**Long-Term Growth Trends**

**Topic: Long-Term Growth Trends**  
**Skill: Recognition**

1) To understand the growth of average living standards, we need data on the growth rate of  
   A) retail prices.  
   B) wholesale prices.  
   C) real GDP.  
   D) real GDP per person.  
**Answer: D**

**Topic: Long-Term Growth Trends**  
**Skill: Recognition**

2) The best measure of long-term economic growth potential is changes in  
   A) nominal GDP.  
   B) real GDP.  
   C) nominal GDP per person.  
   D) real GDP per person.  
**Answer: D**

**Topic: Growth in the U.S. Economy**  
**Skill: Recognition**

3) Over the last 100 years, the average U.S. growth rate in potential 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: Growth in the U.S. Economy**  
**Skill: Recognition**

4) Which of the following statements regarding U.S. economic growth is NOT correct?  
   A) From 1903 to 2003, on the average real GDP per person grew 2 percent a year.  
   B) The average annual growth rate of real GDP per person was lower prior to 1929 than after World War II.  
   C) In the 1920s and 1960s, the annual growth rate of real GDP per person was about equal to its long-run average.  
**Answer: D**

**Topic: Real GDP Growth in the World Economy**  
**Skill: Recognition**

5) Since 1963, the country with the highest level of real GDP per person is  
   A) Japan.  
   B) Germany.  
   C) the United States.  
   D) Canada.  
**Answer: C**

**Topic: Real GDP Growth in the World Economy**  
**Skill: Recognition**

6) During the 1990s, which of the following countries experienced the slowest rate of growth in real GDP per person?  
   A) Japan  
   B) France  
   C) United States  
   D) Canada  
**Answer: A**

* This is Chapter 25 in *Economics.*
7) Since 1963, the industrialized country with the highest average growth rate of real GDP per person is
   A) Japan.
   B) Germany.
   C) the United States.
   D) Canada.
   Answer: A

8) Underdeveloped countries in which real GDP per person has not grown as fast as in the United States since 1960 include
   A) Japan and Germany.
   B) countries in Africa and Central and South America.
   C) Hong Kong, Singapore, Taiwan, and South Korea.
   D) Canada.
   Answer: B

9) 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 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

10) Since 1963, 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

11) Over the past forty 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

12) 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

The Causes of Economic Growth: A First Look

13) Economic growth requires preconditions, which include
    A) property rights.
    B) markets.
    C) a monetary exchange system.
    D) All of the above answers are correct.
    Answer: D

14) All of the following are necessary preconditions for economic growth EXCEPT
    A) restrictions on private ownership of productive factors.
    B) markets.
    C) property rights.
    D) monetary exchange.
    Answer: A
**Topic: Preconditions for Economic Growth**  
**Skill: Recognition**

15) Which of the following is NOT one of the basic preconditions for economic growth?

A) Markets  
B) Property rights  
C) Investment in human capital  
D) Monetary exchange

**Answer: C**

**Topic: Preconditions for Economic Growth**  
**Skill: Recognition**

16) Which of the following is NOT a necessary precondition for economic growth?

A) Markets and prices  
B) Property rights  
C) Monetary exchange  
D) Democracy

**Answer: D**

**Topic: Preconditions for Economic Growth**  
**Skill: Recognition**

17) All of the following are social institutions that create the incentives necessary for growth EXCEPT

A) technology  
B) markets  
C) monetary exchange  
D) property rights

**Answer: A**

**Topic: Preconditions for Economic Growth**  
**Skill: Recognition**

18) Which of the following characteristics is NOT a precondition for economic growth?

A) monetary exchange  
B) markets  
C) active fiscal and monetary policy  
D) property rights

**Answer: C**

**Topic: Preconditions for Economic Growth**  
**Skill: Recognition**

19) Experience indicates that economic growth

A) depends on democratic political institutions.  
B) is impossible under authoritarian political systems.  
C) is greatest where government careful manages and regulates the economy.  
D) doesn’t depend on any one particular political system.

**Answer: D**

**Topic: Preconditions for Economic Growth**  
**Skill: Conceptual**

20) Which of the following are necessary for economic growth?

I. Incentive systems.  
II. Established and enforced rights to own physical properties.  
III. Liberal democracies.

A) I.  
B) I and II.  
C) II and III.  
D) I, II, and III.

**Answer: B**

**Topic: Preconditions for Economic Growth, Markets**  
**Skill: Conceptual**

21) A basic precondition for economic growth is incentives, provided through

A) tax abatements and tax credits  
B) markets.  
C) government control of essential industries.  
D) government control over credit markets.

**Answer: B**

**Topic: Preconditions for Economic Growth, Markets**  
**Skill: Conceptual**

22) Markets are an important precondition for economic growth because markets

A) restrict the amount of information flowing to buyers and sellers so that market participants don’t get confused.  
B) limit individuals’ abilities to profit from their productive activities and so redirect individual self-interest into socially acceptable channels.  
C) enable people to specialize and trade.  
D) all of the above are correct

**Answer: C**
23) Markets provide all of the following benefits to society EXCEPT:
A) allowing buyers and sellers to acquire information.
B) permitting market prices to send signals to buyers and sellers.
C) enabling people to specialize.
D) eliminating incentives to change the quantities supplied and demanded.
Answer: D

24) Property rights are:
A) social arrangements that govern the ownership, use, and disposal of goods and factors.
B) the rights to use money in exchange for goods and services.
C) rights that do not include the right to own financial assets.
D) rights that include the right to own financial, but not physical, assets.
Answer: A

25) Continuing economic growth requires all of the following activities EXCEPT:
A) investment in human capital.
B) saving and investment in new capital.
C) widespread restrictions on property rights.
D) technological progress.
Answer: C

26) Monetary exchange:
A) facilitates transactions of all kinds.
B) is not necessary for economic growth.
C) in combination with technology, decreases incentives.
D) hampers specialization and trade because exchange rates must be agreed upon.
Answer: A

27) An incentive system facilitates economic growth by:
A) rewarding people for specializing in activities in which they have a comparative advantage.
B) discouraging investment.
C) rewarding people for pursuing high-cost activities.
D) discouraging the use of money.
Answer: A

28) 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

29) 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

30) 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
31) 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

32) 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

33) The stock of knowledge of a worker is known as
   A) monetary capital.
   B) human capital.
   C) physical capital.
   D) financial capital.
   Answer: B

34) 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

35) During World War II, the increasing productivity of workers who built Liberty Ships was due primarily to
   A) human capital accumulation through schooling and training.
   B) learning-by-doing.
   C) discoveries of new and better technologies.
   D) investments by shipyards in new capital equipment.
   Answer: B

36) 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

37) Workers who pursue an education directly increase their
   A) financial capital.
   B) physical capital.
   C) human capital.
   D) saving.
   Answer: C

38) Which of the following statements regarding technological change is true?
   A) Formal research and development and informal trial and error are the source of technological change.
   B) Technological change impacts the productivity of physical capital but not human capital.
   C) Technological change is usually embodied in human capital.
   D) Technological change has played a minimal role in economic growth.
   Answer: A
Growth Accounting

Topic: Growth Accounting
Skill: Recognition
39) Growth accounting is designed to measure the amount of economic growth resulting from
A) only technological progress.
B) only increased labor.
C) only increased capital and labor.
D) technological progress, increased labor, and increased capital.
Answer: D

Topic: Growth Accounting
Skill: Conceptual
40) The purpose of growth accounting is to determine
A) how rapidly GDP grows.
B) how rapidly the capital stock grows.
C) how much of GDP growth is a result of increases in capital, how much is the result of increase in labor, and how much is the result of increases in technology.
D) the most accurate ways of measuring depreciation.
Answer: C

Topic: Growth Accounting
Skill: Conceptual
41) Separating the sources of economic growth is the purpose behind
A) the national income accounts.
B) the production possibilities curve.
C) macroeconomics.
D) growth accounting.
Answer: D

Topic: Aggregate Production Function
Skill: Recognition
43) The aggregate production function is based upon three main variables:
A) labor, capital and technology.
B) labor, technology and money.
C) capital, technology and land.
D) land, labor and laws.
Answer: A

Topic: Aggregate Production Function
Skill: Recognition
44) The aggregate production function describes how
A) inputs and technology are combined to produce output.
B) wages and other input costs combine into total cost.
C) wages and productivity affect economic growth.
D) saving and investment affect labor productivity.
Answer: A

Topic: Aggregate Production Function
Skill: Conceptual
45) The equation \( Y = F(L, K, T) \) where \( Y \) = real GDP, \( L \) = labor, \( K \) = capital, and \( T \) = technology
A) is known as the labor function.
B) is known as the aggregate production function.
C) shows that the faster technology grows, the faster real GDP grows.
D) Both answers B and C are correct.
Answer: D

Topic: Aggregate Production Function
Skill: Conceptual
46) If \( Y = \text{real GDP}, \) and \( L, K \) and \( T \) represent the quantities of labor, capital and technology respectively, then the most appropriate representation of the aggregate production function is
A) \( L = F(K, Y, T) \).
B) \( Y = F(T, K) \).
C) \( Y = F(K, T, L) \).
D) \( T = F(Y, T, L) \).
Answer: C
**Topic: Labor Productivity**  
**Skill: Recognition**

47) Labor productivity is measured by
   A) real GDP.
   B) capital per hour of labor.
   C) real GDP per hour of labor.
   D) real GDP per unit of capital.

**Answer: C**

**Topic: Labor Productivity**  
**Skill: Recognition**

48) Labor productivity equals
   A) $Y/L$.
   B) $K/L$.
   C) $T/L$.
   D) the percentage change in the labor input $L$.

**Answer: A**

**Topic: Labor Productivity**  
**Skill: Recognition**

49) 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**

50) 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**

51) 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.
   B) II.
   C) I and II.
   D) I and III.

**Answer: C**

**Topic: Labor Productivity**  
**Skill: Recognition**

52) An assumption underlying growth accounting is that growth in output per hour of labor is determined by growth in
   A) only technological progress.
   B) both capital per hour of labor and technological progress.
   C) only capital per hour of labor.
   D) hours of labor.

**Answer: B**

**Topic: Labor Productivity**  
**Skill: Recognition**

53) Productivity growth
   A) was high in the 1960s, slowed after 1973, and accelerated after 1983.
   B) was low in the 1960s, speeded up after 1973, and slowed after 1983.
   C) was constant from 1960 to the present.
   D) consistently fell between 1960 and the present.

**Answer: A**

**Topic: Labor Productivity**  
**Skill: Recognition**

54) Productivity growth
   A) consistently fell from 1960 to the present.
   B) consistently rose from 1960 to the present.
   C) was constant from 1960 to the present.
   D) was high in the 1960s, slowed after 1973, and speeded up after 1983.

**Answer: D**
55) 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

56) Which statement regarding productivity growth is NOT correct?
A) Labor productivity is defined as real GDP per hour of labor.
B) Productivity growth in the United States was more rapid in the 1960s than the 1970s.
C) Labor productivity growth is due mostly to growth in capital per hour of labor.
D) The 1990s exhibited above-average productivity growth.
Answer: C

57) The productivity curve is a relationship between
A) real GDP per hour of labor and capital per hour of labor, with technology held constant.
B) nominal GDP per hour of labor and capital per hour of labor, with technology held constant.
C) real GDP per hour of labor and capital per hour of labor whenever technological growth occurs.
D) capital per hour of labor and technological growth.
Answer: A

58) The productivity curve is a relationship between
A) real GDP; hours of labor
B) real GDP; capital
C) real GDP per hour of labor; capital
D) real GDP per hour of labor; capital per hour of labor
Answer: D
Suppose that an IBM worker rearranges existing machines and labor and improves production in the process. Using the productivity curve graphed against the capital stock per hour of labor, this invention would be described as

A) a movement upward along the curve.
B) a movement downward along the curve.
C) a shift of the curve upward.
D) a shift of the curve downward.

Answer: C

Using the productivity curve, growth accounting measures the contributions of capital accumulation and technological change to growth in

A) real GDP per hour of labor.
B) real GDP per unit of capital.
C) nominal GDP per unit of capital.
D) nominal GDP per hour of labor.

Answer: A

If capital per hour of labor increases, output 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

If capital per hour of labor decreases, output 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

The productivity curve shows that an increase in technological progress results in

A) an increase in the level of real GDP per hour of labor at any level of capital per hour of labor.
B) no change in the level of real GDP per hour of labor at any level of capital per hour of labor.
C) a decrease in the level of real GDP per hour of labor at any level of capital per hour of labor.
D) an increase in the quantity of labor.

Answer: A

If the level of technology rises, output per worker

A) increases for any level of capital per hour of labor.
B) increases because the level of capital per worker increases.
C) decreases for a given level of capital per worker.
D) decreases because the level of capital per worker decreases.

Answer: A

Which of the following is used most directly in growth accounting?

A) the production possibilities curve.
B) the aggregate expenditures curve.
C) the productivity curve.
D) the aggregate supply curve.

Answer: C
70) The curves in the above figure are referred to as
A) saving supply curves.
B) productivity curves.
C) labor demand curves.
D) investment demand curves.
Answer: B

71) In the above figure, the movement from point \( a \) to point \( e \) shows the effect of
A) the two-thirds rule.
B) an increase in the capital stock.
C) an increase in labor productivity.
D) an advance in technology.
Answer: B

72) In the above figure, an increase in the capital stock per hour of labor is represented by a movement such as from
A) point \( a \) to point \( e \).
B) point \( a \) to point \( b \).
C) point \( a \) to point \( c \).
D) point \( a \) to point \( d \).
Answer: A

73) In the above figure, a decrease in the capital stock per hour of labor is represented by movement such as from
A) point \( a \) to point \( e \).
B) point \( a \) to point \( b \).
C) point \( a \) to point \( c \).
D) point \( a \) to point \( d \).
Answer: D

74) In the above figure, a technological innovation is represented by a movement such as from
A) point \( a \) to point \( e \).
B) point \( a \) to point \( b \).
C) point \( a \) to point \( c \).
D) point \( a \) to point \( d \).
Answer: B

75) In the above figure, as the amount of capital per hour of labor increases and the economy moves from point \( d \) to point \( a \) to point \( e \),
A) real GDP per hour increases at a decreasing rate.
B) the law of diminishing returns is violated.
C) real GDP per hour decreases at an increasing rate.
D) real GDP per hour decreases.
Answer: A
ECONOMIC GROWTH

Topic: The Productivity Curve
Skill: Analytical
76) According to the figure above, which of the following best describes the effect of an increase in the quantity of capital per hour of labor?

A) \( A \) to \( B \).
B) \( B \) to \( D \).
C) \( C \) to \( D \).
D) \( C \) to \( A \).

Answer: B

Topic: The Productivity Curve, Technological Advance
Skill: Analytical
77) According to the figure above, which of the following best describes the effect of an increase in technology?

A) \( C \) to \( D \).
B) \( B \) to \( A \).
C) \( A \) to \( C \).
D) \( D \) to \( B \).

Answer: A

Topic: Law of Diminishing Returns
Skill: Recognition
79) The law of diminishing returns states that, as
A) the quantity of one input used in production increases, all else being the same, output increases.
B) technology increases, all else being the same, output increases.
C) the quantity of one input used in production increases, all else being the same, output increases by ever larger amounts.
D) the quantity of one input used in production increases, all else being the same, output increases by ever smaller amounts.

Answer: D

Topic: Law of Diminishing Returns
Skill: Recognition
80) 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: Conceptual
81) The law of diminishing returns states that if
A) only one input is increased, output decreases by progressively smaller amounts.
B) only one input is increased, output increases by progressively smaller amounts.
C) all inputs in production double, so does output per labor hour.
D) all inputs in production increase, output per labor hour increases but does not necessarily double.

Answer: B
Topic: Law of Diminishing Returns
Skill: Conceptual
82) Suppose that capital per hour of labor rises by 1 unit and consequently that output per hour of labor rises by 0.3 unit. Then, if capital per hour of labor rises by another 1 unit, the law of diminishing returns implies that output per hour of labor will rise by
A) 1 unit.
B) 0.3 unit.
C) less than 0.3 unit.
D) between 0.3 and 1 unit.
Answer: C

Topic: Law of Diminishing Returns
Skill: Analytical
83) Suppose that capital per hour of labor rises by 10 units, increasing output per hour of labor by 1 unit. Then a further 10 unit increase in capital per hour of labor will
A) increase output per hour of labor by more than 1 unit.
B) increase output per hour of labor by 1 unit.
C) increase output per hour of labor by less than 1 unit.
D) decrease output per hour of labor by less than 1 unit.
Answer: C

Topic: The One-Third Rule
Skill: Recognition
84) According to MIT economist Robert Solow, in the absence of a change in technology, a 1 percent increase in capital per hour of labor
A) has no significant effect on real GDP per hour of labor.
B) brings about a three percent increase in real GDP per hour of labor.
C) brings about a 1/3 (0.33 percent) percent increase in real GDP per hour of labor.
D) brings about a percentage increase in real GDP per hour of labor equal to the real interest rate.
Answer: C

Topic: The One-Third Rule
Skill: Recognition
85) The one-third rule states that, holding technology constant, for every 1 percent increase in
A) hours worked, output will increase by 0.33 percent.
B) real wages, hours of work increase by 0.33 percent.
C) capital per hour of labor, output per hour of labor will increase by 0.33 percent.
D) real wages, hours of work decrease by 0.33 percent.
Answer: C

Topic: The One-Third Rule
Skill: Conceptual
86) Suppose that capital per hour of labor has increased by 9 percent. If output per hour of labor has risen by 10 percent, the one-third rule states that, holding technology constant, capital per hour of labor accounts for
A) 7 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 3 percent.
B) 4 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 6 percent.
C) 2 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 8 percent.
D) 3 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 7 percent.
Answer: D

Topic: The One-Third Rule
Skill: Analytical
87) According to Robert Solow’s one-third rule, if both capital per hour of labor and real GDP per hour of labor grow by 3 percent a year, then we can conclude that
A) the one-third rule has been violated.
B) capital growth contributed one-third of one percent to GDP growth
C) technological change contributed 2 percent to growth in GDP per hour of labor.
D) most of the growth in GDP per hour of labor was due to growth in capital per hour of labor.
Answer C
88) Suppose that real GDP grew by 6 percent last year and the capital per hour of labor grew 9 percent. Using the one-third rule, by how much did the increase in capital per hour of labor increase real GDP per hour of labor?

A) 6 percent  
B) 4 percent  
C) 3 percent  
D) 2 percent

Answer: C

89) Assume that capital per hour of labor grows 4 percent and real GDP per hour of labor grows 3 percent. According to the one-third rule, what part of the 3 percent growth of real GDP per hour of labor is attributable to the growth of capital?

A) 1 percent  
B) 1.33 percent  
C) 1.67 percent  
D) 2.67 percent

Answer: B

90) Suppose that capital per hour of labor grew enough to increase GDP per hour of labor by 3 percent. Then, using the one-third rule, the growth in capital per hour of labor must have been

A) 1 percent.  
B) 9 percent.  
C) 3 percent.  
D) 0 percent.

Answer: B

91) Suppose that capital per hour of labor grew by 9 percent while GDP per hour of labor grew by 4 percent. Then the contribution of technology to growth in GDP per hour of labor is

A) 1 percent.  
B) 5 percent.  
C) –1 percent.  
D) 9 percent.

Answer: A

92) In the above figure showing two productivity curves, a decrease in the amount of capital per hour of labor would result in a movement such as from

A) a to b.  
B) a to c.  
C) b to c.  
D) c to a.

Answer: D

93) The shape of the productivity curves above indicates that this economy experiences

A) diminishing returns.  
B) increasing returns.  
C) constant returns.  
D) can’t tell from the given information.

Answer: A
CHAPTER 9

Topic: The One-Third Rule
Skill: Analytical
94) In 2004, the economy whose productivity curves are pictured in the above figure was at point a. By the year 2007, the economy moved to point b. GDP per hour of labor increased by 30 percent. How much did the increase in capital per hour of labor contribute to the growth in GDP per hour of labor?
A) 30 percent
B) 20 percent
C) 10 percent
D) 6 percent
Answer: C

Topic: The One-Third Rule
Skill: Analytical
95) In 2004, the economy whose productivity curves are pictured in the above figure was at point a. By the year 2007, the economy moved to point b. GDP per hour of labor increased by 15 percent. How much did technology contribute to the growth in GDP per hour of labor?
A) 30 percent
B) 20 percent
C) 10 percent
D) 6 percent
Answer: B

Topic: Productivity Growth Slowdown
Skill: Conceptual
97) An increase in energy prices could account for the productivity growth slowdown because
A) research was devoted to developing energy saving capital goods instead of increasing productivity.
B) higher gas prices reduced saving.
C) research was devoted to developing energy saving capital goods, and thus the productivity curve shifted downward.
D) the capital stock increased as a result of higher energy prices.
Answer: A

Topic: Achieving Faster Growth
Skill: Conceptual
98) 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 Growth, Saving
Skill: Conceptual
99) A higher saving rate leads to faster growth because
A) more saving produces greater additions to capital per hour of labor, raising output per person.
B) capital would wear out faster.
C) people would consume more of an economy’s output.
D) population growth would accelerate.
Answer: A

Topic: Achieving Faster Growth, Saving
Skill: Conceptual
100) If the saving rate increases, a country’s growth rate of output per hour of labor increases and capital per hour of labor decreases.
A) increases; increases
B) increases; decreases
C) decreases; increases
D) decreases; decreases
Answer: A
Topic: Achieving Faster Growth, Saving
Skill: Conceptual
101) 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

Growth Theories

Topic: Classical Growth Theory
Skill: Conceptual
102) 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
103) The subsistence real wage rate is the
A) minimum real wage rate necessary to sustain life.
B) real wage rate that produces an excess supply of labor.
C) real wage rate that produces an excess demand for labor.
D) real wage rate that causes technological progress to occur.
Answer: A

Topic: Classical Growth Theory
Skill: Recognition
104) Classical growth theory asserts that
A) an increase in the labor supply raises real wages.
B) the economy can grow indefinitely.
C) real wages fall over time and, as they fall, they increase the population growth rate.
D) population growth is determined by the level of income per person.
Answer: D

Topic: Classical Growth Theory
Skill: Conceptual
105) Classical growth theory predicts that
A) technological progress increases the demand for labor, driving down real wages, and then population growth rises, driving up real wages to their subsistence level.
B) technological progress decreases the demand for labor.
C) technological progress increases the demand for labor, driving up real wages, and then population growth rises, driving down real wages to their subsistence level.
D) the supply of labor decreases as real wages rise.
Answer: C

Topic: Classical Growth Theory
Skill: Conceptual
106) 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
107) 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: Conceptual
108) Classical economists believed that technological progress would make the labor force
A) more productive, shifting the labor demand curve rightward and raising real wage rates.
B) less productive, shifting the labor demand curve leftward and raising real wage rates.
C) more productive, shifting the labor demand curve leftward and lowering real wage rates.
D) less productive, shifting the labor demand curve leftward and lowering real wage rates.
Answer: A
Topic: Classical Growth Theory  
Skill: Conceptual  
109) 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  
110) Classical economists believed that  
A) real wages would rise above their subsistence level in the long run.  
B) real wages would never rise above their subsistence level in the long run.  
C) the labor supply would increase because real wages would fall as a result of technological progress.  
D) the population growth would decrease as real wages rise.  
Answer: B

Topic: Classical Growth Theory  
Skill: Recognition  
111) Economics became known as the “Dismal Science” because of the  
A) tendency of competitive markets to keep prices and profits low.  
B) classical growth theory prediction of subsistence wages in the long run.  
C) neoclassical growth theory prediction that growth would not persist in the long run.  
C) trouble students have earning good grades in their Introductory Economics classes.  
Answer: B

Topic: Classical Growth Theory  
Skill: Analytical  
112) In the above figure, suppose the economy is initially on LD_0 and LS_0. According to the classical growth theory, an advance in technology would initially  
A) shift the LS curve from LS_0 to LS_1.  
B) increase the subsistence real wage.  
C) increase the real wage.  
D) increase the population.  
Answer: C

Topic: Classical Growth Theory  
Skill: Analytical  
113) In the above figure, suppose the economy is initially on LD_0 and LS_0. As a result of an increase in technology, classical growth theory predicts  
A) the subsistence real wage will rise.  
B) the subsistence real wage will fall.  
C) there will be an increase in population.  
D) the real wage will first fall, then rise.  
Answer: C

Topic: Classical Growth Theory  
Skill: Analytical  
114) In the above figure, suppose the economy is initially at point a. According to classical growth theory, an increase in technology will  
A) move the economy from a to d to c.  
B) move the economy from a to b to c.  
C) move the economy from a to b to a.  
D) not move the economy from a.  
Answer: A
**Topic: Neoclassical Growth Theory**  
**Skill: Recognition**

115) 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, Target Rate**  
**Skill: Conceptual**

116) If the target interest rate is above the real interest rate,  
A) households increase saving.  
B) households’ saving is unaffected.  
C) the demand for capital by firms increases.  
D) households decrease saving.  
**Answer: A**  

117) If the target interest rate is 6 percent and the real interest rate is  
A) 4 percent, saving will increase.  
B) 7 percent, saving will decrease.  
C) 7 percent, saving will increase.  
D) 6 percent, saving will decrease.  
**Answer: C**  

**Topic: Neoclassical Growth Theory, Target Rate**  
**Skill: Conceptual**

118) 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**  

119) 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 the demand for capital.  
C) real GDP growth is caused by growth in the population.  
D) discoveries result from choices that increase profits.  
**Answer: B**  

120) Neoclassical growth theory assumes the productivity curve exhibits  
A) increasing returns to hours of labor.  
B) increasing returns to capital per hour of labor.  
C) diminishing returns to only hours of labor.  
D) diminishing returns to capital per hour of labor.  
**Answer: D**  

121) Neoclassical growth theory predicts that  
A) advances in technology increase the productivity of capital, which leads to an increase in investment and rising per capita GDP.  
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 demand.  
D) growth in real GDP can continue indefinitely.  
**Answer: A**  

122) According to neoclassical growth theory, the productivity curve shifts upward if  
A) the target real interest rate increases.  
B) capital per hour of labor increases.  
C) technological progress occurs.  
D) the target real interest rate decreases.  
**Answer: C**
Chapter 9

Topic: Neoclassical Growth Theory
Skill: Conceptual
123) Neoclassical growth theory predicts that
A) the growth rates of all nations will diverge.
B) the growth rates of all nations will converge.
C) output is constant over time.
D) capital is constant over time.
Answer: B

Topic: New Growth Theory
Skill: Recognition
124) According to the new growth theory of Paul Romer,
A) the rate of technological progress is determined by chance.
B) knowledge is not subject to diminishing returns.
C) the productivity curve does not shift upward over time.
D) the concept of a productivity curve is not necessary.
Answer: B

Topic: New Growth Theory
Skill: Recognition
125) 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: Recognition
126) 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
127) 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 the real wage rate back to subsistence level.
C) the capital stock experiences diminishing returns.
D) the economy can enjoy a period of indefinite growth.
Answer: D

Topic: New Growth Theory
Skill: Recognition
128) 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: Conceptual
129) 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
130) 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**

131) New growth theory proposes that real GDP per person grows because of ____ and that growth is ____.
   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: Sorting Out the Growth Theories**  
**Skill: Conceptual**

132) 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 wage rate.  
   D) In classical growth theory physical resources are unlimited.

*Answer: A*

### Study Guide Questions

**Topic: Study Guide Question, Productivity Growth Slowdown**  
**Skill: Recognition**

133) When did productivity grow most rapidly?
   A) 1960 to 1973  
   B) 1973 to 1983  
   C) 1983 to 1997  
   D) 1960 to 1983

*Answer: A*

**Topic: Study Guide Question, Productivity Growth Slowdown**  
**Skill: Conceptual**

134) Helping create the 1973-1983 slowdown in productivity growth was
   A) a large increase in capital per hour of labor.  
   B) large increases in the price of oil.  
   C) passing fewer environmental protection laws.  
   D) All of the above helped create the slowdown in productivity growth.

*Answer: B*

**Topic: Study Guide Question, The Productivity Curve**  
**Skill: Conceptual**

135) A decrease in the amount of capital per hour of labor leads to
   A) an upward shift in the productivity curve.  
   B) a downward shift in the productivity curve.  
   C) a movement along the productivity curve to a higher level of output per hour of labor.  
   D) a movement along the productivity curve to a lower level of output per hour of labor.

*Answer: D*

**Topic: Study Guide Question, The Productivity Curve, Technological Advance**  
**Skill: Conceptual**

136) An increase in the level of technology results in
   A) the productivity curve shifting upward.  
   B) the productivity curve shifting downward.  
   C) a movement along the productivity curve to a higher level of output per hour of labor.  
   D) a movement along the productivity curve to a lower level of output per hour of labor.

*Answer: A*

**Topic: Study Guide Question, The One-Third Rule**  
**Skill: Analytical**

137) With no technological change, a 7 percent increase in capital per hour of labor causes approximately a ____ percent increase in output per hour of labor.
   A) 14.  
   B) 7.  
   C) 7/3.  
   D) 1/3.

*Answer: C*
138) Suppose that capital per hour of labor increases by 15 percent and that real GDP per hour of labor increases by 10 percent. What is the contribution to the increase in real GDP per hour of labor from the change in capital per hour of labor?
A) It increased real GDP per hour of labor by 15 percent.
B) It increased real GDP per hour of labor by 10 percent.
C) It increased real GDP per hour of labor by 5 percent.
D) It increased real GDP per hour of labor by 3.3 percent.
Answer: C

139) Suppose that capital per hour of labor increases by 18 percent while real GDP per hour of labor increases by 10 percent. What is the contribution to the increase in real GDP per hour of labor from changing technology?
A) It increased real GDP per hour of labor by 18 percent.
B) It increased real GDP per hour of labor by 12 percent.
C) It increased real GDP per hour of labor by 4 percent.
D) It increased real GDP per hour of labor by 3.33 percent.
Answer: C

140) Which theory of economic growth concludes that in the long run people will be paid only a subsistence real wage?
A) The classical theory
B) The neoclassical theory
C) The new theory
D) All of the theories
Answer: C

141) 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

142) An assumption of the neoclassical theory of growth is that
A) people earn only a subsistence real wage.
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

143) If the real interest rate exceeds the target interest rate, saving is ____ and capital per hour of labor ____.
A) high; increases
B) high; decreases
C) low; increases
D) low; decreases
Answer: A

144) 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, New Growth Theory
Skill: Conceptual
145) 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 target interest rate is lower than the real in-
terest rate.
Answer: C

Topic: Study Guide Question, New Growth Theory
Skill: Conceptual
146) 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
147) In the new growth theory, as long as the real in-
terest rate is greater than the target rate,
A) the population growth rate increases.
B) saving is less than investment.
C) international trade is necessary.
D) more capital is accumulated.
Answer: D

MyEconLab Questions

Topic: Long-Term Growth Trends
Level 1: Definitions and Concepts
148) 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: Preconditions for Economic Growth
Level 1: Definitions and Concepts
149) The preconditions for economic growth include
all the following except ____.
A) money so that all sorts of transactions can take
place
B) property rights that are properly enforced by the
rule of law
C) markets that enable people to do business with
each other.
D) big governments that spend more and more of
the nation’s income
Answer: D

Topic: Growth Accounting
Level 1: Definitions and Concepts
150) The calculation of the contribution of an increase
in labor and capital and the contribution of tech-
nological change to real GDP growth is called
____.
A) growth calculation in the twentieth century
B) growth accounting
C) productivity accounting
D) technological and capital calculation
Answer: B

Topic: Labor Productivity
Level 1: Definitions and Concepts
151) Labor productivity ____.
A) is labor per unit of capital
B) increases when aggregate labor hours increase
C) is real GDP per unit of capital
D) is real GDP per hour of labor
Answer: D

Topic: The Productivity Curve
Level 1: Definitions and Concepts
152) The productivity curve shows the relationship
between how ____ per hour of labor changes as
the amount of ____ per hour of labor changes
when technology ____.
A) GDP; capital; advances
B) real GDP; the real wage; advances
C) the real wage; labor productivity; remains un-
changed
D) real GDP; capital; remains unchanged
Answer: D
153) 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

154) If the real wage rate is greater than the subsistence real wage rate, then classical growth theory assumes that ____.
A) the population will grow  
B) the population will grow indefinitely  
C) the real wage rate will be 4 shillings a day  
D) the real wage rate will be maintained  
Answer: A

155) 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

156) The aggregate production function shows how ____ changes when ____ change.
A) GDP; labor and capital  
B) GDP; capital and technology  
C) real GDP; labor, capital, and technology  
D) real GDP; capital and technology  
Answer: A

157) ____ 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: Law of Diminishing Returns  
Level 2: Using Definitions and Concepts  
162) The law of diminishing returns states that as the quantity of one input increases and all other inputs remain the same, output will ____.
A) increase as capital increases
B) increase but by ever smaller increments
C) increase but eventually decrease
D) gradually decrease
Answer: B

Topic: The One-Third Rule  
Level 2: Using Definitions and Concepts  
163) The one-third rule states that a one percent increase in ____ per hour of labor with ____ in technology results in a one-third of one percent increase in ____ per hour of labor.
A) the real wage; no change; capital
B) capital; an increase; real GDP
C) capital; no change; real GDP
D) the real wage; an increase; capital
Answer: C

Topic: Classical Growth Theory  
Level 2: Using Definitions and Concepts  
164) Classical growth economists believed that the real wage rate ____ the subsistence real wage rate.
A) could sometimes be above
B) would always be above
C) would always equal
D) None of the above answers is correct.
Answer: A

Topic: Neoclassical Growth Theory  
Level 2: Using Definitions and Concepts  
165) 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: New Growth Theory  
Level 2: Using Definitions and Concepts  
166) In new growth theory, ____ does not experience diminishing returns.
A) knowledge capital
B) the demand for labor
C) the marginal product of labor
D) the demand for capital
Answer: A

Topic: Achieving Faster Growth, International Trade  
Level 2: Using Definitions and Concepts  
167) To increase the pace of economic growth we must increase the growth rate of ____ or increase the growth rate of ____.
A) capital per hour of labor; technological progress
B) aggregate work hours; consumption
C) aggregate supply; the price level
D) aggregate demand; the real wage rate
Answer: A

Topic: Long-Term Growth Trends  
Level 3: Calculations and Predictions  
168) Between 1901 and 2001, the average growth rate of real GDP per person in the United States was 2 percent a year. During this period, ____ grew at a faster rate than ____.
A) GDP; the population
B) the population; real GDP
C) real GDP; the population
D) inflation; real GDP
Answer: C

Topic: The Productivity Curve  
Level 3: Calculations and Predictions  
169) An increase in the quantity of capital per hour of labor with no change in population creates a ____ the productivity curve, and technological change creates a ____ the productivity curve.
A) movement along; movement along
B) shift of; movement along
C) shift of; shift of
D) movement along; shift of
Answer: D
CHAPTER 9

Topic: Law of Diminishing Returns
Level 3: Calculations and Predictions
170) When capital per hour of labor increases by $10,000, real GDP per hour of labor increases by $8,000. According to the law of diminishing returns, if capital per hour of labor increases by an additional $10,000, real GDP per hour of labor will ____.
A) increase by more than $8,000
B) increase by $8,000
C) increase by less than $8,000
D) increase but more information is needed to determine if the increase is more than, less than, or equal to $8,000.
Answer: C

Topic: The One-Third Rule
Level 3: Calculations and Predictions
171) In Lotusland, real GDP per hour of labor grows at 6 percent a year when capital per hour of labor increases by 6 percent a year. The one-third rule tells us that capital per hour of labor increased real GDP per hour of labor by ____.
A) 6 percent a year
B) 3 percent a year
C) 2 percent a year
D) 12 percent a year
Answer: C

Topic: The One-Third Rule
Level 3: Calculations and Predictions
172) In Lotusland, real GDP per hour of labor grows at 6 percent a year when capital per hour of labor increases by 6 percent a year. The one-third rule tells us that technological change increased real GDP per hour of labor by ____.
A) 3 percent a year
B) 12 percent a year
C) 6 percent a year
D) 4 percent a year
Answer: D

Topic: The One-Third Rule
Level 3: Calculations and Predictions
173) In Dreamland, capital per hour of labor increased by 3 percent a year and technological change increased real GDP per hour of labor by 1 percent a year. Real GDP per hour of labor increased by ____.
A) 2 percent a year
B) 6 percent a year
C) 5 percent a year
D) 4 percent a year
Answer: A

Topic: The One-Third Rule
Level 3: Calculations and Predictions
174) In Gamma, as capital per hour of labor grows by 6 percent a year and technology does not change, ____ and real GDP per hour of labor increases by ____ percent a year.
A) Gamma moves along its productivity curve; 3
B) Gamma’s productivity curve shifts upward; 2
C) Gamma moves along its productivity curve; 6
D) Gamma moves along its productivity curve; 2
Answer: D

Topic: The One-Third Rule
Level 3: Calculations and Predictions
175) In Lotusland, real GDP per hour of labor grows at 5 percent a year when technology increases real GDP per hour of labor by 5 percent a year. Capital per hour of labor grows by ____ percent a year.
A) 0
B) 10
C) 15
D) 30
Answer: A
**Topic: Classical Growth Theory**
**Level 3: Calculations and Predictions**

176) The economy is at point $A$ in the figure. Classical growth theory predicts that with technological advance, the economy will move first to point ____ and then to point ____.

A) $C$; $B$
B) $B$; $C$
C) $D$; $E$
D) $D$; $A$

**Answer:** B

**Topic: Classical Growth Theory**
**Level 3: Calculations and Predictions**

177) An assumption of classical growth theory is that when ____ the population growth rate ____.

A) the real wage rate exceeds the subsistence real wage rate; increases
B) people become more skilled; decreases
C) the real wage rate decreases; increases
D) saving declines; decreases

**Answer:** A

---

**Topic: Long-Term Growth Trends**
**Level 4: Advanced Calculations and Predictions**

178) Real GDP per person in the country of Flax is $10,000. Each year real GDP per person grows 10 percent. At the end of 2 years, real GDP per person is ____.

A) $11,000$
B) $12,000$
C) $10,100$
D) $12,100$

**Answer:** D

**Topic: Long-Term Growth Trends**
**Level 4: Advanced Calculations and Predictions**

179) 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: Preconditions for Economic Growth**
**Level 4: Advanced Calculations and Predictions**

180) Economic growth can begin when people ____ , but in order to continue, there must be an incentive system which encourages people to pursue activities ____.

A) specialize and trade; such as investment in human capital
B) have comparative advantage; having absolute advantage
C) are educated; in which they have a comparative advantage
D) increase working hours; that use more capital

**Answer:** A
181) The one-third rule predicts that if capital per hour of labor increases by 6 percent and real GDP per hour of labor increases by 6 percent, then the increase in capital per hour of labor increases real GDP per hour of labor by ____ and technological change increases real GDP per hour of labor by ____.
A) 6 percent; 0 percent  
B) 2 percent; 4 percent  
C) 4 percent; 2 percent  
D) 0 percent; 6 percent
Answer: B

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital per hour of labor (seashells)</th>
<th>Labor productivity (seashells)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>600.0</td>
<td>400.0</td>
</tr>
<tr>
<td>2003</td>
<td>654.0</td>
<td>424.0</td>
</tr>
<tr>
<td>2004</td>
<td>719.4</td>
<td>466.4</td>
</tr>
</tbody>
</table>

182) The table above shows capital per hour of labor and labor productivity for the beach economy of Whitepool. In the year 2003, how many seashells does the increase in capital per hour of labor contribute and how many seashells of growth does technological change contribute to the growth in real GDP per hour of labor?
A) 12 seashells; 12 seashells  
B) 24 seashells; 0 seashells  
C) 3 seashells; 3 seashells  
D) 54 seashells; −30 seashells
Answer: A

183) The table above shows capital per hour of labor and labor productivity for the beach economy of Whitepool. In the year 2004, what is the contribution of the increase in capital per hour of labor and the contribution of technological change to the growth in real GDP per hour of labor?
A) 10 percent; 0 percent  
B) 3 1/3 percent; 6 2/3 percent  
C) 0 percent; 10 percent  
D) 5 percent; 5 percent
Answer: B

184) In 2003, capital per hour of labor was $250 and real GDP per hour of labor was $50. In 2004, real GDP per hour of labor was $55. If there was no change in technology between 2003 and 2004, then capital per hour of labor in 2004 was ____.
A) $252  
B) $325  
C) $275  
D) $280
Answer: B

185) An economy is in a long-run equilibrium. The real interest rate and the target rate of return are 6 percent a year. Then technology advances and the real interest rate rises to 10 percent. Neoclassical growth theory predicts that economic growth will continue ____.
A) until the real interest rate and subsistence wage rate are equal  
B) until the real interest rate falls to 6 percent a year  
C) only after the real interest rate returns to 6 percent a year  
D) indefinitely
Answer: B

186) According to new growth theory ____.
A) ever-advancing productivity keeps the rate of return below the target rate of return  
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: Achieving Faster Growth, International Trade
Level 4: Advanced Calculations and Predictions
187) 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