

### Question 1

L2QM-PQ1311-1410

LOS: LOS-6600

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

A higher growth rate of potential GDP will *most* likely lead to:

- ☒ Higher real interest rates.
- ☐ Lower real interest rates.
- ☐ Lower real asset returns.

#### Rationale

##### This Answer is Correct

Higher growth rates of potential GDP translate into higher real interest rates. Consumers expect incomes to rise going forward, which encourages them to spend. Therefore, the real interest rate must rise to stimulate the saving required for capital accumulation.

## Question 2

L200-PQ0004-1412

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

According to the Malthusian model of GDP growth, what happens to real per capita GDP growth rates when the real wage rate is above the minimum requirement to maintain life?

- ☐ They rise.
- ☒ They fall.
- ☐ They remain unchanged.

### Rationale

#### This Answer is Correct

According to the Malthusian model of real per capita GDP, growth rates will fall due to the population explosion that results from increasing the real wage rate above the minimum requirement to maintain life.

### Question 3

L2QM-PQ1314-1410

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Consider the following historical economic data for three countries:

	Country	Growth in Hours Worked	Growth in Labor Productivity	Growth in TFP	Growth in GDP
A		0.7	2.5	2.2	4.5
B		-0.3	1.8	0.9	2.2
C		1.5	0.9	-0.5	3.5

Capital deepening as a source of growth was *least* important for:

- ☒ Country A.
- ☐ Country B.
- ☐ Country C.

#### Rationale

##### ✔ This Answer is Correct

The effect of capital deepening on growth can be measured as the difference between the growth rate of labor productivity and the growth rate of total factor productivity. This difference is smallest for Country A ( $2.5 - 2.2 = 0.3$ ).

#### Question 4

L2EC-TB0010-1412

LOS: LOS-6630

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Which of the following statements regarding economic growth and natural resources is *most likely* to be accurate?

- ☐ Countries with ownership of natural resources will always have economic growth rates faster than those countries without natural resources.
- ☐ Countries without ownership of natural resources will always have economic growth rates faster than those countries without natural resources.
- ☒ Countries that are rich in natural resources may suffer the Dutch disease.

#### Rationale

##### This Answer is Correct

The relation between resource endowment and economic growth is not so straightforward that the existence of one necessarily implies the existence of the other. Access to natural resources through trade is more important than ownership. Some countries rich in natural resource can suffer the Dutch disease, where currency appreciation driven by strong export demand for resources makes other segments of the economy globally uncompetitive.

### Question 5

L2R14TB-AC010-1512

LOS: LOS-6610

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Capital deepening reflects an increase in the:

- ☐ capital-to-labor ratio as a result of a decrease in employment.
- ☐ amount of labor relative to capital.
- ☒ capital-to-labor ratio as a result of higher growth rate of capital relative to labor.

#### Rationale

 **capital-to-labor ratio as a result of a decrease in employment.**

Capital deepening reflects the increase in the capital-to-labor ratio and occurs when the growth rate of capital is greater than the growth rate of labor.

#### Rationale

 **amount of labor relative to capital.**

Capital deepening reflects the increase in the capital-to-labor ratio and occurs when the growth rate of capital is greater than the growth rate of labor.

#### Rationale

 **capital-to-labor ratio as a result of higher growth rate of capital relative to labor.**

Capital deepening reflects the increase in the capital-to-labor ratio and occurs when the growth rate of capital is greater than the growth rate of labor.

### Question 6

L2R14TB-AC015-1512

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

Steady-state growth is characterized as:

- ☒ the point at which output per worker and capital per worker are growing at equal and sustainable rates.
- ☐ when there are no further shifts in total factor productivity.
- ☐ when potential GDP remains flat.

#### Rationale

☒ **the point at which output per worker and capital per worker are growing at equal and sustainable rates.**

The point at which capital per worker and output per worker are growing at equal sustainable rates is referred to as the steady state.

#### Rationale

☐ **when there are no further shifts in total factor productivity.**

The point at which capital per worker and output per worker are growing at equal sustainable rates is referred to as the steady state.

#### Rationale

☐ **when potential GDP remains flat.**

The point at which capital per worker and output per worker are growing at equal sustainable rates is referred to as the steady state.

### Question 7

L2R14TB-AC009-1512

LOS: LOS-6590

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

The sustainable rate of economic growth is measured by the rate of increase in:

- ☐ technology.
- ☒ potential GDP.
- ☐ factors of production.

#### Rationale

 **technology.**

The sustainable rate of economic growth is measured by the rate of increase in the economy's potential GDP.

#### Rationale

 **potential GDP.**

The sustainable rate of economic growth is measured by the rate of increase in the economy's potential GDP.

#### Rationale

 **factors of production.**

The sustainable rate of economic growth is measured by the rate of increase in the economy's potential GDP.

### Question 8

L2QM-PQ1312-1410

LOS: LOS-6660

Lesson Reference: Lesson 4: Neoclassical Growth Theory (Part II) and Endogenous Growth Theory

Difficulty: medium

Consider the following statements:

Statement 1: Under the endogenous model, an increase in the savings rate would result in a permanent increase in the rate of economic growth.

Statement 2: Under the endogenous model, the production function is a curved line that eventually flattens out.

Which of the following is *most* likely?

- ☒ Only Statement 1 is correct.
- ☐ Only Statement 2 is correct.
- ☐ Both statements are incorrect.

#### Rationale

##### This Answer is Correct

Under the endogenous model, since there are no diminishing marginal returns to capital from the perspective of the economy as a whole, an increase in the savings rate would result in a permanent increase in the rate of economic growth.

Under the endogenous model, the production function is an upward-sloping straight line.



### Question 9

L2EC-TBB206-1412

LOS: LOS-6650

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Which of the following types of capital investment is *most likely* to boost the growth rate of potential GDP through externality impacts?

- ☐ Both ICT and non-ICT spending.
- ☒ ICT spending only.
- ☐ Non-ICT spending only.

#### Rationale

##### This Answer is Correct

ICT investment spending includes spending on information, computers, and telecommunications equipment. ICT spending allows people to communicate through the Internet and work more productively—a type of network externality that can boost the growth rate of potential GDP. Non-ICT spending results in capital deepening and lower marginal returns, and hence, will have less of an impact on potential GDP growth.

### Question 10

L2R14TB-AC012-1512

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

The following information describes the economy for Country A.

Growth in real output	5%
Labor contribution to output	75%
Annual growth rate in labor hours	2.5%
Capital share of output	25%
Annual growth rate in capital	6.5%

Using Solow's growth accounting equation, what is the rate of technological change for the economy?

- ☒ 1.5%.
- ☐ 3.5%.
- ☐ 5.0%.

#### Rationale

☒ 1.5%.

Growth rate accounting is based on the equation:  $\Delta Y/Y = \Delta A/A + \alpha \Delta K/K + (1 - \alpha) \Delta L/L$ ; where  $\Delta Y/Y$  is the growth rate in real GDP. Substituting the given values:

$$5.0 = \Delta A/A + (0.25)(6.5) + (0.75)(2.5)$$
$$\Delta A/A = 1.5\%$$

#### Rationale

☐ 3.5%.

Growth rate accounting is based on the equation:  $\Delta Y/Y = \Delta A/A + \alpha \Delta K/K + (1 - \alpha) \Delta L/L$ ; where  $\Delta Y/Y$  is the growth rate in real GDP. Substituting the given values:

$$5.0 = \Delta A/A + (0.25)(6.5) + (0.75)(2.5)$$
$$\Delta A/A = 1.5\%$$

#### Rationale

☐ 5.0%.

Growth rate accounting is based on the equation:  $\Delta Y/Y = \Delta A/A + \alpha \Delta K/K + (1 - \alpha) \Delta L/L$ ; where  $\Delta Y/Y$  is the growth rate in real GDP. Substituting the given values:

$$5.0 = \Delta A/A + (0.25)(6.5) + (0.75)(2.5)$$
$$\Delta A/A = 1.5\%$$

### Question 11

L2QM-PQ1309-1410

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

Under the neoclassical model, an increase in which of the following will *least likely* result in a decrease in the levels of capital per worker and output per worker in the short run?

- ☒ Savings rate
- ☐ Labor force growth rate
- ☐ Depreciation rate

#### Rationale

✔ This Answer is Correct

An increase in the savings rate would result in an increase in the levels of capital per worker and output per worker in the short run as the sy curve would shift upward.

Increase in labor force growth rates and depreciation rates result in a short-term decrease in capital per worker and output per worker.

## Question 12

L2EC-TB0008-1412

LOS: LOS-6610

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

An economist notices that capital deepening is occurring in two different countries. One of the countries is a developed country with a high capital-to-labor ratio, while the other country is an emerging market with a low capital-to-labor ratio. Economic growth is *most likely* to be:

- ☐ Higher in the developed-market economy.
- ☒ Higher in the emerging-market economy.
- ☐ Zero in both economies without a simultaneous increase in total factor productivity.

### Rationale

#### This Answer is Correct

Capital deepening can lead to economic growth if the country has low levels of capital to labor. Due to the decreasing marginal returns to capital at a fixed level of total factor productivity, the developed market is likely to have less growth than the emerging market.

### Question 13

L2EC-TB0005-1412

LOS: LOS-6580

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

Which of the following factors is *most likely* to favor economic growth in an economy?

- ☒ High savings rates.
- ☐ High levels of regulation.
- ☐ Government policies restricting international competition.

#### Rationale

##### This Answer is Correct

High savings rates will provide the investment required to provide capital for future economic growth. Low levels of regulation encouraging entrepreneurship will favor growth. International trade and free capital flow will favor growth.

### Question 14

L2R14TB-AC013-1512

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Using the labor productivity growth accounting equation, an analyst finds that the potential GDP is 5.0%. If labor productivity, measured as an increase in the number of hours worked, is 2.5%, what is the expected long-term average growth rate in the labor force?

- ☐ 7.5%.
- ☒ 2.5%.
- ☐ 1.25%.

#### Rationale

 7.5%.

The labor productivity method of assessing potential GDP is based on the following equation:

$\text{Growth rate in potential GDP} = \text{Long-term growth rate of the labor force} + \text{Long-term growth rate in labor productivity}$

If potential GDP is 5% and labor productivity is 2.5%, the long-term growth rate of the labor force is 2.5%.

#### Rationale

 2.5%.

The labor productivity method of assessing potential GDP is based on the following equation:

$\text{Growth rate in potential GDP} = \text{Long-term growth rate of the labor force} + \text{Long-term growth rate in labor productivity}$

If potential GDP is 5% and labor productivity is 2.5%, the long-term growth rate of the labor force is 2.5%.

#### Rationale

 1.25%.

The labor productivity method of assessing potential GDP is based on the following equation:

$\text{Growth rate in potential GDP} = \text{Long-term growth rate of the labor force} + \text{Long-term growth rate in labor productivity}$

If potential GDP is 5% and labor productivity is 2.5%, the long-term growth rate of the labor force is 2.5%.

### Question 15

L2R14TB-AC011-1512

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Total factor productivity (TFP) significantly impacts production frontiers and promotes continued growth. The catalyst for higher TFP is:

- ☐ labor to capital.
- ☐ investment spending.
- ☒ technological advance.

#### Rationale

##### **labor to capital.**

In growth accounting models, TFP is valued as the residual component of growth that is determined after other explicit factors of production are evaluated (labor, capital). TFP is attributed to technological progress.

#### Rationale

##### **investment spending.**

In growth accounting models, TFP is valued as the residual component of growth that is determined after other explicit factors of production are evaluated (labor, capital). TFP is attributed to technological progress.

#### Rationale

##### **technological advance.**

In growth accounting models, TFP is valued as the residual component of growth that is determined after other explicit factors of production are evaluated (labor, capital). TFP is attributed to technological progress.

### Question 16

L2R14TB-AC020-1512

LOS: LOS-6610

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Country V has promoted capital investment in manufacturing as a means to boost growth. However, data has revealed that despite the increasing investment, growth rates in output have not kept up pace. This lack of progress could *most likely* be attributed to:

- ☐ technological obsolescence.
- ☒ capital deepening.
- ☐ endogenous growth.

#### Rationale

##### **technological obsolescence.**

Capital deepening is often measured on a per unit of labor basis, or a capital-to-labor ratio. An increase in the ratio reflects an increase in the investment in the economy. However, there is a point at which the investment will result in a capital-to-labor ratio that will yield a negligible impact to output. This occurs due to the reduction in marginal product or diminishing marginal returns.

#### Rationale

##### **capital deepening.**

Capital deepening is often measured on a per unit of labor basis, or a capital-to-labor ratio. An increase in the ratio reflects an increase in the investment in the economy. However, there is a point at which the investment will result in a capital-to-labor ratio that will yield a negligible impact to output. This occurs due to the reduction in marginal product or diminishing marginal returns.

#### Rationale

##### **endogenous growth.**

Capital deepening is often measured on a per unit of labor basis, or a capital-to-labor ratio. An increase in the ratio reflects an increase in the investment in the economy. However, there is a point at which the investment will result in a capital-to-labor ratio that will yield a negligible impact to output. This occurs due to the reduction in marginal product or diminishing marginal returns.



### Question 17

L200-PQ0009-1412

LOS: LOS-6680

Lesson Reference: Lesson 5: The Convergence Debate and Growth in an Open Economy

Difficulty: medium

What will the import of technology from a developed to an emerging nation likely do to the emerging nation's income levels relative to developed nations?

- ☒ Raise them
- ☐ No relative change
- ☐ Lower them

#### Rationale

##### This Answer is Correct

Importing technology from a developed to an emerging nation will raise the emerging country's income levels relative to other developed nations.

### Question 18

L2R14TB-AC007-1512

LOS: LOS-6640

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Country Q is facing a barbell demographic composition in coming years. The largest populations will be above the age of 65 and below the age of 16. As this demographic shift manifests, the growth rate of real GDP, assuming no other investment or technological change occurs, will *most likely*:

- ☐ stay fixed at the present level.
- ☐ accelerate.
- ☒ decelerate.

#### Rationale

 **stay fixed at the present level.**

In the next two years, the share of the working age population will decline and therefore, holding all other attributes and influences constant, GDP growth will be expected to decelerate, as well.

#### Rationale

 **accelerate.**

In the next two years, the share of the working age population will decline and therefore, holding all other attributes and influences constant, GDP growth will be expected to decelerate, as well.

#### Rationale

 **decelerate.**

In the next two years, the share of the working age population will decline and therefore, holding all other attributes and influences constant, GDP growth will be expected to decelerate, as well.

### Question 19

L2R14TB-AC021-1512

LOS: LOS-6680

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

In order for increased domestic investment in capital to yield greater increases in output, which of the following is required?

- ☐ Free trade.
- ☐ Limited human capital flight.
- ☒ Technological progress.

#### Rationale

##### **Free trade.**

With the addition of technological progress, total factor productivity (TFP) improves, increasing marginal product relative to marginal cost and providing an incentive for further capital investment or deepening, thereby providing an improvement in technology as a foundation for sustainable growth.

#### Rationale

##### **Limited human capital flight.**

With the addition of technological progress, total factor productivity (TFP) improves, increasing marginal product relative to marginal cost and providing an incentive for further capital investment or deepening, thereby providing an improvement in technology as a foundation for sustainable growth.

#### Rationale

##### **Technological progress.**

With the addition of technological progress, total factor productivity (TFP) improves, increasing marginal product relative to marginal cost and providing an incentive for further capital investment or deepening, thereby providing an improvement in technology as a foundation for sustainable growth.

## Question 20

L2R14TB-ITEMSET-AC001-1512

LOS: LOS-6600

LOS: LOS-6610

LOS: LOS-6660

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

### Use the following information to answer the next 3 questions:

Two junior analysts, John and Ben, have been asked to evaluate statements made by a television personality, Jon Sebo, who enjoys a strong reputation among analysts for providing up-to-the minute detail on emerging market opportunities. Sebo has a flair for the dramatic so John and Ben have had to distill his on-air remarks to the following statements.

**Statement 1:** The stock market in Country X has had significant growth over the last 10 years, and its ratio of corporate profits to GDP (E/GDP) has also been trending strongly upwards.

**Statement 2:** Country X is a developed economy with a high capital-to-labor ratio. Country Y is a developing country with a much lower capital-to-labor ratio.

**Statement 3:** Country X and Country Y are open economies and trading partners. This characteristic will lead to eventual convergence between the two.

Both John and Ben are well versed in GDP assessment and growth characteristics/catalysts. They have noted that Sebo has only provided minimal data points.

i.

In Statement 1, what can be assumed about the long-run growth rate of the ratio of corporate profits to GDP (E/GDP)?

- ☐ It will converge to a constant value consistent with long-run GDP growth.
- ☐ It will increase at the rate of stock market appreciation.
- ☒ It will decrease from the present level.

#### Rationale

##### ✔ This Answer is Correct

The ratio of corporate profits to GDP growth cannot increase indefinitely—input cost, including labor, will eventually put downward pressure to profits. As a result, profits will tend to converge to a lower long-run historical level over time. In the long run, the growth rate of GDP dominates the percentage change in the stock market value.

#### Rationale

##### ✔ This Answer is Correct

The ratio of corporate profits to GDP growth cannot increase indefinitely—input cost, including labor, will eventually put downward pressure to profits. As a result, profits will tend to converge to a lower long-run historical level over time. In the long run, the growth rate of GDP dominates the percentage change in the stock market value.

#### Rationale

##### ✔ This Answer is Correct

The ratio of corporate profits to GDP growth cannot increase indefinitely—input cost, including labor, will eventually put downward pressure to profits. As a result, profits will tend to converge to a lower long-run historical level over time. In the long run, the growth rate of GDP dominates the percentage change in the stock market value.

ii.

Based on the information contained in Statement 2, which country is *most likely* to improve its potential GDP through capital deepening?

- ☐ Country X because it has a higher capital-to-labor ratio.
- ☐ Country Y because developed countries have cheaper labor.
- ☒ Country Y because its diminishing returns to capital is lower.

#### Rationale

##### This Answer is Incorrect

A developed country like Country X has a large capital stock relative to the size of its labor force. Adding more capital to a fixed amount of labor will incur diminishing marginal returns as each additional unit of capital contributes less and less to output-per-worker. Since Country Y has a lower capital stock relative to the size of its workforce, it is less affected by diminishing marginal returns to capital and, therefore, better able to increase its potential GDP by adding more capital (deepening).

#### Rationale

##### This Answer is Incorrect

A developed country like Country X has a large capital stock relative to the size of its labor force. Adding more capital to a fixed amount of labor will incur diminishing marginal returns as each additional unit of capital contributes less and less to output-per-worker. Since Country Y has a lower capital stock relative to the size of its workforce, it is less affected by diminishing marginal returns to capital and, therefore, better able to increase its potential GDP by adding more capital (deepening).

#### Rationale

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A developed country like Country X has a large capital stock relative to the size of its labor force. Adding more capital to a fixed amount of labor will incur diminishing marginal returns as each additional unit of capital contributes less and less to output-per-worker. Since Country Y has a lower capital stock relative to the size of its workforce, it is less affected by diminishing marginal returns to capital and, therefore, better able to increase its potential GDP by adding more capital (deepening).

iii.

Which growth model does Statement 3 *best* conform to?

- ☐ Classical.
- ☒ Neoclassical.
- ☐ Endogenous.

#### Rationale

##### This Answer is Incorrect

Neoclassical growth theory predicts that convergence will occur more quickly in an open economy, which allows for free trade and foreign investment. The Classical model states that as per capita GDP rises, the

population increases, and the standard of living returns to a subsistence level. The Endogenous model relies on entrepreneurship and human capital, which are not subject to diminishing returns, to provide continuous growth in potential GDP, negating the convergence of emerging and developed economies.

#### Rationale

##### This Answer is Incorrect

Neoclassical growth theory predicts that convergence will occur more quickly in an open economy, which allows for free trade and foreign investment. The Classical model states that as per capita GDP rises, the population increases, and the standard of living returns to a subsistence level. The Endogenous model relies on entrepreneurship and human capital, which are not subject to diminishing returns, to provide continuous growth in potential GDP, negating the convergence of emerging and developed economies.

#### Rationale

##### This Answer is Incorrect

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### Question 21

L2R14TB-AC019-1512

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

Over time, increases in inputs of production will yield diminishing returns; therefore, economic growth will always converge to a steady state, which is related to the growth in labor and technology. This statement *most closely* aligns with which growth theory?

- ☒ Neoclassical.
- ☐ Classical.
- ☐ Endogenous.

#### Rationale

✔ **Neoclassical.**

Neoclassical theory assumes diminishing returns and notes that technological progress can preempt diminishing returns by shifting an economy's TFP.

#### Rationale

✘ **Classical.**

Neoclassical theory assumes diminishing returns and notes that technological progress can preempt diminishing returns by shifting an economy's TFP.

#### Rationale

✘ **Endogenous.**

Neoclassical theory assumes diminishing returns and notes that technological progress can preempt diminishing returns by shifting an economy's TFP.

## Question 22

L2EC-TB0006-1412

LOS: LOS-6590

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

Which of the following factors is *most likely* to contribute to appreciation or depreciation of the stock market of an economy over the long term?

- ☒ Change in GDP.
- ☐ Change in the share of earnings in GDP.
- ☐ Change in the price-to-earnings multiple.

### Rationale

#### This Answer is Correct

Share of corporate earnings in GDP cannot rise forever since workers would eventually refuse to work for relatively low wages. The price-to-earnings ratio cannot rise forever since investors will not pay an arbitrarily high price for corporate earnings. Hence, the only factor affecting stock markets that can keep growing over the long term is economic growth.



### Question 23

L2EC-TBB205-1412

LOS: LOS-6640

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Which of the following countries is *most likely* to have the fastest economic growth?

- ☐ A country with an aging population and net migration out of the country.
- ☒ A country with a young population with net migration into the country.
- ☐ A country with a young population with net migration out of the country.

#### Rationale

##### This Answer is Correct

All else equal, an increasing supply of labor should increase the economic activity of a country, and hence, spur economic growth. An aging population will lower labor participation rates, and hence act as a drag on growth. Net migration into a country will increase the labor force; hence, the second option is the correct answer.

### Question 24

L200-PQ0005-1412

LOS: LOS-6680

Lesson Reference: Lesson 4: Neoclassical Growth Theory (Part II) and Endogenous Growth Theory

Difficulty: medium

According to the Endogenous Growth Theory, what type of GDP growth rates cannot be achieved?

- ☒ Steady GDP growth rates
- ☐ Steady per capita growth rates
- ☐ Very high GDP growth rates

#### Rationale

##### This Answer is Correct

According to the Endogenous Growth Theory, steady GDP growth rates will not occur due to increasing returns to scale across an economy, as companies benefit from the R&D spending of competitors.

### Question 25

L2EC-TBB208-1412

LOS: LOS-6670

Lesson Reference: Lesson 5: The Convergence Debate and Growth in an Open Economy

Difficulty: medium

Which of the following types of convergence in economic activity is predicted by the endogenous growth model?

- ☐ Absolute convergence only.
- ☐ Conditional convergence only.
- ☒ Neither absolute convergence or conditional convergence.

#### Rationale

##### This Answer is Correct

Endogenous growth theory makes no prediction that convergence between developing and developed economies should occur. The model allows for countries that start with high per-capita income and more capital to grow faster and stay ahead of the developing countries as long as they continue to invest in human capital.

### Question 26

L2EC-TB0007-1412

LOS: LOS-6600

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

Paul Tilley, CFA, is a fixed-income analyst carrying out research on the economy of an emerging market that has recently seen a heavy slowdown in economic activity. The central bank of the economy has made reference to low levels of resource utilization and slack in the economy. Based on this information, which of the following statements is *most likely* to be accurate?

- ☐ Inflation is likely to be high and interest rates are likely to fall.
- ☐ Inflation is likely to be low and interest rates are likely to rise.
- ☒ Inflation is likely to be low and interest rates are likely to fall.

#### Rationale

##### This Answer is Correct

An economy with low levels of resource utilization is likely to be experiencing low levels of demand and low inflation. The comments by the central bank suggest that they will engage in looser monetary policy in order to increase activity by cutting interest rates.

### Question 27

L2QM-PQ1307-1410

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

Consider the following statements:

Statement 1: The neoclassical model asserts that in the steady state, the marginal product of capital remains constant.

Statement 2: The classical model asserts that in the long run, standards of living remain constant despite technological progress.

Which of the following is *most likely*?

- ☐ Only Statement 1 is correct.
- ☐ Only Statement 2 is correct.
- ☒ Both statements are correct.

#### Rationale

##### This Answer is Correct

Under the neoclassical model, in the steady state the marginal product of capital equals the real interest rate.

Under the classical model, labor productivity and per capita income remain at the subsistence level, so standards of living also remain constant.

### Question 28

L200-PQ0007-1412

LOS: LOS-6660

Lesson Reference: Lesson 5: The Convergence Debate and Growth in an Open Economy

Difficulty: medium

Which of the following definitions most accurately describes convergence in an economic context?

- ☒ Convergence means that countries with low per capita incomes should grow at a faster rate than countries with high per capita incomes, such that, over time, per capita income differences will be eliminated.
- ☐ Convergence means that countries with low per capita incomes should grow at a lower rate than countries with high per capita incomes, such that, over time, per capita income differences will be exacerbated.
- ☐ Convergence means that countries with low per capita incomes should grow at a faster rate than countries with high per capita incomes, such that, over time, per capita income differences will be reduced.

#### Rationale

##### This Answer is Correct

Convergence means that countries with low per capita incomes should grow at a faster rate than countries with high per capita incomes, such that, over time, per capita income differences will be eliminated.

### Question 29

L2EC-TB0009-1412

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

An analyst has estimated that the growth rate in potential GDP of an economy is 4% per year. If the labor force of the economy is expected to shrink by 1% per year due to an aging population, which of the following is closest to the long-term growth rate in productivity required to meet the GDP growth forecast?

- ☐ 3%.
- ☒ 5%.
- ☐ 8%.

#### Rationale

##### This Answer is Correct

The labor productivity growth accounting equation states that the growth rate in potential GDP is equal to the long-term growth rate of the labor force plus the long-term growth rate in labor productivity.

### Question 30

L2QM-PQ1306-1410

LOS: LOS-6650

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Which of the following is *least likely* to result in an upward shift in the production function?

- ☒ An increase in non-ICT investment.
- ☐ An increase in spending on healthcare.
- ☐ An increase in spending on public infrastructure.

#### Rationale

##### This Answer is Correct

An increase in non-ICT investment would result in capital deepening. Increased spending on healthcare would improve the quality of labor and increased spending on public infrastructure would increase the productivity of private investment.



### Question 31

L2QM-PQ1302-1410

LOS: LOS-6610

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Consider the following statements:

Statement 1: If the share of capital in GDP is close to 1, diminishing marginal returns to capital are likely to be significant.

Statement 2: The greater the output-capital ratio, the higher the marginal product of capital.

Which of the following is *most likely*?

- ☐ Only Statement 1 is correct.
- ☒ Only Statement 2 is correct.
- ☐ Both statements are correct.

#### Rationale

##### This Answer is Correct

If the share of capital in GDP ( $\alpha$ ) is close to 1, diminishing marginal returns to capital are **not** significant, as the extra output produced by the marginal unit of capital is almost the same as the extra output produced by the previous unit of capital employed.

Marginal product of capital can be expressed as  $\alpha(Y/K)$ . The higher the output-capital ratio, the higher the marginal product of capital.

### Question 32

L2QM-PQ1305-1410

LOS: LOS-6610

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

Consider the following information regarding two countries:

Country	Capital per Worker	Capital-Labor Ratio
A (Developed country)	\$50,000	High
B (Developing country)	\$5,000	Low

Consider the following statements:

Statement 1: An increase in business investment in both countries will have a more significant impact on growth in Country A than in Country B.

Statement 2: Country B has more room to grow through capital deepening than Country A.

Which of the following is *most likely*?

- ☐ Only Statement 1 is correct.
- ☒ Only Statement 2 is correct.
- ☐ Both statements are correct.

#### Rationale

##### This Answer is Correct

An increase in business investment will raise the capital-labor ratio. Since Country B has more room to grow through capital deepening, the impact on growth will be higher for Country B than Country A.

### Question 33

L2QM-PQ1313-1410

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

According to the neoclassical model, which of the following is *most* likely if countries have the same savings rate, population growth rate, and production function:

- ☒ They will have the same level of output per worker and the same steady state growth rates.
- ☐ They will only have the same growth rate in output per worker.
- ☐ They will only have the same level of output per worker.

#### Rationale

##### This Answer is Correct

According to the neoclassical model, if countries have the same savings rate, population growth rate, and production function they will converge to the same level of per capita output as well as the same steady state growth rate.

### Question 34

L2R14TB-ITEMSET-AC004-1512

LOS: LOS-6630

LOS: LOS-6590

LOS: LOS-6610

Lesson Reference: Lesson 1: Growth in the Global Economy: Developed versus Developing Countries

Difficulty: medium

Use the following information to answer the next 3 questions:

Oliver Westcott, CFA, is an emerging market analyst who evaluates countries within his coverage range to assess and rank their potential GDP under the theory that countries with high GDP growth are attractive areas for investment. He has developed the following table delineating specific attributes that have historically been correlated with economic growth.

Country	Trade Barriers	Capital per Worker
Country F	No	High
Country L	No	Average
Country P	Yes	Low

Oliver knows that Country P will establish a free trade policy in the next 12 months. Also, Country F has had significant growth over the past decade where corporate profits have recently exceeded their historical average, which is captured in equity market appreciation relative to GDP. Additionally, there is significant interest in natural resources currently found in Countries L and P. However, Country P is more accessible to international trade routes than Country L.

i.

Based on the information he has available, Oliver would *most likely* rank Country P's growth prospects relative to Country L as being:

- ☒ higher due to the removal of trade barriers in conjunction with natural resource abundance and accessibility.
- ☐ lower due to the lower capital per worker endowment and existing trade barriers.
- ☐ lower due to Country L's open economy and endowment of natural resources.

#### Rationale

##### ✔ This Answer is Correct

Going forward, the removal of barriers to trade in Country P will increase the potential for trade and foreign direct investment coupled with the natural resource endowment presently in demand as well as an accessibility advantage relative to Country L.

#### Rationale

##### ✔ This Answer is Correct

Going forward, the removal of barriers to trade in Country P will increase the potential for trade and foreign direct investment coupled with the natural resource endowment presently in demand as well as an accessibility advantage relative to Country L.

#### Rationale

##### ✔ This Answer is Correct

Going forward, the removal of barriers to trade in Country P will increase the potential for trade and foreign direct investment coupled with the natural resource endowment presently in demand as well as an accessibility advantage relative to Country L.

ii.

Based on Country F's stock market appreciation, the long-run appreciation of the stock market relative to GDP is *most likely* to:

- ☐ remain at the present level.
- ☐ increase going forward.
- ☒ decrease relative to the present trend.

#### Rationale

##### This Answer is Incorrect

The upward trend in profits for Country F is presently stated as being above the historical average. The ratio of profits relative to GDP cannot rise indefinitely; therefore, at some point theory indicates that profits relative to GDP will decline to the long-run historical average.

#### Rationale

##### This Answer is Incorrect

The upward trend in profits for Country F is presently stated as being above the historical average. The ratio of profits relative to GDP cannot rise indefinitely; therefore, at some point theory indicates that profits relative to GDP will decline to the long-run historical average.

#### Rationale

##### This Answer is Incorrect

The upward trend in profits for Country F is presently stated as being above the historical average. The ratio of profits relative to GDP cannot rise indefinitely; therefore, at some point theory indicates that profits relative to GDP will decline to the long-run historical average.

iii.

Given the information available on Country F, which of the following will *most likely* drive future growth in potential GDP?

- ☐ Capital deepening.
- ☐ Increasing exports.
- ☒ Technological progress.

#### Rationale

##### This Answer is Incorrect

For a high capital-to-labor country, technological progress is a significant contributor to persistently strong growth. Capital deepening is unlikely to increase growth because it is already subject to diminishing returns.

#### Rationale

##### This Answer is Incorrect

For a high capital-to-labor country, technological progress is a significant contributor to persistently strong growth. Capital deepening is unlikely to increase growth because it is already subject to diminishing returns.

#### Rationale

##### This Answer is Incorrect

For a high capital-to-labor country, technological progress is a significant contributor to persistently strong growth. Capital deepening is unlikely to increase growth because it is already subject to diminishing returns.

### Question 35

L2R14TB-AC014-1512

LOS: LOS-6670

Lesson Reference: Lesson 5: The Convergence Debate and Growth in an Open Economy

Difficulty: medium

According to the convergence hypothesis, developing countries will have rates of growth and productivity that will be:

- ☐ lower than developed countries.
- ☒ higher than developed countries.
- ☐ dependent on growth in developed countries.

#### Rationale

 **lower than developed countries.**

The convergence hypothesis predicts that the growth rate in productivity and GDP will be higher in developing countries relative to developed countries.

#### Rationale

 **higher than developed countries.**

The convergence hypothesis predicts that the growth rate in productivity and GDP will be higher in developing countries relative to developed countries.

#### Rationale

 **dependent on growth in developed countries.**

The convergence hypothesis predicts that the growth rate in productivity and GDP will be higher in developing countries relative to developed countries.

### Question 36

L2R14TB-AC017-1512

LOS: LOS-6690

Lesson Reference: Lesson 5: The Convergence Debate and Growth in an Open Economy

Difficulty: medium

Which of the following *best* describes why a government would remove trade barriers?

- ☒ Empirical results show that removal of trade barriers promotes faster growth in trade-based economies.
- ☐ Removal of trade barriers diminishes political instability.
- ☐ Lack of trade barriers increases currency value and leads to long-term increases in domestic income.

#### Rationale

 **Empirical results show that removal of trade barriers promotes faster growth in trade-based economies.**


In support of the convergence hypothesis, empirical studies have found that trade-based economies, for which the government has actively sought to remove barriers to trade, have growth at a faster rate.

#### Rationale

 **Removal of trade barriers diminishes political instability.**

In support of the convergence hypothesis, empirical studies have found that trade-based economies, for which the government has actively sought to remove barriers to trade, have growth at a faster rate.

#### Rationale

 **Lack of trade barriers increases currency value and leads to long-term increases in domestic income.**

In support of the convergence hypothesis, empirical studies have found that trade-based economies, for which the government has actively sought to remove barriers to trade, have growth at a faster rate.



### Question 37

L2EC-TBB207-1412

LOS: LOS-6660

Lesson Reference: Lesson 4: Neoclassical Growth Theory (Part II) and Endogenous Growth Theory

Difficulty: medium

Which of the following theories of economic growth attempts to explain technological progress in an economy rather than treating it as a random unexplained event?

- ☐ Classical growth.
- ☐ Neoclassical growth.
- ☒ Endogenous.

#### Rationale

##### This Answer is Correct

Endogenous growth theory models focus on explaining technological progress rather than treating it as a random exogenous event, hence the name endogenous. In endogenous models, self-sustaining growth emerges as a natural consequence of the model and the economy does not necessarily converge to a steady-state rate of growth.

### Question 38

L2QM-PQ1310-1410

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

An increase in which of the following will *most* likely result in an increase in the steady-state growth rate of the economy under the neoclassical model?

- ☐ Saving rate
- ☐ Population growth rate
- ☒ Growth in TFP

#### Rationale

##### This Answer is Correct

Only an increase in the growth rate of TFP has a permanent impact on the growth rate of output per worker in the steady state under the neoclassical model.

### Question 39

L2R14TB-AC008-1512

LOS: LOS-6660

Lesson Reference: Lesson 3: Classical Growth Theory and Neoclassical Growth Theory (Part I)

Difficulty: medium

The idea that savings and investment can only temporarily lead to higher economic growth is consistent with which of the following growth theories?

- ☒ Neoclassical.
- ☐ Classical.
- ☐ Endogenous.

#### Rationale

##### ✔ Neoclassical.

The initial impact of a higher savings rate is to temporarily raise the rate of growth in an economy. If the growth rate exceeds the steady state, the economy will return to the steady state. Countries with higher savings rates typically do have higher per capita output, higher capital-to-labor ratios, and higher labor productivity.

#### Rationale

##### ✘ Classical.

The initial impact of a higher savings rate is to temporarily raise the rate of growth in an economy. If the growth rate exceeds the steady state, the economy will return to the steady state. Countries with higher savings rates typically do have higher per capita output, higher capital-to-labor ratios, and higher labor productivity.

#### Rationale

##### ✘ Endogenous.

The initial impact of a higher savings rate is to temporarily raise the rate of growth in an economy. If the growth rate exceeds the steady state, the economy will return to the steady state. Countries with higher savings rates typically do have higher per capita output, higher capital-to-labor ratios, and higher labor productivity.

### Question 40

L2R14TB-AC018-1512

LOS: LOS-6620

Lesson Reference: Lesson 2: Determinants of Economic Growth

Difficulty: medium

An analyst uses the labor productivity growth accounting equation to analyze two countries' growth rate in potential GDP. Country A and Country B have the same worker productivity. The population growth rate for Country B is higher than Country A, which has zero population growth. Assuming wages are correlated with labor productivity and adjusting for the exchange rate, the growth rate of real output in Country B relative to Country A is *most likely*:

- ☒ higher.
- ☐ lower.
- ☐ the same.

#### Rationale

✔ higher.

Growth rate of potential GDP is equal to the sum of the long-term growth rate of the labor force and long-term growth rate in productivity. Country A has the same worker productivity as B but lower (zero) growth in the labor supply. Country B will therefore have a higher growth rate of real output.

#### Rationale

✘ lower.

Growth rate of potential GDP is equal to the sum of the long-term growth rate of the labor force and long-term growth rate in productivity. Country A has the same worker productivity as B but lower (zero) growth in the labor supply. Country B will therefore have a higher growth rate of real output.

#### Rationale

✘ the same.

Growth rate of potential GDP is equal to the sum of the long-term growth rate of the labor force and long-term growth rate in productivity. Country A has the same worker productivity as B but lower (zero) growth in the labor supply. Country B will therefore have a higher growth rate of real output.