topic: Economic Growth Rate

Skill: Conceptual

Question history: New 10th edition

AACSB: Reflective Thinking

85) Labor growth depends mainly on \_\_\_\_\_ and labor productivity growth depends on \_\_\_\_\_.

- A) population growth; increases in real GDP
- B) population growth; technological advances
- C) growth in real GDP per person; growth rate of capital
- D) growth in real GDP per person; technological advances

Answer: B

Topic: Labor Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

86) Labor productivity is

- A) real GDP per hour of labor times the hours of work.
- B) real GDP per hour of labor times the number of people.
- C) real GDP per hour of labor.
- D) the rate of change in real GDP per hour of labor.

Answer: C

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

87) Dividing the value of real GDP by aggregate labor hours gives

- A) the net domestic product.
- B) labor productivity.
- C) the size of the labor force.
- D) the rate of capital accumulation.

Answer: B

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

88) Labor productivity is defined as

- A) total output attributable to labor.
- B) total real GDP.
- C) the growth rate of the labor force.
- D) real GDP per hour of labor.

Answer: D

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

89) Labor productivity equals

- A) real GDP divided by the capital stock.
- B) real GDP divided by the working-age population.
- C) total wages divided by real GDP.
- D) real GDP divided by aggregate labor hours.

Answer: D

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

90) Labor productivity is

- A) the average amount of real GDP produced per worker times the number of workers.
- B) the average amount of real GDP produced per worker times the number of people.
- C) the average amount of real GDP produced per hour of labor.
- D) the rate of change in the amount of real GDP produced per hour of labor.

Answer: C

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

91) If real GDP is \$800 million and aggregate labor hours are 20 million, labor productivity is

- \_\_\_\_\_.
- A) \$40 per hour
  - B) \$16,000 million
  - C) \$40 million
  - D) \$160 per hour

Answer: A

Topic: Labor Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

92) If real GDP is \$13,000 billion and aggregate hours are 270 billion, labor productivity equals

- A) \$6.50 per hour.
- B) \$45 per hour.
- C) \$48 per hour.
- D) \$650 per hour.

Answer: C

Topic: Labor Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 93) If real GDP is \$13,500 billion and aggregate hours are 110 billion, labor productivity equals
- A) \$6.75 per hour.
  - B) \$104 per hour.
  - C) \$123 per hour.
  - D) \$675 per hour.

Answer: C

Topic: Labor Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 94) If real GDP is \$11,750 billion and aggregate hours are 175 billion, labor productivity equals
- A) \$23.50 per hour.
  - B) \$52 per hour.
  - C) \$67 per hour.
  - D) \$235 per hour.

Answer: C

Topic: Labor Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 95) An increase in productivity relates to
- A) working harder over time.
  - B) working longer over time.
  - C) producing the same output with fewer labor hours.
  - D) producing the same output with more labor hours.

Answer: C

Topic: Labor Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 96) When labor productivity increases, the demand for labor curve \_\_\_\_\_ and the supply of labor curve \_\_\_\_\_.
- A) shifts rightward; shifts rightward
  - B) shifts rightward; does not shift
  - C) shifts leftward; shifts rightward
  - D) shifts leftward; does not shift

Answer: B

Topic: Demand for Labor

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 97) If the nation's capital stock increases so that workers become more productive, the
- A) demand for labor will increase
  - B) supply of labor will increase
  - C) demand for labor will decrease
  - D) supply of labor will decrease

Answer: A

Topic: Demand for Labor Curve

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 98) Which of the following statements is correct?
- A) When workers become more productive, the demand for labor curve shifts rightward.
  - B) When technology decreases, the supply of labor curve shifts leftward.
  - C) When labor force participation increases, the supply of labor curve shifts leftward.
  - D) When human capital increases, the demand for labor curve shifts leftward.

Answer: A

Topic: Demand for Labor Curve

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 99) If both the supply of labor and the demand for labor increase, then
- A) potential GDP decreases.
  - B) potential GDP increases.
  - C) full employment decreases.
  - D) the real wage rate increases.

Answer: B

Topic: Shifts in Labor Demand and Labor Supply

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 100) An increase in labor productivity \_\_\_\_\_ the real wage rate and an increase in population \_\_\_\_\_ the real wage rate.
- A) raises; lowers
  - B) raises; raises
  - C) lowers; lowers
  - D) lowers; raises

Answer: A

Topic: Shifts in Labor Demand and Labor Supply

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



101) If the demand for labor increases

- I. employment increases.
- II. the real wage rate increases.
- A) Only I is correct.
- B) Only II is correct.
- C) Both I and II are correct.
- D) Neither I nor II is correct.

Answer: C

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

102) An advance in technology that results in increased productivity results in a

- A) rightward shift of the labor supply curve.
- B) rightward shift of the labor demand curve.
- C) rightward shift of both the labor supply and labor demand curves.
- D) movement along the production function.

Answer: B

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

103) An advance in technology that increases productivity and an increase in the working-age population results in a

- A) rightward shift of the labor supply curve.
- B) rightward shift of the labor demand curve.
- C) rightward shift of the labor supply curve and of the labor demand curve.
- D) movement along the production function.

Answer: C

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

104) An advance in technology increases the productivity of labor. As a result, the nation's production function shifts \_\_\_\_\_ and the \_\_\_\_\_ labor curve shifts rightward.

- A) upward; demand for
- B) downward; demand for
- C) upward; supply of
- D) downward; supply of

Answer: A

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

105) An increase in physical capital or a technological advance

- A) raises the real wage rate.
- B) decreases the quantity of labor employed.
- C) shifts the production function downward.
- D) decreases demand for labor.

Answer: A

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

106) An advance in technology will

- A) not shift the production function but will lead to a movement down along the production function.
- B) shift the production function downward.
- C) not shift the production function but will lead to a movement up along the production function.
- D) shift the production function upward.

Answer: D

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

107) An advance in technology shifts the production function upward and shifts the labor

- A) demand curve leftward.
- B) supply curve leftward.
- C) demand curve rightward.
- D) supply curve rightward.

Answer: C

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

108) An increase in labor productivity shifts the labor \_\_\_\_\_ curve \_\_\_\_\_.

- A) demand; rightward
- B) demand; leftward
- C) supply; rightward
- D) supply; leftward

Answer: A

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

109) If new capital increases labor productivity, the supply of labor \_\_\_\_\_ and the demand for labor \_\_\_\_\_.

- A) stays the same; increases
- B) increases; increases
- C) increases; decreases
- D) decreases; stays the same

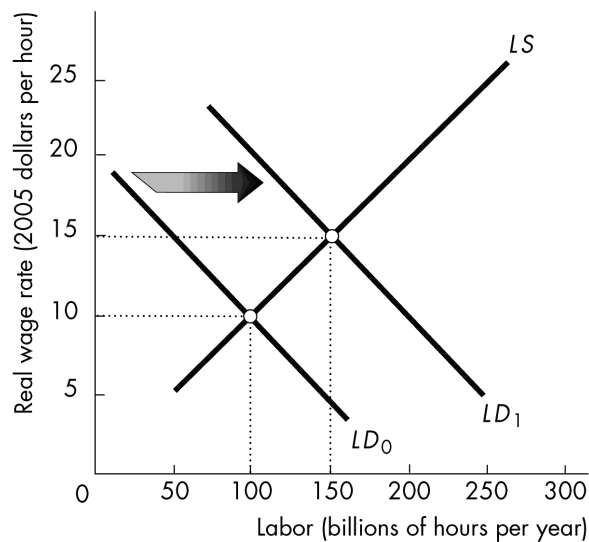
Answer: A

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



110) As a result of the rightward shift in the demand curve for labor from  $LD_0$  to  $LD_1$ , the equilibrium level of employment \_\_\_\_\_ and potential GDP \_\_\_\_\_.

- A) increases; increases
- B) increases; decreases
- C) decreases; increases
- D) decreases; decreases

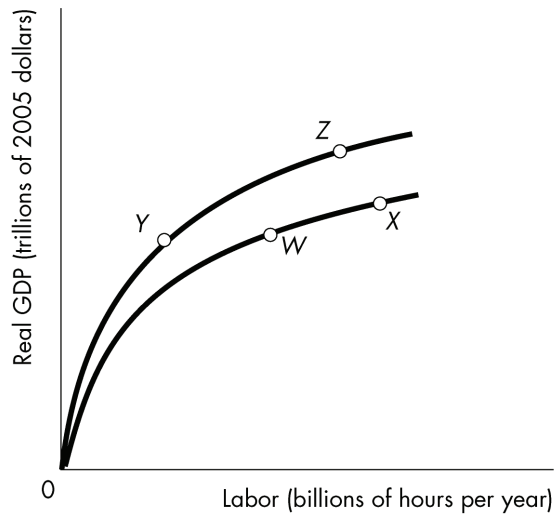
Answer: A

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



111) The figure above shows the U.S. production function. From 1986 to 2008 the United States experienced major advances in technology as well as an increase in the working-age population. The combined effect can best be shown by a

- A) movement from point W to point X.
- B) movement from point Y to point Z.
- C) movement from point Y to point X.
- D) movement from point W to point Z.

Answer: D

Topic: Labor Market Equilibrium with an Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

112) A decrease in the real wage rate

- A) shifts the labor demand curve rightward.
- B) shifts the labor demand curve leftward.
- C) shifts the labor supply curve leftward.
- D) none of the above because a change in the real wage rate does not shift either the labor demand or labor supply curve.

Answer: D

Topic: Study Guide Question, Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 113) The demand for labor curve
- A) is downward sloping because productivity of labor diminishes as more workers are employed.
  - B) is upward sloping and the supply curve of labor is downward sloping.
  - C) is upward sloping because productivity of labor diminishes as more workers are employed.
  - D) shifts rightward when the real wage rate rises.

Answer: A

Topic: Study Guide Question, Demand for Labor

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 114) An increase in labor productivity
- A) labor demand curve rightward.
  - B) labor demand curve leftward.
  - C) labor supply curve rightward.
  - D) labor supply curve leftward

Answer: A

Topic: Study Guide Question, Increase in Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 115) A decrease in population shifts the
- A) labor demand curve rightward.
  - B) labor demand curve leftward.
  - C) labor supply curve rightward.
  - D) labor supply curve leftward

Answer: D

Topic: Study Guide Question, Population

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

## 4 Why Labor Productivity Grows

- 1) The Industrial Revolution in England in large was the result of
- A) growth in human capital.
  - B) technological innovations encouraged by the patent system.
  - C) population growth.
  - D) technological innovations that were financed mainly by government spending.

Answer: B

Topic: Achieving Faster Economic Growth

Skill: Recognition

Question history: New 10th edition

AACSB: Reflective Thinking

- 2) Which of the following is NOT an important factor affecting growth in labor productivity?
- A) the saving rate
  - B) the speed with which prices fall
  - C) the growth rate of physical capital
  - D) the growth rate of labor productivity

Answer: B

Topic: Factors Creating Economic Growth

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 3) All of the following contribute to labor productivity growth EXCEPT:
- A) population growth.
  - B) physical capital growth.
  - C) human capital growth.
  - D) technological advancements.

Answer: A

Topic: Factors Creating Economic Growth

Skill: Conceptual

Question history: New 10th edition

AACSB: Reflective Thinking

- 4) Technological change
- A) lowers the real wage rate.
  - B) decreases labor productivity.
  - C) has no effect on employment.
  - D) increases potential GDP.

Answer: D

Topic: Factors Creating Economic Growth

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) Factors that influence labor productivity include \_\_\_\_\_.
- A) the inflation rate, the real wage rate, and the exchange rate
  - B) the labor demand curve
  - C) physical capital, the real wage rate, and technology
  - D) physical capital, human capital, and technology

Answer: D

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 6) Labor productivity, real GDP per labor hour, increases if
- A) saving and investment cause an increase in the quantity of capital per worker.
  - B) there is an increase in the accumulation of human capital.
  - C) new technologies are continuously discovered.
  - D) All of the above answers are correct.

Answer: D

Topic: Labor Productivity

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 7) Which of the following directly creates growth in labor productivity?
- I. Growth in capital per hour of labor.
  - II. Technological change.
  - III. Population growth.
- A) I only
  - B) II only
  - C) I and II
  - D) I and III

Answer: C

Topic: Labor Productivity, Changes in Capital Stock

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 8) Labor productivity rises
- A) if the amount of capital per worker increases.
  - B) in the absence of technological progress.
  - C) if firms invest in hiring more workers rather than buying more capital.
  - D) if the amount of capital per worker decreases.

Answer: A

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 9) Which of the following contributes to an increase in labor productivity?
- A) increased consumption expenditure
  - B) decreased investment
  - C) increased capital stock
  - D) All of the above contribute to an increase in labor productivity.

Answer: C

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

10) Which of the following does NOT increase labor productivity?

- A) increases in aggregate hours
- B) physical capital growth
- C) human capital growth
- D) technological advances

Answer: A

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

11) If capital per worker rises,

- A) labor productivity decreases.
- B) no technological progress occurs.
- C) labor productivity increases.
- D) firms respond by raising their prices.

Answer: C

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

12) If the quantity of capital per worker in the economy increases,

- A) the amount of money held by workers increases.
- B) labor productivity increases.
- C) the stock of human capital necessarily increases.
- D) the stock of financial assets held by the public increases.

Answer: B

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

13) Saving and investment that increase a nation's capital lead to

- A) slower growth because there is a lack of consumption.
- B) a decrease in labor productivity as capital is used to replace labor.
- C) a decrease in the amount of capital per worker.
- D) an increase in labor productivity.

Answer: D

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



- 14) An increase in saving that leads to more capital accumulation \_\_\_\_\_ labor productivity.
- A) increases
  - B) does not change
  - C) decreases
  - D) probably changes but in an ambiguous direction

Answer: A

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 15) A higher savings rate that leads to an increase in the capital stock
- A) leads to higher interest rates.
  - B) leads to increases in labor productivity.
  - C) immediately decreases investment.
  - D) is associated with a decrease in the rate of growth of the population.

Answer: B

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 16) Labor productivity increases with
- A) increases in consumption expenditure.
  - B) increases in depreciation.
  - C) increases in capital.
  - D) All of the above answers are correct.

Answer: C

Topic: Labor Productivity, Changes in Capital Stock

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 17) If capital per hour of labor increases, real GDP per hour of labor
- A) decreases for a given level of technology.
  - B) increases because the level of technology increases.
  - C) increases for a given level of technology.
  - D) decreases because the level of technology decreases.

Answer: C

Topic: Labor Productivity, Changes in Capital Stock

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 18) If capital per hour of labor decreases, real GDP per hour of labor
- A) decreases because the level of technology decreases.
  - B) increases because the level of technology increases.
  - C) increases for a given level of technology.
  - D) decreases for a given level of technology.

Answer: D

Topic: Labor Productivity, Changes in Capital Stock

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 19) An increase in education and training
- A) increases labor productivity.
  - B) increases aggregate hours.
  - C) decreases real GDP growth.
  - D) increases the employment-to-population ratio.

Answer: A

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 20) \_\_\_\_\_ is the knowledge and skill that people have obtained from education and on-the-job training.
- A) Labor productivity
  - B) Human capital
  - C) Capital
  - D) Technology

Answer: B

Topic: Human Capital

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 21) Human capital is the
- A) machinery used by humans to produce GDP.
  - B) technology used by humans to produce GDP.
  - C) skill and knowledge accumulated by humans.
  - D) plant and equipment produced by humans and not by machines.

Answer: C

Topic: Human Capital

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

22) Human capital is

- A) the saving done by human beings.
- B) people's knowledge and skills.
- C) a measure of the labor productivity of workers.
- D) the investment people make in industries that make capital goods.

Answer: B

Topic: Human Capital

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

23) Human capital is, in part, the

- A) amount of money held by a worker.
- B) stock of knowledge of a worker.
- C) stock of plant and equipment.
- D) stock of financial assets held by the public.

Answer: B

Topic: Human Capital

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

24) A worker's stock of knowledge is known as

- A) monetary capital.
- B) human capital.
- C) physical capital.
- D) financial capital.

Answer: B

Topic: Human Capital

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

25) On-the-job-training is an example of

- A) increasing labor force participation.
- B) investment in human capital.
- C) investment in physical capital.
- D) technological change.

Answer: B

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 26) The more education that workers have, the \_\_\_\_\_ is their human capital and \_\_\_\_\_ is their productivity.
- A) larger; higher
  - B) larger; smaller
  - C) smaller; larger
  - D) smaller; smaller

Answer: A

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 27) During World War II, the increasing productivity of workers who built ships was due primarily to
- A) human capital accumulation through schooling and training.
  - B) human capital accumulation by repeatedly doing the same tasks.
  - C) discoveries of new and better technologies.
  - D) investments by shipyards in new capital equipment.

Answer: B

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 28) Which of the following statements regarding human capital is INCORRECT?
- A) Human capital is the accumulated skill and knowledge of human beings.
  - B) Education is the only vehicle for the creation of human capital because training simply reinforces what has already been learned.
  - C) The accumulation of human capital is the source of both increased productivity and technological advance.
  - D) Writing and mathematics, the most basic of human skills, are crucial elements in economic progress.

Answer: B

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 29) Workers who pursue an education directly increase their
- A) financial capital.
  - B) physical capital.
  - C) human capital.
  - D) saving.

Answer: C

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 30) In addition to saving and investment in capital, making an even larger contribution to long-term economic growth in real GDP per person
- A) are technological advances.
  - B) is lower current consumption.
  - C) is higher current consumption.
  - D) is a larger work force.

Answer: A

Topic: Labor Productivity, Technological Advance

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 31) Most \_\_\_\_\_ is embodied in physical capital.
- A) human capital
  - B) technological change
  - C) labor productivity
  - D) economic growth

Answer: B

Topic: Labor Productivity, Technological Advance

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 32) If the level of technology rises, real GDP per hour of labor
- A) increases for any level of capital per hour of labor.
  - B) increases because the amount of capital per hour of labor increases.
  - C) decreases for a given level of capital per hour of labor.
  - D) decreases because the level of capital per hour of labor decreases.

Answer: A

Topic: Labor Productivity, Technological Advance

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 33) In developing nations, microloans
- A) have increased the indebtedness of impoverished people, thereby slowing economic growth.
  - B) are primarily used to finance consumption expenditure, thereby leading to economic growth.
  - C) have enabled small businesses with limited access to credit to purchase capital and expand, thus allowing greater economic growth.
  - D) are far too small to have any discernible effect.

Answer: C

Topic: Microloans

Skill: Recognition

Question history: New 10th edition

AACSB: Reflective Thinking

## 5 Growth Theories, Evidence, and Policies

- 1) Which of the following is associated with classical growth theory?
- I. Growth in real GDP can continue indefinitely.
  - II. Technological growth increases as the population grows.
  - III. Population explosions bring real GDP per person back to subsistence levels.
- A) I
  - B) II
  - C) III
  - D) I and III

Answer: C

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 2) The view that population growth occurs when real GDP per person exceeds the amount necessary to sustain life is part of the \_\_\_\_\_.
- A) classical growth theory
  - B) modern theory of population growth
  - C) neoclassical growth theory
  - D) new growth theory

Answer: A

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 3) An assumption of classical growth theory is that when \_\_\_\_\_ the population growth rate \_\_\_\_\_.
- A) real GDP per person exceeds the subsistence level; increases
  - B) people become more skilled; decreases
  - C) the real wage rate falls; increases
  - D) saving declines; decreases

Answer: A

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 4) Classical growth theory asserts that
- A) an increase in the labor supply raises real wage rates.
  - B) the economy can grow indefinitely.
  - C) real wage rates fall over time and, as they fall, they increase the population growth rate.
  - D) population growth is determined by the level of real GDP per person.

Answer: D

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

5) Which of the following is consistent with the classical theory of growth?

- A) permanent increases in real wages
- B) permanent growth in productivity
- C) rapid population growth in poor countries
- D) permanent increases in living standards

Answer: C

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

6) Classical growth theory states that

- A) growth is maximized when everyone is fully employed.
- B) growth is followed by increases in the population, eventually leaving real GDP per person unchanged.
- C) growth in real GDP per person is difficult in the beginning but easier in the later stages.
- D) advances in technology will always insure a permanent increase in real GDP per person.

Answer: B

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

7) Which of the following predicts that there can be no sustained rise in real GDP per person above the subsistence level?

- A) classical growth theory
- B) neoclassical growth theory
- C) new growth theory
- D) None of the above because all predict that there will be a sustained rise above the subsistence level.

Answer: A

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

8) Classical growth theory argues that when real GDP per person rises above the subsistence level,

- A) technological change slows down, stagnating the economy.
- B) population growth increases, driving real GDP per person back to subsistence level.
- C) people don't want to work as much, decreasing labor supply.
- D) the economy enjoys a period of permanent growth.

Answer: B

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

9) What best explains why real GDP per person is always driven to the subsistence level in the classical model?

- A) Population growth occurs, increasing the supply of labor.
- B) Population growth occurs, shifting the labor supply curve leftward.
- C) Growth is not possible so the demand for labor never changes.
- D) Investment in capital decreases labor demand, decreasing the demand for labor.

Answer: A

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

10) Which of the following ideas are included in classical growth theory?

- I. Subsistence real GDP per person
  - II. Growth in real GDP per person is temporary.
  - III. Technological change induces investment.
- A) I only
  - B) I and II
  - C) II and III
  - D) I, II and III

Answer: B

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

11) The assumption that population growth will lead to a fall in real GDP per person rate back to subsistence level is

- A) accepted by all economists today.
- B) associated with Malthusians.
- C) part of the neoclassical school of growth theory.
- D) central to the new growth theory.

Answer: B

Topic: Classical Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

12) According to the classical growth theory of Thomas Malthus,

- A) labor productivity increases continuously.
- B) the population growth rate is fixed.
- C) technological advances lead to permanent increases in real GDP per person.
- D) increases in real GDP per person are only temporary.

Answer: D

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



- 13) Population increases are the limiting factor in the growth process in
- A) classical growth theory.
  - B) neoclassical growth theory.
  - C) the new growth theory.
  - D) real growth theory.

Answer: A

Topic: Classical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 14) Classical growth theory proposes that real GDP growth is \_\_\_\_\_ and that real GDP per person will \_\_\_\_\_ the subsistence level.
- A) permanent; temporarily be above
  - B) permanent; always be above
  - C) temporary; temporarily be above
  - D) temporary; be above and below

Answer: C

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 15) Classical economists believed that
- A) real GDP per person would rise above its subsistence level in the long run.
  - B) real GDP per person would never rise above its subsistence level in the long run.
  - C) the demand for labor increases when the population increases.
  - D) population growth decreases as real GDP per person rises.

Answer: B

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 16) Classical growth theory asserts that
- A) growth in real GDP per person is temporary.
  - B) only some countries can have economic growth.
  - C) real GDP growth will eventually be a constant 3 percent per year.
  - D) nominal GDP growth is most important.

Answer: A

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 17) The classical model of Malthus predicted that economies would
- A) continue to grow indefinitely.
  - B) experience rapid technological progress.
  - C) reach a state where the growth of real GDP per person stopped.
  - D) experience significant productivity growth.

Answer: C

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 18) Which of the following is consistent with classical growth theory?
- A) Real GDP per person will increase because technological change induces investment.
  - B) Real GDP per person will never permanently increase.
  - C) Competition destroys innovation and decreases profit.
  - D) As real GDP increases, there will be a decrease in the rate of population growth.

Answer: B

Topic: Classical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 19) According to the neoclassical growth theory,
- A) increases in labor productivity are only temporary.
  - B) technological change depends on people's choices.
  - C) forces other than GDP growth determine population growth.
  - D) higher saving rates generate permanently faster growth in GDP per person.

Answer: C

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 20) Neoclassical growth theory predicts that
- A) population growth rates slow as employment opportunities for women increase.
  - B) population explosions decrease real GDP per person.
  - C) economic growth leads to technological change.
  - D) the pursuit of profit creates perpetual growth.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: New 10th edition

AACSB: Reflective Thinking

- 21) Which of the following ideas apply to the neoclassical growth theory?
- I. The rate of technological change influences the rate of economic growth.
  - II. Technological change promotes saving and investment.
  - III. Convergence of economic growth rates across countries.
- A) I only
  - B) III only
  - C) I and II
  - D) I, II and III

Answer: D

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 22) Which of the following ideas apply to the neoclassical growth theory?
- I. Technological change results from chance.
  - II. Growth in real GDP stops if technology stops advancing.
- A) I only
  - B) II only
  - C) both I and II
  - D) neither I nor II

Answer: C

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 23) Neoclassical growth theory attributes economic growth to
- A) technological change.
  - B) fiscal policy.
  - C) the law of diminishing returns.
  - D) increasing population growth.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 24) The neoclassical growth theory says, in part, that
- A) a population explosion driven by economic growth will end economic growth.
  - B) technological change leads to economic growth.
  - C) the differences in nation's growth rates will persist indefinitely.
  - D) technology does not play a role in economic growth.

Answer: B

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 25) In neoclassical growth theory, technological change \_\_\_\_\_.  
A) occurs by chance  
B) is influenced by population growth  
C) is influenced by the rate of economic growth  
D) occurs at a steady rate

Answer: A

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 26) An assumption of neoclassical growth theory is that  
A) technological change is random.  
B) technological change can be influenced by savings.  
C) more growth encourages more technological change.  
D) None of the above answers is correct.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 27) Neoclassical growth theory assumes that technological progress  
A) is determined by investment.  
B) is determined by saving.  
C) responds to economic incentives.  
D) is a purely chance event.

Answer: D

Topic: Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 28) Neoclassical growth theory proposes that  
A) technological progress increases the population growth rate and drives down real wages.  
B) real GDP per person grows because technological change increases profit opportunities.  
C) real GDP growth is caused by growth in the population.  
D) discoveries result from choices that increase profits.

Answer: B

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

29) Within neoclassical growth theory, technological change \_\_\_\_\_ saving and \_\_\_\_\_ investment.

- A) increases; increases
- B) increases; decreases
- C) decreases; increases
- D) decreases; decreases

Answer: A

Topic: Neoclassical Growth Theory

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

30) Neoclassical growth theory is based on the proposition that real GDP per person grows when

- A) the population growth rate increases.
- B) the population growth rate decreases.
- C) technological advances occur.
- D) saving decreases.

Answer: C

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

31) According to neoclassical growth theory, the higher real GDP per person from economic growth will

- A) not last because the population will increase.
- B) last because there is no link between growth and population.
- C) last indefinitely regardless of any other factor.
- D) last as long as technological change continues.

Answer: B

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

32) Neoclassical growth theory predicts that

- A) advances in technology increase the productivity of capital, which leads to an increase in investment and rising real GDP per person.
- B) advances in technology are a result of discoveries motivated by the pursuit of profits.
- C) growth in real GDP can increase without any increase in investment.
- D) growth in real GDP can continue indefinitely.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Modified 10th edition

AACSB: Reflective Thinking

33) Neoclassical growth theory

- A) predicts that growth rates and incomes per person throughout the world will converge.
- B) predicts that the faster growing underdeveloped nations will overtake and then surpass the industrial nations.
- C) predicts that nations that enjoy a technological advantage will maintain that advantage.
- D) makes no predictions about the relative growth or incomes among countries.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

34) Neoclassical growth theory predicts that China's economic growth rate will \_\_\_\_\_.

- A) decrease when the interest rate increases
- B) continue at around 10 percent a year
- C) always remain above the U.S. economic growth rate
- D) eventually converge to the U.S. economic growth rate.

Answer: D

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

35) A problem with the neoclassical growth theory is its

- A) prediction that population growth lowers the real wage rate.
- B) inability to explain persistent differences between countries' GDP growth rates.
- C) prediction that population growth raises the real wage rate.
- D) comparison of the economy to a perpetual motion machine.

Answer: B

Topic: Neoclassical Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

36) The notion that technological change is not random but instead is driven by the pursuit of profits is an essential element of

- A) classical growth theory.
- B) neoclassical growth theory.
- C) the new growth theory.
- D) perpetual growth theory.

Answer: C

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

37) According to the new growth theory, competition

- A) reduces profit.
- B) increases profit.
- C) has no impact on real profit, only nominal profit.
- D) is only theoretical because all firms are growing at some rate.

Answer: A

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

38) According to new growth theory, technological change is driven by

- A) random chance.
- B) government policies.
- C) foreign firms' attempts to increase their sales in the domestic market.
- D) firms' attempts to increase their profit.

Answer: D

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

39) Because of the choices people make in the pursuit of profit, new growth theory argues that

- A) technology growth slows down in the long-run.
- B) population growth increases will bring real GDP per person back to subsistence level.
- C) the capital stock experiences diminishing returns.
- D) the economy can enjoy persisting economic growth.

Answer: D

Topic: New Growth Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

40) \_\_\_\_\_ predicts that real GDP per person can grow indefinitely.

- A) New growth theory
- B) Classical growth theory
- C) Profit growth theory
- D) Neoclassical growth theory

Answer: A

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 41) New growth theory predicts that
- A) economic growth is only temporary.
  - B) economic growth can last indefinitely.
  - C) economic growth is eroded by changes in taxes.
  - D) government policies can do nothing to foster increased growth.

Answer: B

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 42) A central proposition of the new growth theory is that
- A) growth will cease but prosperity will persist.
  - B) knowledge is not subject to diminishing returns.
  - C) government direction and oversight is necessary for consistent growth.
  - D) growth is often just an illusion fostered by growth accounting.

Answer: B

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 43) New growth theory assumes that
- A) all inputs experience diminishing returns.
  - B) only random technological advances produce growth.
  - C) knowledge does not experience diminishing returns.
  - D) None of the above answers is correct.

Answer: C

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 44) A key feature of the new growth theory is the assumption of
- A) diminishing returns to labor.
  - B) diminishing returns to knowledge.
  - C) no diminishing returns to knowledge.
  - D) no diminishing returns to labor.

Answer: C

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking



- 45) According to the new growth theory
- A) the rate of technological progress is determined by chance.
  - B) knowledge is not subject to diminishing returns.
  - C) the labor demand curve does not shift rightward over time.
  - D) the concept of a labor market is not necessary.

Answer: B

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 46) According to new growth theory \_\_\_\_\_.
- A) ever-advancing productivity keeps the population growth rate high
  - B) knowledge does not experience diminishing returns
  - C) growth rates and income levels per person around the globe will converge
  - D) knowledge is subject to the law of diminishing returns

Answer: B

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 47) Which theory emphasizes the significance of new discoveries that can be used by many people at the same time?
- A) neoclassical growth theory
  - B) new growth theory
  - C) classical growth theory
  - D) None of the above answers are correct.

Answer: B

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 48) Which of the following is NOT associated with the new growth theory?
- A) natural resources
  - B) research
  - C) technology
  - D) innovation

Answer: A

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

49) New growth theory

- A) dates from the 18th century.
- B) concludes that economic growth is temporary.
- C) states that economic growth arises from people's choices.
- D) asserts that population growth is the source of economic growth.

Answer: C

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

50) An important foundation of the new growth theory is that

- A) we will get more technological advances the more the government is involved in deciding which technology to pursue.
- B) we will get more technological advances the greater the rewards people receive from making technological advances.
- C) the growth rate of the capital stock is more important than the growth rate of new knowledge in generating economic growth.
- D) improvements in labor productivity are poor measures of technological growth.

Answer: B

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

51) New growth theory economists believe that:

- I. Economic growth can continue as long as we keep finding new ideas.
  - II. The marginal product of capital diminishes very rapidly, so we must rely upon technological advances to create economic growth.
- A) I only
  - B) II only
  - C) both I and II
  - D) neither I nor II

Answer: A

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

52) New growth theory proposes that real GDP per person grows because of \_\_\_\_\_ and that growth \_\_\_\_\_.

- A) the pursuit of profit; can persist indefinitely
- B) productivity shocks; can persist indefinitely
- C) technological change; can only increase above the subsistence level temporarily
- D) productivity shocks; occurs randomly

Answer: A

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 53) Which growth theory models growth as a perpetual motion machine?
- A) new growth theory
  - B) classical growth theory
  - C) neoclassical growth theory
  - D) all growth theories model growth as a perpetual motion machine

Answer: A

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 54) Which growth theory predicts perpetual growth?
- A) classical growth theory
  - B) neoclassical growth theory
  - C) new growth theory
  - D) None of the above answers is correct.

Answer: C

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 55) The growth theory that predicts perpetual economic growth is
- A) classical growth theory.
  - B) neoclassical growth theory.
  - C) the new growth theory.
  - D) real growth theory.

Answer: C

Topic: New Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 56) Which one of the following statements about growth theories is correct?
- A) In the new growth theory, knowledge is not subject to diminishing returns.
  - B) In neoclassical growth theory, technological progress is the result of rapid increases in saving and investment in capital per person.
  - C) In classical growth theory, real GDP per person is unrelated to the subsistence real GDP.
  - D) In classical growth theory physical resources are unlimited.

Answer: A

Topic: Sorting Out the Growth Theories

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 57) Ongoing economic growth in real GDP per person requires all of the following except \_\_\_\_\_.  
 A) investment in human capital  
 B) the discovery of new technologies  
 C) saving and investment in new capital  
 D) population growth

Answer: D

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 58) Which of the following has NOT been one of the primary sources of economic growth over the last 200 years?  
 A) investment in new capital  
 B) resource conservation  
 C) investment in human capital  
 D) discoveries of new technology

Answer: B

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 59) Which of the following policy actions could speed productivity growth?  
 I. Tax incentives to encourage saving.  
 II. Encouraging international trade.  
 III. Directing public funds toward financing basic research.  
 A) II only.  
 B) I and III.  
 C) I only.  
 D) I, II, and III.

Answer: D

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 60) A higher saving rate leads to faster growth because  
 A) more saving produces greater additions to capital per hour of labor, raising real GDP per person.  
 B) capital would wear out faster.  
 C) people could consume more of an economy's output.  
 D) population growth would accelerate.

Answer: A

Topic: *Achieving Faster Growth, Saving*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 61) If the saving rate increases, a country's growth rate of real GDP per hour of labor \_\_\_\_\_ and capital per hour of labor \_\_\_\_\_.
- A) increases; increases
  - B) increases; decreases
  - C) decreases; increases
  - D) decreases; decreases

Answer: A

Topic: Achieving Faster Growth, Saving

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 62) Savings is an important factor influencing economic growth because saving
- A) can finance new investment and capital formation.
  - B) helps the economy maintain the current level of total expenditures when a recession begins.
  - C) provides a fund for wages needed from any unexpected population growth.
  - D) All of the above answers are correct.

Answer: A

Topic: Achieving Faster Growth, Saving

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 63) Which of the following statements is CORRECT?
- I. Higher savings rates can stimulate economic growth.
  - II. Limiting international trade can stimulate economic growth.
- A) I only
  - B) II only
  - C) both I and II
  - D) neither I nor II

Answer: A

Topic: Achieving Faster Growth, Saving

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 64) One policy that would increase the saving rate would be
- A) raising taxes on the returns to saving.
  - B) raising taxes on the returns to investment.
  - C) taxing consumption.
  - D) raising taxes on saving.

Answer: C

Topic: Achieving Faster Growth, Saving

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 65) To achieve faster growth, one possibility is to tax
- A) consumption.
  - B) saving.
  - C) hiring.
  - D) immigration.

Answer: A

Topic: *Achieving Faster Growth, Saving*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 66) Activities that encourage faster growth are
- A) investment in new capital and human capital.
  - B) high levels of consumption and low levels of savings.
  - C) taxes on saving that serve to encourage more spending and less saving.
  - D) developing trade barriers to protect national industries.

Answer: A

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 67) Which of the following policies improves prospects for more rapid economic growth?
- A) policies to increase government expenditure
  - B) limitations on international trade
  - C) policies to increase the educational attainment of the labor force
  - D) encouragement of political instability

Answer: C

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 68) All of the following lead to more rapid economic growth EXCEPT
- A) restricting international trade.
  - B) encouraging higher rates of saving.
  - C) supporting more research and development.
  - D) encouraging higher quality education.

Answer: A

Topic: *Achieving Faster Economic Growth*

Skill: *Conceptual*

Question history: *New 10th edition*

AACSB: *Reflective Thinking*

69) A country would achieve faster growth by \_\_\_\_\_.

- A) encouraging free trade
- B) increasing the cost of education
- C) increasing union membership
- D) taxing income and not consumption

Answer: A

Topic: Achieving Faster Growth, International Trade

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

70) Several factors are important for achieving faster economic growth. Which of the following is one of those factors?

- A) expansion of international trade
- B) increased government expenditure
- C) increased taxes on saving
- D) promotion of consumption expenditure

Answer: A

Topic: Achieving Faster Growth, International Trade

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

71) Economic growth tends to be higher in a country that

- A) has a low savings rate.
- B) has an economy open to international trade.
- C) has an undeveloped system of property rights.
- D) does not grant patents to inventors.

Answer: B

Topic: Achieving Faster Growth, International Trade

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

72) The relationship between education and economic growth can best be summarized by saying that

- A) educated people are less apt to consume goods that deplete economic resources, which encourages economic growth.
- B) educational expenditures tend to divert funds from productive investments, which discourages economic growth.
- C) educational expenditures tend to be inflationary, which discourages economic growth.
- D) education has benefits beyond those who receive the education, which encourages economic growth.

Answer: D

Topic: Achieving Faster Growth, Education

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

73) All of the following would increase the growth rate of the economy EXCEPT

- A) raising the saving rate.
- B) stimulating research and development.
- C) discouraging international trade.
- D) None of the above answers is correct because they all would increase the growth rate.

Answer: C

Topic: *Achieving Faster Economic Growth*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

74) Which of the following will NOT work to increase the rate of economic growth?

- A) increase saving
- B) limit competition from international trade
- C) improve the quality of education
- D) All of the above will work to increase the rate of economic growth.

Answer: B

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

75) All of the following would stimulate economic growth EXCEPT

- A) decreasing taxes on consumption (for instance, decreasing a sales taxes) and increasing income taxes.
- B) subsidizing basic research.
- C) decreasing tuition charges at state universities.
- D) encouraging international trade.

Answer: A

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

76) According to empirical evidence,

- A) providing international aid to developing nations stimulates economic growth.
- B) providing international aid to developing nations does not have a positive effect on economic growth.
- C) international trade stimulates economic growth in richer nations, but actually slows economic growth in developing economies.
- D) international trade stimulates economic growth in developing economies, but actually slows economic growth in richer nations.

Answer: B

Topic: *Achieving Faster Economic Growth*

Skill: *Recognition*

Question history: *New 10th edition*

AACSB: *Reflective Thinking*



77) Which theory of economic growth concludes that in the long run real GDP per person will be at its subsistence level?

- A) the classical theory
- B) the neoclassical theory
- C) the new theory
- D) all of the theories

Answer: C

Topic: Study Guide Question, Classical Theory

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

78) A factor that turned out to be a weakness of the classical theory of growth is its

- A) emphasis on saving and investment.
- B) assumption that the growth rate of the population increases when income increases.
- C) reliance on constant growth in technology.
- D) neglect of the subsistence real wage.

Answer: B

Topic: Study Guide Question, Classical Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

79) An assumption of the neoclassical theory of growth is that

- A) people receive only subsistence real GDP per person.
- B) all technological advances are the result of chance.
- C) the marginal product of all types of capital increases as more capital is accumulated.
- D) knowledge has diminishing returns.

Answer: B

Topic: Study Guide Question, Neoclassical Growth Theory

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

80) In the neoclassical theory of growth, growth in \_\_\_\_\_ is the result of luck.

- A) saving
- B) income
- C) technology
- D) the real interest rate

Answer: C

Topic: Study Guide Question, Neoclassical Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 81) A key assumption of new growth theory is that
- A) all technological change is the result of luck.
  - B) higher incomes lead to a higher birth rate.
  - C) a successful innovator has the opportunity to earn a temporary, above-average profit.
  - D) the population growth rate is lower than the real interest rate.

Answer: C

Topic: Study Guide Question, New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 82) Which theory of economic growth concludes that growth can continue indefinitely?
- A) the classical theory
  - B) the neoclassical theory
  - C) the new theory
  - D) all of the theories

Answer: C

Topic: Study Guide Question, New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

## 6 News Based Questions

- 1) The table below shows data for China.

	Population (millions)	Real GDP (yuan, billions)	Nominal GDP (yuan, billions)
2000	1267	4999	9921
2003	1292	6498	13582
2006	1315	8776	21087

The economic growth rate in China between 2000 and 2003 was \_\_\_\_\_ percent.

- A) 30
- B) 37
- C) 1.97
- D) 98

Answer: A

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

2) The table below shows data for China.

	Population (millions)	Real GDP (yuan, billions)	Nominal GDP (yuan, billions)
2000	1267	4999	9921
2003	1292	6498	13582
2006	1315	8776	21087

The standard of living between 2003 and 2006 increased by \_\_\_\_\_.

- A) 55.3 percent
- B) 1.8 percent
- C) 35 percent
- D) 32.7 percent

Answer: D

Topic: Economic Growth Rate

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

3) "IT Policy Can Spur Economic Growth, Industry Says"

As staffers on Capitol Hill know all too well, the growth of technology has created an economy increasingly reliant on energy consumption, as BlackBerrys, laptops, and other devices become everyday necessities. The right policies, however, can make IT growth a part of the energy solution rather than the problem, IT representatives said Monday at a forum, in a congressional office, hosted by the Information Technology & Innovation Foundation.

Information technology could reduce the expected growth in carbon emissions by one third over 10 years, said Daniel Castro, a senior analyst with the ITIF.

Information and communication technology has "great promise in driving economic growth as well as reducing emissions," added David Isaacs, director of government affairs for Hewlett-Packard, but "policy should drive these results."

www.news.cnet.com 11/17/2008

In order to drive economic growth in real GDP per person, the changes in information technology that the article addresses must

- A) cause a movement along the aggregate production function.
- B) increase labor productivity.
- C) increase labor supply.
- D) decrease the demand for labor.

Answer: B

Topic: Increase in Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

- 4) "Premier Liu Chao-shiuan announced Tuesday a government plan to distribute NT\$82.9 billion (US\$2.51 billion) in consumption coupons to Taiwan's citizens in a bid to stimulate ... economic growth."

www.etaiwannews.com 11/18/2008

The Premier's plan to boost economic growth by boosting consumption

- A) will work because employment will increase.
- B) will work because there will be a movement out along Taiwan's aggregate production function.
- C) will not work because real GDP per person will decrease.
- D) will not work because economic growth is boosted by labor productivity, not consumption.

Answer: D

Topic: Increase in Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) Hu Tells Leaders China Growth Will Help World Economy

Chinese President Hu Jintao told world leaders that his country "has taken an active part in the international cooperation to deal with the financial crisis" by providing a "\$586 billion economic stimulus, focused on building low-rent housing, roads, railways and airports. The package also allows tax deductions for fixed assets such as machinery to stimulate investment. Farmers will also benefit from more subsidies."

Hu stated that "China is in itself an important contribution to international financial stability and world economic growth."

www.bloomberg.com 11/15/2008

If the fiscal stimulus spending does generate economic growth, we can expect to see

- A) growth in labor productivity.
- B) growth China's price level.
- C) an excess supply of labor in China's labor market.
- D) growth in the supply of labor.

Answer: A

Topic: Increase in Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

## 6) Hu Tells Leaders China Growth Will Help World Economy

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Hu stated that "China is in itself an important contribution to international financial stability and world economic growth."

www.bloomberg.com 11/15/2008

Which of the following will occur if China's spending generates economic growth in real GDP per person?

- i. There will be an upward shift in China's aggregate production function.
  - ii. There will be a rightward shift in China's labor demand curve.
  - iii. There will be an increase in the real wage.
- A) i and ii only.
  - B) i, ii and iii.
  - C) i and iii only.
  - D) ii and iii only.

Answer: B

Topic: Increase in Productivity

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

## 7) Hu Tells Leaders China Growth Will Help World Economy

Chinese President Hu Jintao told world leaders that his country "has taken an active part in the international cooperation to deal with the financial crisis" by providing a "\$586 billion economic stimulus, focused on building low-rent housing, roads, railways and airports. The package also allows tax deductions for fixed assets such as machinery to stimulate investment. Farmers will also benefit from more subsidies."

Hu stated that "China is in itself an important contribution to international financial stability and world economic growth."

www.bloomberg.com 11/15/2008

China wants to increase investment because this change will

- A) increase the growth in physical capital and speed up economic growth.
- B) increase human capital.
- C) cause an increase in the supply of labor.
- D) not cause the real wage rate to increase so employment will increase.

Answer: A

Topic: Why Labor Productivity Grows

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

8) Strategy to Address Dependence on Foreign Workers, Labour Market Demands

The prime minister of Malaysia announced his government's "immediate focus would be to enhance skills development and improve the quality of education." By "the constant upgrading of skills of the country's workforce" he hoped to improve the country's "global competitiveness and raise average incomes of workers."

www.thestar.com.my 11/21/2008

The story describes

- A) a plan increase physical capital.
- B) improvements in Malaysia's incentive system.
- C) a consequence of economic growth.
- D) a plan to increase human capital.

Answer: D

Topic: Human Capital

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

9) Strategy to Address Dependence on Foreign Workers, Labour Market Demands

The prime minister of Malaysia announced his government's "immediate focus would be to enhance skills development and improve the quality of education." By "the constant upgrading of skills of the country's workforce" he hoped to improve the country's "global competitiveness and raise average incomes of workers."

www.thestar.com.my 11/21/2008

The long-run benefit of enhancing "skill development and improve....education" is to

- A) improve property rights.
- B) increase labor supply.
- C) speed economic growth.
- D) smooth the growth of labor productivity.

Answer: C

Topic: Economic Growth Rate

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

## 10) "Why India Cannot Sustain High Economic Growth", by Kunal KumarKundu

In his article about India's prospects for growth, the author notes that "Per capita availability of food grain is falling as population is growing faster than food grain production. Deplorable rural infrastructure leads to India wasting an amount of food grain ... . India's agriculture is still so very highly monsoon dependent..."

www.rediff.com 5/29/2008

This view of India's economic growth is best reflected in the \_\_\_\_\_.

- A) classical growth theory.
- B) new growth theory.
- C) neoclassical growth theory.
- D) aggregate production theory.

Answer: A

*Topic: Classical Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

## 11) "Why India Cannot Sustain High Economic Growth", by Kunal KumarKundu

In his article about India's prospects for growth, the author notes that "Per capita availability of food grain is falling as population is growing faster than food grain production. Deplorable rural infrastructure leads to India wasting an amount of food grain ... . India's agriculture is still so very highly monsoon dependent..."

www.rediff.com 5/29/2008

If the author is suggesting that India's growth prospects are explained by the classical growth theory, we also expect that

- A) real GDP per worker will increase.
- B) the subsistence wage will increase.
- C) the economy will perpetually grow.
- D) labor productivity, which has risen in recent years, will eventually decline.

Answer: D

*Topic: Classical Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

- 12) Use the table below to answer this question. The data show national savings rates as a percentage of GDP; the growth rate of real GDP per person; and birth rates in 2006.

Country	National Saving (% of GDP)	Growth rate of real GDP per person	Birth Rate
Japan	28	1.6	9.96
Canada	24	2.6	11.4
Germany	23	1.9	9.35
U.S.	14	1.9	14.2

www.econstats.com; www.os-connect.com

If the data support the neoclassical growth theory, we would expect to see

- A) Japan with the highest economic growth rate because the high saving means that more capital is accumulated.
- B) the United States with the highest economic growth rate because a lower savings rate means more income is spent on consumption.
- C) Canada with the highest economic growth rate because it has the highest real GDP per person.
- D) the United States with the highest economic growth rate because it has the highest birth rate.

Answer: A

Topic: Neoclassical Growth Theory

Skill: Analytical

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 13) "Global Innovation 1000—Money Isn't Everything."

The report by Booz Allen Hamilton Consulting claims that "There is no direct relationship between R&D spending and significant measures of corporate success such as growth, profitability, and shareholder return. ...However, the pace of corporate R&D spending continues to accelerate, as many executives continue to believe that enhanced innovation is required to fuel their future growth.

www.boozallen.com 10/11/2005

The report provides \_\_\_\_\_ evidence of the \_\_\_\_\_.

- A) conflicting; new growth model which claims that profits are linked to innovation.
- B) supporting; new growth model which claims that innovation is indirectly related to profit.
- C) conflicting; neoclassical growth model which claims that population growth spurs technology.
- D) supporting; neoclassical growth model which claims that technology advances are random.

Answer: A

Topic: New Growth Theory

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills



- 14) According to UNESCO reporting, "Governments in North America and Western Europe invested the highest shares of national resources in education: 5.6 percent of GDP." As a result, we would expect \_\_\_\_\_, all else held constant.

www.worldometers.info

- A) higher economic growth rates in these countries compared to other countries
- B) lower economic growth rates in the countries because fewer resources can be devoted to innovation.
- C) lower research and development spending and lower economic growth unless the governments can raise taxes.
- D) lower saving rates and slower economic growth.

Answer: A

Topic: Achieving Faster Growth, Education

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

- 15) Cuba spends the highest percentage of GDP (18.7 percent) on education while the United States is the 38th highest spender with 5.7 percent of GDP. If spending on education is important for economic growth, which of the following statements explain why Cuba's economic growth rate is lower than the U.S. economic growth rate?

(data from United Nations Human Development Programme)

- A) Cuba trades with many more countries than does the United States.
- B) Cuba doesn't offer property rights that promote innovation.
- C) Cuba's population is smaller than the U.S. population.
- D) all of the above explain why Cuba's economic growth rate is lower than the U.S. economic growth rate.

Answer: D

Topic: Achieving Faster Economic Growth

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Analytical Skills

## 7 Essay Questions

- 1) How has U.S. real GDP per person changed over the last 100 years?

Answer: Although the U.S. economy usually displays growth in real GDP per person, there have been periods of time when real GDP per person has fallen. The decline is usually mild, although this was not the case during the Great Depression, which had a severe decrease in real GDP per person. Overall, the average yearly growth rate was higher after World War II than prior to the Great Depression. Prior to the Great Depression, the yearly U.S. growth rate of real GDP per person averaged only about 1.4 percent per year, while after World War II it averaged 2 percent per year. And, over the entire 100 years, the U.S. growth rate of real GDP per person has averaged about 2 percent per year.

Topic: U.S. Economic Growth

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

- 2) Briefly explain how growth in real GDP differs across economies including the United States, Japan, Africa, Central America, Hong Kong, Korea, and Singapore.

Answer: Over the past 100 years, growth in real GDP per person in the United States has averaged 2 percent per year. The growth rate has varied from one period to the next. Some rich nations, such as Japan, are catching up to the U.S. level of real GDP per person. Many poor nations, especially those in Africa and Central America are not catching up. But Hong Kong, Korea, Singapore, and Taiwan are generally growing more rapidly than the United States and so they are catching up.

*Topic: Real GDP Growth in the World Economy*

*Skill: Recognition*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 3) How has the U.S. growth experience compared to that of Central Europe and Africa? How has compared to the recent experience of Asian nations such as Hong Kong and Singapore.

Answer: A persistent gap in the level of real GDP per person has existed between the United States and most other nations in the world. Nations from Central Europe and Africa have consistently grown at a slower rate and have therefore fallen further behind in real GDP per person. An exception to this rule has been the experience of several Asian nations such as Hong Kong and Singapore. These and other Asian nations have experienced, on average, higher growth rates than the United States and so have (partially) closed the gap in real GDP per person.

*Topic: Real GDP Growth in the World Economy*

*Skill: Recognition*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 4) Discuss the aggregate production function. How does the aggregate production function relate to the labor market and potential GDP?

Answer: The aggregate production function shows the maximum amounts of real GDP that can be produced as the quantity of labor changes, holding constant all other influences on aggregate production. As the quantity of labor increases, real GDP increases but at a decreasing rate, that is, the aggregate production function shows diminishing returns. The aggregate production function "stands between" the labor market and potential GDP. In particular, the quantity of employment is determined in the labor market. The aggregate production function then shows the amount of real GDP that is produced by this quantity of employment. When the quantity of employment determined in the labor market is the equilibrium quantity, then the amount of real GDP produced is potential GDP.

*Topic: Aggregate Production Function*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 5) Define the aggregate production function. Discuss why the aggregate production function exhibits diminishing returns.

Answer: The aggregate production function is the relationship that shows the maximum quantity of real GDP that can be produced as the quantity of labor employed changes and all other influences on aggregate production remain the same. The aggregate production function exhibits diminishing returns because the quantity of capital (and other resources) is fixed. As more labor is hired, the extra output produced decreases because the extra workers have less capital with which to work. As a result, the additional workers cannot produce as much additional output as did the previously hired workers.

*Topic: Aggregate Production Function*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 6) What is the real wage rate?

Answer: The real wage rate is the money wage rate "corrected" for changes in the price level. It is calculated by dividing the money wage rate by the price level. The real wage rate is the quantity of goods and services that can be purchased by an hour's worth of work.

*Topic: Real Wage Rate*

*Skill: Recognition*

*Question history: Modified 10th edition*

*AACSB: Reflective Thinking*

- 7) Explain how the labor market and the production function determine potential GDP.

Answer: The labor market determines the equilibrium quantity of labor. In other words, the amount of employment is determined by supply and demand in the labor market. The production function shows the amount of output, real GDP, that is produced for all different amounts of employment. Intuitively, the production function "converts" the amount of employment from the labor market into real GDP. If the labor market is in equilibrium, so that the level of employment is equal to full employment, then the amount of real GDP produced, determined from the production function is potential GDP.

*Topic: Labor Market and Potential GDP*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 8) How will an increase in physical capital affect labor productivity, labor demand, and potential GDP?

Answer: An increase in capital increases labor productivity. It shifts the production function upward and, because productivity has increased, it increases the demand for labor. Equilibrium employment increases because of the increase in demand for labor. Potential GDP increases because employment increases *and* because the production function has shifted upward.

*Topic: Labor Market and Potential GDP*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

9) What happens to the real wage rate and potential GDP if population increases?

Answer: An increase in population increases the supply of labor. As a result, the labor supply curve shifts rightward. The labor demand curve does not shift. The increase in the supply of labor means that employment increases and the real wage rate falls. The economy moves along its (unchanged) production function to a higher level of potential GDP.

Topic: Labor Market and Potential GDP

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

10) With no change in labor productivity, what would happen to the real wage rate and potential GDP if the population increased?

Answer: An increase in population increases the supply of labor. As a result, the labor supply curve shifts rightward. Neither the labor demand curve nor the production function shifts. The increase in the supply of labor means that employment increases and the real wage rate falls. The economy moves along its (unchanged) production function to a higher level of potential GDP.

Topic: Labor Market and Potential GDP

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

11) What is the effect on real GDP per person if labor productivity increases?

Answer: Real GDP equals (aggregate hours)  $\times$  (labor productivity). Hence an increase in labor productivity increases real GDP. Real GDP per person equals (real GDP)/(population). Therefore an increase in real GDP with no change in the population increases real GDP per person.

Topic: Labor Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

12) Define labor productivity. Discuss the relationship between labor productivity, human capital growth, and technology change.

Answer: Labor productivity is real GDP per hour of labor, so it equals (real GDP)  $\div$  (aggregate hours). The expansion of human capital and the discovery of new technology are two factors that increase labor productivity. Increasing human capital increases labor productivity because workers' skills and knowledge increase, which allows them to produce more goods and services without boosting aggregate hours. Similarly, the discovery and use of new technologies allows workers to produce more goods and services without increasing aggregate hours.

Topic: Labor Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Communication

## 13) What factors raise the productivity of labor?

Answer: The productivity of labor is affected by the amount physical capital, the amount of human capital, and the level of technology. An increase in either physical capital or human capital means that more goods and services can be produced with a given amount of labor, so that the productivity of labor increases. Similarly a technological improvement also increases the productivity of labor.

*Topic: Labor Productivity*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

## 14) List and explain the factors that can increase labor productivity.

Answer: The three factors that can increase labor productivity are saving and investment in physical capital, expansion of human capital, and discovery of new technology. Saving and investing in physical capital increases the amount of capital per worker and thereby increases workers' productivity. Increasing the amount of human capital means that workers' skills, knowledge, and talents increase, which thereby increases their productivity. And, the discovery and use of new technologies allows workers to produce more goods and services than before, which increases their productivity.

*Topic: Labor Productivity*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

## 15) What are the sources of human capital?

Answer: Human capital, the accumulated skills and knowledge people possess, comes from both formal education and training, and from on-the-job experience. On-the-job experience creates "learning by doing," in which workers become more knowledgeable about the best way to accomplish a task as they do the task.

*Topic: Human Capital*

*Skill: Recognition*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

## 16) What are the basic arguments of the classical growth theory?

Answer: The classical growth theory originated during the late 18th century. Although proposed by many leading economists of the time, it has most often associated with Malthus. The classical theory states that economic growth will be temporary. The reason why the growth is temporary is because any economic growth will lead to a population explosion. The growth in population increases labor hours, which lead to a reduction in capital per labor hour. Productivity declines until real GDP per person falls to the subsistence level where life is just sustained. At this point, economic growth ceases.

*Topic: Classical Growth Theory*

*Skill: Conceptual*

*Question history: Modified 10th edition*

*AACSB: Communication*

- 17) What is the main difference between classical economists' ideas about economic growth versus what modern evidence suggests?

Answer: Classical economists assumed that as real GDP per person rises, the population growth rate increased. But, contrary to this assumption, the data show that population growth rate is approximately independent of the economic growth rate. Classical economists concluded that the increase in population, which increases labor supply, would drive real GDP per person back to the subsistence level. But the data show that in advanced nations real GDP per person is well above the subsistence wage rate.

*Topic: Classical Growth Theory*

*Skill: Conceptual*

*Question history: Modified 10th edition*

*AACSB: Communication*

- 18) In the classical theory of growth, what is the final outcome of an increase in growth and labor productivity?

Answer: In the classical growth theory, a rise in labor productivity and the resulting economic growth result in a population explosion that drives real GDP per person back to the subsistence level. In the classical viewpoint, resources are limited and technological change occurs infrequently, so that technological advances are not sufficient to compensate for the lack of resources. Hence, in the long run people earn only a subsistence level of real income.

*Topic: Classical Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 19) What are the basic arguments of the neoclassical growth theory?

Answer: The neoclassical growth theory explains economic growth as the result of technological change. Technological change leads to a level of saving and investment that makes capital per hour of labor grow. Growth, therefore, only ends if technological change ends. However the theory looks at technological change as being the result of chance and luck and so offers no explanation for how or why technological change occurs.

*Topic: Neoclassical Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 20) "According to the neoclassical growth theory, national incentives to save, invest, accumulate human capital, and develop new technology influence the country's growth rate of real GDP." Comment on the accuracy of the previous statement.

Answer: The sentence is inaccurate. The neoclassical growth theory says that a nation's growth rate of real GDP depends on the growth rate of technology. The neoclassical growth theory assumes that the growth rate of technology is the result of chance and luck. It is the new growth theory that asserts that growth depends on people's incentives, so it is the new growth theory that predicts that a nation's growth rate depends on its national incentives to save, invest, accumulate human capital, and develop new technology.

*Topic: Neoclassical Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

21) What is the role of profits in the neoclassical growth theory versus the new growth theory?

Answer: Profits play essentially *no* role in the neoclassical growth theory. In the new growth theory, they are key because it is based on the idea that technological change results from the choices that people make in the pursuit of profit. Discoveries result from people's choices, such as whether to look for something new and, if so, how intensively to look. Profit affects these choices. A new discovery brings the discovered high profits but eventually competitors emerge and the above-average profit is competed away.

*Topic: Neoclassical and New Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

22) What is the main shortcoming of the neoclassical growth model and how does the new growth theory address this shortcoming?

Answer: One difficulty with the neoclassical model is that it predicts all nations will converge to the same level of per capita income. The new growth theory is based on the idea that technological change results from the choices that people make in the pursuit of profit. So if people in different nations face different incentives to innovate, technological progress and hence economic growth can differ among nations.

*Topic: Neoclassical and New Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

23) How does the new growth theory explain economic growth?

Answer: The new growth theory explains growth as the result of choices made in the pursuit of profit. If people choose to look intensively for new technologies they will be found more quickly. Profit is the motive to look for technological change. The reason is that competition squeezes profits. Firms are constantly looking for ways to reduce costs and increase profits through technological change. The economy can grow forever as long as people make the choices that encourage the search for new technologies.

*Topic: New Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*



- 24) Of the three economic growth theories, which is the most optimistic about the chances of real GDP per person growing indefinitely? Which is the most pessimistic? What accounts for the differences?

Answer: The most optimistic is the new growth theory, which concludes that real GDP per person can continue to grow indefinitely. The most pessimistic is the classical theory, which concludes that growth in real GDP per person will stop and that people will produce only the subsistence level of real GDP per person. The difference in the two conclusions can be traced to differences in assumptions in three key areas. First, the new growth theory concludes that technology will advance forever because people, seeking profit, make decisions to develop new technology. Classical growth theory assumes that technological advances are rare and infrequent. Second, the new growth theory assumes that the economy is not subject to diminishing returns. Hence, as the economy accumulates more capital, the returns to capital do not diminish and so the incentive to add yet more capital continues undiminished. The classical growth theory assumes that capital (and labor) is subject to diminishing returns. Thus as more capital is accumulated, the returns diminish and so the incentive to continue adding more capital disappears. Thus the capital stock eventually stops growing. Finally, the new growth theory assumes that the population does not grow more rapidly as real GDP per person increases. The classical theory assumes that whenever real GDP per person exceeds the subsistence level, rapid population growth occurs and, because of diminishing returns to labor, the increased population drives the level of real GDP back to the subsistence amount.

*Topic: Growth Theories*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 25) Explain the role played by technological change in classical growth theory, neoclassical growth theory, and new growth theory.

Answer: Technology plays a secondary role in classical growth theory. While technology might increase real GDP in the classical growth model, population changes drive real GDP per person back to a subsistence level of income. Technology also plays a secondary role in neoclassical growth theory. Neoclassical theory has technological change bringing about an increase in real GDP but diminishing returns brings an end to economic growth. The new growth theory emphasizes the role of technological change in creating continuous growth because entrepreneurs have an incentive to develop new technologies as a means of generating profits for themselves.

*Topic: Growth Theories*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*



- 26) Suppose the President asks you to write him a letter suggesting ways the government might help the economy achieve permanently higher rates of economic growth. Based on your understanding of growth theory and growth accounting, what would you suggest?

Answer: According to both neoclassical and new growth theories, the key to faster growth is generating higher rates of technological progress. Because many technological advances are embodied in new capital, sustaining a high rate of saving and investment is important. Government might help stimulate saving supply by tax incentives such as IRAs and stimulate investment demand by offering investment tax credits, accelerated depreciation and reductions in corporate profit tax rates. New ideas are also embodied in human capital. Government can finance education and training directly and provide low-interest loans to students and training tax credits to businesses. Finally, we need to generate more new ideas, by stimulating research and development efforts. This includes government funding of basic research and tax credits to businesses for R&D expenses.

*Topic: Achieving Faster Economic Growth*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

- 27) Describe ways that governments can promote faster economic growth.

Answer: Policies for increasing the economic growth rate are 1) Stimulate saving (for instance, tax incentives could be directed at increasing saving which will then increase the capital stock); 2) Stimulate research and development (inventions can be copied, so government subsidies can lead to more inventions that spread throughout the economy); 3) Encourage international trade (free international trade encourages economic growth because free trade extracts all the possible gains from specialization and exchange); 4) Improve the quality of education (education creates benefits beyond the ones enjoyed by the students who receive education).

*Topic: Achieving Faster Economic Growth*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Communication*

## 8 Numeric and Graphing Questions

Labor demand (billions of hours per year)	Real wage rate (2005 dollars)	Labor supply (billions of hours per year)
0	30	6
1	25	5
2	20	4
3	15	3
4	10	2

Employment (billions of hours per year)	Real GDP (billions of 2005 dollars)
6	95
5	90
4	80
3	60
2	30

1) The first table above gives the labor demand and labor supply schedules for a nation. The second table gives its production function.

- What is the equilibrium real wage rate and the level of employment?
- What is potential GDP?

Answer: a) The equilibrium real wage rate is \$15 an hour because this is the real wage rate for which the quantity of labor demanded equals the quantity supplied. The equilibrium level of employment is 3 billion hours a year.

b) With employment equal to 3 billion hours per year, potential GDP is equal to \$60 billion.

*Topic: Labor Market Equilibrium*

*Skill: Analytical*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

Real wage rate (2005 dollars)	Labor demand (billions of hours per year)	Labor supply (billions of hours per year)
30	100	700
25	200	600
20	300	500
15	400	400
10	500	300

Employment (billions of hours per year)	Real GDP (trillions of 2005 dollars)
200	3.0
300	4.0
400	4.8
500	5.4
600	5.8

2) The first table above gives the labor demand and labor supply schedules for a nation. The second table gives its production function.

- a) What is the equilibrium real wage rate and the level of employment?
- b) What is potential GDP?

Answer: a) The equilibrium real wage rate is \$15 an hour because this is the real wage rate for which the quantity of labor demanded equals the quantity supplied. The equilibrium level of employment is 400 billion hours a year.

b) With employment equal to 400 billion hours per year, potential GDP is equal to \$4.8 trillion.

*Topic: Labor Market Equilibrium*

*Skill: Analytical*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

Real wage rate (2005 dollars)	Labor demand (billions of hours per year)	Labor supply (billions of hours per year)
5	360	260
10	325	275
15	300	300
20	280	330

Employment (billions of hours per year)	Real GDP (trillions of 2005 dollars)
100	2.0
200	3.0
300	3.8
400	4.4

- 3) The first table above gives the labor demand and labor supply schedules for a nation. The second table gives its production function.
- What is the equilibrium real wage rate and the level of employment?
  - What is potential GDP? If you cannot determine a precise amount, give the range in which potential GDP must lie.

Answer: a) The equilibrium real wage rate is \$15 an hour because this is the real wage rate for which the quantity of labor demanded equals the quantity supplied. The equilibrium level of employment is 300 billion hours a year.

b) With employment equal to 300 billion hours per year, potential GDP is equal to \$3.8 trillion.

*Topic: Labor Market Equilibrium*

*Skill: Analytical*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

- 4) Real GDP equals \$12 trillion and aggregate hours equals 300 billion hours. What does labor productivity equal?

Answer: Labor productivity is (real GDP)/(aggregate hours), so labor productivity equals  $(\$12 \text{ trillion}) / (300 \text{ billion hours}) = \$40 \text{ per hour}$ .

*Topic: Labor Productivity*

*Skill: Analytical*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*

## 9 True or False

- 1) Economists are interested in long-term economic growth because growth increases real GDP per person and improves our standard of living.

Answer: TRUE

*Topic: Economic Growth Rate*

*Skill: Recognition*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

- 2) Over the last 100 years, real GDP per person in the United States has grown at an average rate of approximately 2 percent per year.

Answer: TRUE

Topic: Growth in the U.S. Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 3) The United States had the largest real GDP per person until the 2009 when the China's real GDP per person overtook and then exceeded that in the United States.

Answer: FALSE

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 4) Because the United States is a developed economy, every other country is catching up to the level of U.S. real GDP per person.

Answer: FALSE

Topic: Real GDP Growth in the World Economy

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 5) The gap between real GDP per person in the United States and South America has been narrowing since 1980.

Answer: FALSE

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Modified 10th edition

AACSB: Reflective Thinking

- 6) Real GDP per person is slowly converging around the world.

Answer: FALSE

Topic: Real GDP Growth in the World Economy

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 7) Labor productivity has grown at almost the same rate each year over the last 40 years in the United States.

Answer: FALSE

Topic: Labor Productivity

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 8) If the price level rises faster than the money wage rate, the real wage rate falls.

Answer: TRUE

Topic: Real Wage Rate

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 9) The real wage rate measures the quantity of goods and services an hour's work will buy.

Answer: TRUE

Topic: Real Wage Rate

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 10) The demand curve for labor shows how many hours workers demand to work.

Answer: FALSE

Topic: Demand for Labor

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 11) In general, a higher real wage rate decreases the quantity of labor supplied because fewer people enter the labor force.

Answer: FALSE

Topic: Labor Supply

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 12) The higher the real wage rate, the higher the labor force participation rate.

Answer: TRUE

Topic: Labor Supply

Skill: Recognition

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 13) To achieve faster growth, economies can increase income tax rates in order to increase saving rates.

Answer: FALSE

Topic: Achieving Faster Growth, Saving

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 14) Faster long-term growth can be achieved by discouraging saving and encouraging consumption.

Answer: FALSE

Topic: Achieving Faster Growth, Saving

Skill: Conceptual

Question history: Previous edition, Chapter 6

AACSB: Reflective Thinking

- 15) All else equal, an increase in population decreases potential GDP.

Answer: FALSE

Topic: *An Increase in Population*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 16) The classical growth theory shows how technology changes continually generate economic growth.

Answer: FALSE

Topic: *Classical Growth Theory*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 17) The classical growth theory's view of the economy and its ability to achieve growth can be compared to a perpetual motion machine.

Answer: FALSE

Topic: *Classical Growth Theory*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 18) The neoclassical growth theory is based on a subsistence real wage rate.

Answer: FALSE

Topic: *Neoclassical Growth Theory*

Skill: *Recognition*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 19) The neoclassical growth theory concluded that economic growth is temporary because of a population explosion that occurs as a result of economic growth.

Answer: FALSE

Topic: *Neoclassical Growth Theory*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 20) In neoclassical growth theory, technological progress is the key to continuous growth in labor productivity.

Answer: TRUE

Topic: *Neoclassical Growth Theory*

Skill: *Conceptual*

Question history: *Previous edition, Chapter 6*

AACSB: *Reflective Thinking*

- 21) New growth theory claims that economic growth occurs because firms reap profits from research and add to the stock of capital.

Answer: TRUE

*Topic: New Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

- 22) New growth theory holds that choices, and the discoveries that result from them, result in growth that is temporary in nature.

Answer: FALSE

*Topic: New Growth Theory*

*Skill: Conceptual*

*Question history: Previous edition, Chapter 6*

*AACSB: Reflective Thinking*

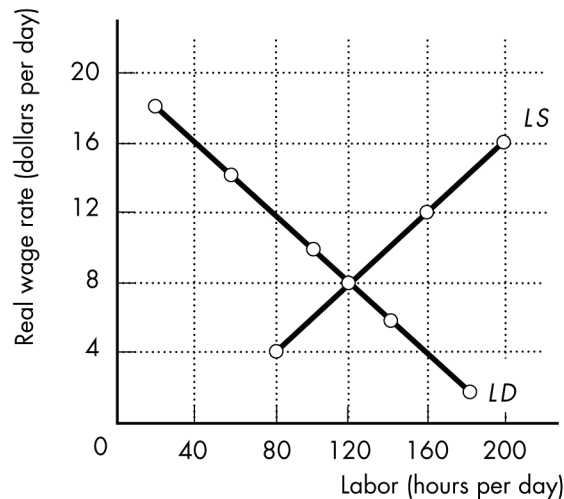


## 10 Extended Problems

Leisure (hours)	Real GDP (2005 dollars)
0	2,000
40	1,920
80	1,680
120	1,280
160	720
200	0

- 1) The people of Palm Island are willing to work 80 hours a day for a real wage rate of \$4 an hour. Then each dollar increase in the real wage, they are willing to work 10 additional hours a day. Palm Island's production possibilities are in the table above.
- Draw Palm Island's demand for labor curve.
  - Draw Palm Island's supply of labor curve.
  - What are the full-employment equilibrium real wage rate and quantity of labor in Palm Island's economy?
  - What is Palm Island's potential GDP?

Answer:



- See the figure above. Palm Island's demand for labor curve is the marginal product of labor curve. The marginal product of labor for each quantity of labor employed is the change in real GDP divided by the change in quantity of labor employed. For example, 100 hours of labor employed is the midpoint between 80 and 120 hours on the production function. The 40 hours of additional labor between 80 and 100 hours produce  $\$1,680 - \$1,280 = \$400$  of additional real GDP. So for these 40 hours of labor, one hour will produce additional real GDP of  $\$400/40 = \$10$  per hour. So the marginal product of labor is \$10 per hour when 100 hours of labor are employed. The rest of the marginal products are calculated similarly and are in the figure above.
- The figure above shows the labor supply curve.

c) The full-employment equilibrium real wage rate is the one at which the quantity of labor demanded equals the quantity of labor supplied so that real GDP is at its full-employment level. In the economy of Palm Island, the figure above shows that the full-employment equilibrium real wage rate is \$8 per hour and the full-employment quantity of labor is 120 hours per day.

d) Potential GDP is the level of real GDP at full employment. As the figure above shows, Palm Island's full employment is 120 hours per day. And the production function shows that 120 hours of labor can produce a real GDP of \$1,280. So Palm Island's potential GDP is \$1,280 per day.

*Topic: Labor Market and Potential GDP*

*Skill: Analytical*

*Question history: Previous edition, Chapter 6*

*AACSB: Analytical Skills*